タイ王国
農業統計及び経済分析開発プロジェクト
中間評価調査報告書

平成18年4月
（2006年）

独立行政法人 国際協力機構

タイ事務所

序　　文

タイ王国は、同国の農業統計情報を収集、分析及び利用するための精度の高い技術を習得し、農業統計活動の円滑化を目指すとともに、将来的にはアセアン各国への普及を念頭に置いた農業統計モデルの開発を行なうことを目的に、日本国政府に対して技術協力を要請してきました。

これを受けて、独立行政法人国際協力機構は平成 14 年 7 月 1 日から 7 月 11 日まで第一次事前評価調査団､同年 12 月 1 日から 12 月 27 日まで第二次事前評価調査団を派遣しました。

これら 2 回の調査団派遣により、要請背景の確認、協力課題の絞り込み及び先方国政府の実施体制の確認を行ない、プロジェクト基本計画等の（案）を作成しました。

また、討議議事録（R/D）に基づき平成 15 年 7 月 16 日より技術協力プロジェクトを開始した後、運営指導調査団を派遣し、より一層円滑なプロジェクト運営を行なうため、先方国政府との協議及び現地調査を行いました。

本プロジェクトは R/D に基づき 5 年間にわたる案件を実施中ですが、協力開始後 2 年 7 カ月を経過した現時点において中間評価（レビュー）を実施し、技術移転の進捗状況を把握した上で今後の協力計画を必要に応じて見直すために、平成 18 年 2 月 27 日から同年 3 月 25 日まで中間評価調査団を派遣しました。

本報告書はその結果を取りまとめたものです。ここに本調査団の派遣に関し、ご協力頂いた日本・タイ両国の関係各位に対し、深甚の謝意を表するとともに併せて今後の支援をお願いする次第です。

平成 18 年 4 月

独立行政法人国際協力機構
タ イ 事 務 所
所　長　佐　藤　幹　治

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評価調査結果要約表

１．案件の概要

国　　名：タイ王国		案件名：農業統計及び経済分析開発プロジェクト
分　　野：農業一般		協力形態：技術協力プロジェクト
所轄部署：JICA タイ事務所		協力金額（評価時点）：360,456 千円
協力期間	平成 15 年 7 月 16 日～平成 20 年 7 月 15 日（5 年間）	先方関係機関：農業・協同組合省　農業経済局
		日本国側協力機関：農林水産省
		他の関連協力： ・東アジア緊急米備蓄パイロットプロジェクト（EAERR） ・FAO アジア太平洋諸国食料・農業統計地域データ交換システム強化プロジェクト ・農業・協同組合省　農業開発計画専門家派遣

１－１　協力の背景と概要

タイ国経済は 1997 年のアジア通貨危機による深刻な打撃を受けて、翌年 1998 年には大幅に収縮する事態に陥ったが、この危機的な事態でも農業分野は産業として比較的安定しており、経済危機により他分野で失職した人々を吸収するという実績を残した。その結果、農業分野の産業として重要性が社会的・政治的に改めて見直されるようになった。農業政策の立案や実施については、農業経済局（OAE）が提出する農業統計資料や経済分析結果が重要な基礎情報になっているが、現状ではそれらの精度と信頼性が十分であるとは言い難い。統計調査の結果が調査終了時から 1 年以上経過してようやく発表される場合も多く、その年の統計資料が政策決定に活用できない状況が見られた。

これらの課題を解決するためには、OAE が農業統計データを正確に収集・分析する技術を習得し、タイ国内の農業統計と経済分析の技術レベルを引き上げることが必要である。更にアセアン加盟国への技術普及を念頭におき、東南アジア地域での情報ネットワークシステムと農業経済分析の開発に対応できる人材を育成する必要がある。このような経緯から、タイ国政府は日本国政府に農業統計・経済分析開発に関する技術協力プロジェクトを要請してきた。

１－２　協力内容

(1) 上位目標

1. アセアン食料安全保障情報研修センター（AFSIT センター）で開発された統計情報・経済分析手法がアセアン各国で活用される。
2. 農業経済局（OAE）が提供する正確な統計情報・経済分析により、農業政策・プログラムが農業・協同組合省（MOAC）によって効果的かつ効率的に立案・実施される。

(2) プロジェクト目標

OAE が、タイ国の農業政策に関して、また AFSIS の人材育成を支援するために、農業統計情報及び経済分析の中心的組織として強化される。

(3) 成果

1. アセアン加盟国への支援のため、データ収集方法、情報ネットワークシステム、食料需給予測を含む農業経済分析における OAE の人材が育成される。
2. OAE と 9 カ所の地方事務所（ROAE）におけるデータ収集手法（主要 5 作物）が改善される（主要 5 食用作物：コメ、キャッサバ、トウモロコシ、サトウキビ、ダイズ）。
3. OAE と 9 カ所の ROAE 間の情報ネットワークシステムが確立・開発される。
4. 農業経済分析手法が開発される。
5. OAE 職員の研修実施能力が開発される。

(4) 投入（評価時点）

日本国側（JICA）：

長期専門家派遣	6 名	機材供与	16,447,000 バーツ
短期専門家派遣	7 名	ローカルコスト負担	13,188,000 バーツ
研修員受入	32 名（内 11 名は OAE とのコストシェアリング）		

タイ国側（OAE）：

カウンターパート（以下、「C/P」）配置 65 名

ローカルコスト負担　35,288,000 バーツ（研修費、現地調査費、機材購入費等）

専門家執務室の提供

２．評価調査団の概要

調査者：	団長／総括	奥邨　彰一	JICA タイ事務所　次長
	農業統計／データ収集	大塚　美智也	農林水産省大臣官房統計部統計企画課 課長補佐
	計画管理	井上　明美	JICA タイ事務所　所員
	評価分析	飯沼　光生	アイ・シー・ネット（株） コンサルティング部コンサルタント
	Ms. Patchara Kosinanont		タイ国際開発協力事務室（TICA）プログラム担当

調査期間：平成 18 年 2 月 27 日～3 月 22 日　評価種類：中間評価

３．評価結果の概要

３－１　実績の確認

(1) AFSIS の人材育成への支援

中間評価時点で 5 名の OAE 職員が AFSIS プログラムや国際ワークショップにて 2 回以上の講義・発表の経験を積んでおり、AFSIS の講師としてのレベルに達していることが確認された。

(2) データ収集

坪刈調査については OAE 職員への技術移転はほぼ完了し、全国規模の主要 5 作物の坪刈調査は一通り終えている。坪刈調査の導入により、収穫時に現地調査を実施されるようになり、収集されたデータの精度も高いことが確認された。一方、面積調査は全国規模のプレテストを実施している段階である。

(3) データ分析・情報ネットワークシステム

ウェブを利用したデータ入力・処理システムが開発されたことで、坪刈・面積調査のデータ入力・分析工程が省力化され、データ分析時間の短縮に効果が現れている。また全ての地方事務所（ROAE）にウェブサイトが設立され、地域の農業統計情報を発信している。

(4) 経済分析

マクロ経済モデルと食料需給モデルはすでに出来上がり、更新された統計データに合わせてモデルの修正を行っている。2000 年の産業連関表（I/O Table）が完成し、2006 年 3 月の農業経済分析の国際ワークショップで発表された。

(5) 普及

坪刈研修を中心に毎年 10 回以上の研修・セミナーが実施され、延べ 200 名以上の OAE・ROAE 職員が参加している。すでに OAE 本局で 15 名以上、各 ROAE では 3 名以上の職員が研修講師として指導を担当している。

３－２　評価結果の要約

(1) 妥当性

当プロジェクトの目的は、タイ国の第 9 次国家経済・社会開発計画（2000 年～2006 年）や農業・協同組合省戦略計画（2004 年～2008 年）で策定されているタイ国の農業開発政策と合致している。また当プロジェクトの実施内容は JICA 国別援助実施計画(2002 年)で指摘している協力内容とも合致している。農業統計調査や農業情報ネットワークの分野では、日本国内での長年の実績と開発途上国への技術協力の経験から、日本の技術優位性は高い。当プロジェクトは OAE の技術面の能力を強化することで、アセアン食料安全保障情報システム（AFSIS）の人材育成事業を支援することを目的にしていることから、東南アジア地域の食料安全保障協力の一環に組み込まれている。以上から当プロジェクト実施の妥当性はプロジェクト開始当初と変わっておらず依然として高いといえる。

(2) 有効性

OAE への技術面の能力強化と AFSIS の人材育成への支援は順調に進んでおり、まだいくつかの課題点はあるものの、プロジェクト目標達成の見込みは高いと思われる。特に OAE の積極的なプロジェクトへの取り組み姿勢が、円滑な技術移転とプロジェクト運営を進めている。AFSIT センターの活用は良く進んでおり、また OAE は十分に関係機関との連絡に努めていることから、これらの要因もプロジェクトの進捗を支えている。今後の重要な課題点として、AFSIS 支援に十分に対応するために OAE 職員の英語力を向上させること、 OAE の統計情報の信頼性を高めるために、坪刈調査で収集された収穫量データを早い時期に公式に採用することが挙げられる。

(3) 効率性

OAE の能力強化は順調に進んでおり、データ収集手法の指導、情報ネットワークシステムの開発、経済分析モデルの開発、研修会を通じた技術普及は順調に成果を上げている。日本人専門家の人数、専門分野、派遣時期は適切であった。また JICA が供与した機材ではパソコンや坪刈調査機材を中心によく活用されていた。C/P 研修や技術交換も OAE 職員の意識を高める上で有効であり、帰国後に C/P が企画・提案する事例が見られた。OAE と JICA とのコスト分担に進んでおり、現状で研修や現地調査のかなりの費用は OAE 側が負担している。他の農業統計プロジェクトと比較して、当プロジェクトは専門家の投入量がまだ小さいが、すでに全国規模の現地調査や情報ネットワークシステムの整備が進んでおり、費用対効果も高いといえる。

(4) インパクト

OAE がまだ坪刈調査や面積調査で得られたデータを全面的に公式な統計データとして採用・公表していないことから、外部の関係組織への波及効果はまだ見られない。しかし、OAE 内部では坪刈調査の有用性を理解し、すでに OAE は独自でプロジェクト対象の主要 5 作物以外の農産物を対象にして坪刈調査を開始している。また、当プロジェクトが開発・導入したウェブを利用した坪刈調査用のデータ入力・処理システムから刺激を受けて、従来の OAE 調査用データベースを独自でウェブ入力に改良している。

(5) 自立発展性

OAE 職員が積極的にプロジェクト活動に取り組んでいることで技術移転は順調に進んでおり、すでに一部の活動については OAE 職員で独自で計画・実施して進めている。また、C/P の人数もプロジェクト活動の展開に合わせて増えてきており、多くの OAE 職員が当プロジェクトに関わり、OAE 側の運営体制は徐々に強化されている。また OAE はかなりのプロジェクト活動の実施・運営費用を賄っており、費用面でも徐々に自立しつつある。加えて技術面でも坪刈調査や面積調査は OAE 職員への技術移転が進んでおり、特に坪刈調査では、地方事務所（ROAE）でも研修会や現地調査を実施できるレベルに達している。以上により、プロジェクトの成果を OAE が今後も継承していける体

制が整いつつあり、自立発展性が高いといえる。

３－３　効果発現に貢献した要因

(1) 計画内容に関すること

・プロジェクト目標は OAE のニーズとよく合致しており、OAE が積極的にプロジェクト活動に取り組む一因になっている。

・OAE と JICA と間で実施・運営費用の分担が良くできており、OAE が研修会や現地調査の実施経費のかなりの部分を負担することで、OAE 職員の主体的な取り組みを促している。

(2) 実施プロセスに関すること

・OAE 職員は企画の提案や活動計画・実施に積極的に取り組み、順調なプロジェクト活動の進捗に貢献している。

・日本人専門家と C/P は頻繁に連絡を取り合い、お互いの意見交換や情報共有を進めており、円滑なプロジェクトの実施を促進している。

・OAE 本局と ROAE は密に連絡を取り合うことで、研修会や現地調査の準備や実施を円滑に進めることができる。

３－４ 問題点及び問題を惹起した要因

(1) 計画内容に関すること

・多くの OAE 職員の英語能力は講義するにはまだ不十分であり、今まで以上に AFSIS プログラムに貢献するためには、OAE 職員の英語力の向上が必要である。

・坪刈調査や面積調査の導入により、現場での研修や調査を担当している ROAE の業務負担が増えてきており、ROAE の調査担当者の業務時間の多くが現地調査の移動や現場指導に占められている。

(2) 実施プロセスに関すること

・データ処理の終了後、OAE ではデータ公表が正式に決裁される手続きに数カ月以上を要しており、収穫量データは常に時期が遅れて公開されている。

・坪刈調査や面積調査の収集データは、未だ部分的にしか統計情報に反映されておらず、外部の団体・組織が正確な統計情報を入手できるところまで、データの公式採用と公表が進んでいない。

３－５ 結論

総合的に判断して OAE への技術移転は順調に進んでおり、当プロジェクトはほぼ計画通りに進捗している。プロジェクト目標や成果の指標の中には、現在のレベルである程度達成しているものも見られる。しかし、OAE の技術面の能力強化や AFSIS の人材育成への支援をより高いレベルで押し進めるためには、まだ残されている課題が見受けられ、これらの課題への取り組みが今後のプロジェクト実施に重要である。

３－６　提言（当該プロジェクトに関する具体的な措置、提案、助言）

1) 坪刈・面積調査の現地調査での ROAE の業務負担を軽減するために、坪刈調査と面積調査の実施・運営体制を見直す。

2) OAE は坪刈・面積調査によるデータ収集に力を入れているが、生産量予測に必要であるデータ分析と予測調査にも力を振り向ける。

3) 現在の情報システムは数年のデータにしか対応していないことから、累年データのデータベースを構築して、今後の作物の収穫量予測に活用する。

4) より多くの OAE 職員が AFSIS プログラムで講師を務めるために、技術面と語学面から OAE 職員の能力をより一層強化する。

5）OAE の統計情報の精度を改善するために、早い時期に坪刈・面積調査の収集データを公式に全面的に採用する。
6）メディアを通じて正確な統計情報や経済分析結果を広報し、一般の人たちや外部組織の農業統計の活用を促進させる。

３－７ 教訓（当該プロジェクトから導き出された他の類似プロジェクトの発掘・形成、実施、運営管理に参考となる事柄）

1）OAE と JICA のコスト分担が進んだことは、OAE のプロジェクトのオーナー意識を高めており、プロジェクトが円滑に運営・実施される一因となっている。
2）坪刈調査は、簡便で分かりやすい手法を取り入れ、その教材を誰でも理解しやすく工夫したことで、短期間での広範囲の技術普及を実現している。

第１章　中間評価の概要

１－１　中間評価調査団派遣の経緯と目的

2001 年 10 月に実施された ASEAN＋3（アセアン諸国＋日本、中国、韓国）農林大臣会議により、アセアン食料安全保障情報システム（AFSIS）[1]の運営組織となるアセアン食料安全保障情報研修センター（AFSIT センター: ASEAN Food Security Information Center）を、タイ王国（以下、「タイ国」）農業・協同組合省（MOAC）[2]の農業経済局（OAE）[3]内に設置することが合意された。AFSIT センターの主な任務は、ASEAN+3 諸国を対象とした、研修やワークショップを通じた農業統計調査や農業経済分析に関する人材育成と情報ネットワークシステムの確立である。そのため、タイ国農業経済局は AFSIT センターの円滑な運営を通じて、アセアン加盟国の農業統計と経済分析の技術レベルの向上に貢献することが期待されている。

タイ国経済は 1997 年のアジア通貨危機による深刻な打撃を受け、翌年 1998 年には大幅に収縮する事態に陥った。しかし、この危機的な事態でも農業分野は産業として比較的安定しており、経済危機より他分野で失職した人々を吸収するという実績を残した。その結果、農業分野は産業としての重要性が社会的・政治的に改めて見直されるようになった。農業政策の立案や実施については、農業経済局が提出する農業統計資料や経済分析結果が重要な基礎情報になっているが、現状ではそれらの精度と信頼性が十分であるとは言い難い。統計調査の結果が調査終了時から 1 年以上経過してようやく発表される場合も多く、その年の統計資料が政策決定に活用できない状況が見られる。

これらの課題を解決するためには、農業経済局が農業統計データを正確に収集・分析する技術を習得し、タイ国内の農業統計と経済分析の技術レベルを引き上げることが必要である。更に、アセアン加盟国への技術普及を念頭に置き、東南アジア地域での情報ネットワークシステムと農業経済分析の開発に対応できる人材を育成する必要がある。この様な経緯から、タイ国政府は、日本国政府に農業統計・経済分析開発に関する技術協力プロジェクトを要請してきた。

この要請を受けて、国際協力事業団（現独立行政法人国際協力機構　以下、「JICA」）はプロジェクト実施に必要な情報を収集するために、第 1 次・第 2 次事前評価調査団を派遣し、プロジェクトの実施妥当性を検討した上で、プロジェクト実施の枠組みを作成した。プロジェクトは 2003 年 7 月から 5 年間の計画で開始された。

プロジェクト実施開始からすでに 2 年半が経過して中間時に達したため、以下の事項を確認することを目的に、中間評価調査を実施することになった。

①プロジェクト開始から中間時までの実績と計画達成度を確認し、評価 5 項目（妥当性、有効性、効率性、インパクト、自立発展性）の観点から評価する。

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[1] AFSIS：ASEAN Food Security Information System
[2] MOAC：Ministry of Agriculture and Cooperative
[3] OAE：Office of Agricultural Economics

②プロジェクト後半の活動計画について協議し、必要な助言を行い、必要に応じて実施計画の修正を行う。
③円滑なプロジェクト運営のために取るべき措置について協議し、協議結果を日本国・タイ国両政府と関係機関に報告する。

１－２　評価調査団の構成

日本国側

氏名	担当分野	所属	
奥邨　彰一	団長／総括	JICA タイ事務所 次長	平成 18 年 3 月 17 日～ 3 月 22 日
大塚　美智也	農業統計／ データ収集	農林水産省大臣官房統計部 統計企画課 課長補佐	平成 18 年 3 月 16 日～ 3 月 23 日
井上　明美	計画管理	JICA タイ事務所 所員	平成 18 年 3 月 17 日～ 3 月 22 日
飯沼　光生	評価分析	アイ・シー・ネット（株） コンサルタント	平成 18 年 2 月 27 日～ 3 月 25 日

タイ国側

氏名	所属	
Ms. Patchara Kosinanont	タイ国際開発協力事務室（TICA） （プログラム担当官）	平成 18 年 3 月 21 日～ 3 月 22 日

１－３　調査日程

月日		日程
2/27	月	飯沼団員：東京→バンコク
2/28	火	JICA 事務所・事前打合せ、OAE 打合せ
3/ 1	水	専門家インタビュー、地方事務所（ROAE）質問票作成
3/ 2	木	専門家・カウンターパート（以下、「C/P」）インタビュー、 ROAE 質問票翻訳・修正
3/ 3	金	C/P インタビュー、ROAE 質問票送付
3/ 4	土	資料整理
3/ 5	日	移動：バンコク→チェンマイ
3/ 6	月	地方事務所（ROAE1）訪問、ROAE 職員インタビュー 移動：チェンマイ→バンコク
3/ 7	火	FAO アジア太平洋事務所訪問（萩野専門家）、指標資料整理
3/ 8	水	OAE 幹部インタビュー、専門家・C/P への補足インタビュー
3/ 9	木	OAE 幹部インタビュー、中間報告準備（評価 5 項目分析等）
3/10	金	JICA 事務所・調査中間報告
3/11	土	ミニッツ（案）作成
3/12	日	ミニッツ（案）作成
3/13	月	国際ワークショップ出席、MOAC 新野専門家インタビュー 評価グリッド・達成グリッド作成
3/14	火	ミニッツ英文修正作業、評価グリッド・達成グリッド作成
3/15	水	ROAE 質問票結果の取りまとめ
3/16	木	C/P インタビュー、調査団内打合せ （大塚団員：東京→バンコク）

3/17	金	調査団内打合せ OAE 側との打合せ
3/18	土	移動：バンコク→アントン→バンコク ROAE7 の坪刈調査研修への訪問 ROAE7 職員、現地調査員へのインタビュー
3/19	日	調査報告書準備
3/20	月	OAE とのミニッツ協議
3/21	火	OAE とのミニッツ協議
3/22	水	合同調整委員会、JICA 事務所長報告
3/23	木	調査報告書作成 （大塚団員：バンコク→東京）
3/24	金	調査報告書作成
3/25	土	飯沼団員：バンコク→東京

１－４　主要面談者

農業経済局（OAE）

農業経済局官房

- Mr. Ponwate Taomahawong　農業経済局シニアエキスパート（Senior Expert）
- Ms. Nareenat Roonnapai　農業経済局シニアエキスパート（Senior Expert）

農業情報センター（CAI：Center for Agricultural Information）

- Mr. Montol Jeamchareon　農業情報センター所長（Director of Center for Agricultural Information）
- Mr. Chanchai Toviwat　地理情報システム課長（Director of Geographic Information System Division）
- Ms. Unchana Tracho　畜産・水産情報課長（Director of Livestock and Fisheries Information Division）
- Mr. Watcharachai Pasomsups　作物情報システム課長（Director of Field Crop Information System Division）
- Ms. Suraporn Issaradetkul　園芸作物情報課長（Director of Horticultural Crop Information Division）
- Ms. Pornpun Hensawang　農業予測課長（Director of Agricultural Forecasting Division）
- Mr. Porntep Sangsuwan　情報技術・農業データベース課長（Director of Information Technology and Agricultural Database Division）
- Mr. Amorn Sangprohm　作物情報システム課・統計官（Statistical Technical officer）
- Mr. Suarachai Chanakai　作物情報システム課・統計官（　〃　）
- Ms. Busaya Pinsuwan　作物情報システム課・統計官（　〃　）
- Mr. Vongthaworn Tanteinrath　作物情報システム課・統計官（　〃　）

農業経済局地域事務所（ROAE）
第 1 地域事務所（ROAE1）

・Mr. Sathaphon Poripord	作物情報課長（Chief of Agricultural Information Group）
・Mr. Panu Choomjai	作物情報課・職員

第 7 地域事務所（ROAE7）

・Mr. Sanarn Janphakdee	地域事務所長（Director of 7th Regional office of Agricultural Economics）

プロジェクト長期専門家

・佐々木　正明	チーフアドバイザー
・小林　俊孝	業務調整・研修
・神宮司　一誠	農業統計調査
・横堀　俊一	データ分析・情報ネットワークシステム
・古河　俊一	農業産業連関表作成・分析、マクロ経済モデル

農業・協同組合省

・新野　謙司	JICA 専門家（農業開発計画）

東アジア緊急米備蓄パイロットプロジェクト
（East Asia Emergency Rice Reserve Pilot Project）

・宮島　栄一	JICA 専門家（タイ国及びアセアン諸国における食料安全保障）

国連食糧農業機構　アジア太平洋諸国 食料･農業統計地域データ交換システム強化プロジェクト（FAO Strengthening Regional Data Exchange System on Food and Agricultural Statistics in Asia and Pacific Countries）

・萩野　剛	専門家（農業統計）

１－５　評価項目・評価方法

(1) 評価項目

JICA 事業評価ガイドラインに基づき、評価 5 項目と呼ばれる、妥当性、有効性、効率性、インパクト、自立発展性の観点から調査で得られた情報を分析し、調査結果を評価した。その結果を踏まえて、プロジェクトの今後の展開に関する提言と他の案件への教訓を引き出した。

1）妥当性

プロジェクト目標や上位目標が、タイ国政府の開発目標、日本国の援助課題、対象機関のニーズに合致しているかを主に評価する。

2）有効性

有効性は、成果とプロジェクト目標の関係（プロジェクト目標の達成度、成果の貢献度）に焦点を合わせて分析する。

3）効率性

プロジェクト実施の効率性は、成果と投入の関係（タイミング、質・量、運営管理、その他）を焦点にし、投入がどれだけ効率良く成果に転換されたかを分析する。

4）インパクト

インパクトでは、プロジェクトの実施により上位目標や外部環境に与えた直接・間接の影響を分析する。

5）自立発展性

自立発展性では、主に組織、財務、技術の観点から、プロジェクト終了後の実施機関の運営管理能力を評価する。

(2) データ収集方法

評価に必要な情報・資料は、以下の方法で収集した。

1）既存資料のレビュー

プロジェクト関係資料(業務進捗報告書､モニタリング報告書､専門家報告書、合同調整委員会資料等）を入手し、内容を確認した。また必要に応じて、最新の進捗状況に関する資料を専門家・C/P に作成してもらった。

2）インタビュー

専門家・C/P と直接面談し、資料レビューした内容を確認して、更に資料に記載していない追加情報を聴取した。また必要に応じて、OAE 地域事務所、OAE 幹部、JICA 専門家、FAO 等のプロジェクト関係者に面談し、関係情報を入手した。

3）質問票

9 つの OAE 地域事務所（ROAE）に質問票を配布し、主にプロジェクトが導入した技術の有効性と持続可能性についての情報を入手した。

第２章　プロジェクトの実績

２－１　投入実績

(1) 日本国側の投入

1) 専門家派遣

2006 年 3 月までに、6 人の長期専門家（5 分野：チーフアドバイザー、業務調整・研修、農業統計調査、データ分析・情報ネットワークシステム、農業産業連関表作成・分析、マクロ経済モデル）と、7 人の短期専門家が派遣された。

チーフアドバイザーは 2005 年 7 月､川崎専門家から佐々木専門家に交代した。経済分析担当の古河専門家はプロジェクト開始当初は短期専門家として 2 度派遣された。しかし、業務負担が大きく、短期派遣で成果を上げるのが難しいとの判断から、2004 年 6 月から長期専門家に切り替わった（詳細な専門家派遣の実績については、付属資料のミニッツ ANNEX I-5 を参照)。

2) 供与機材

統計処理と情報ネットワークに必要となるパソコンセットが、OAE（7 台）と ROAE（合計 36 台）に供与された。また、AFSIT センターにパソコン 31 台とプラズマモニター4 台を含む研修関連機材が設置された。その他、研修時の移動用として小型バス 1 台とミニバン 1 台の車輌が供与された（詳細な供与機材の実績については、付属資料のミニッツ ANNEX I-6 を参照)。

3) C/P 研修

2006 年 3 月の時点までに、32 人の C/P が JICA 本邦研修に参加している。2004 年度にインドネシア国に 4 人、2005 年度にラオス国に 3 人の C/P が技術交換として派遣された（詳細な本邦研修と技術交換の実績は、付属資料のミニッツ ANNEX I-7 を参照)。

4) ローカルコスト

日本国側のローカルコストとして、2003 年度から 2005 年度までに約 989 万 8,000 バーツが投入された。主な用途は、事務経費、研修実施経費（現地調査員の日当、食費、ユニフォーム代等)、国際ワークショップ開催費等である（年度別の日本国側のプロジェクト経費実績については、付属資料のミニッツ ANNEX I-9 を参照)。

(2) タイ国側の投入

1) C/P

C/P の人数は、2006 年 3 月時点で 65 人。分野別の人数は以下の通りである。

・チーフアドバイザー： OAE 本局 2 人
・農業統計調査： OAE 本局 12 人、ROAE 10 人（各 ROAE 1 人＋ 1 人）

・データ分析・情報ネットワークシステム：OAE 本局 7 人、ROAE 9 人（各 ROAE 1 人）
・産業連関表・マクロ経済モデル分析：OAE 本局 14 人
・研修：OAE 本局 2 人、ROAE 9 人（各 ROAE 1 人）

C/P は OAE 本局の職員だけでなく、9 カ所の地方事務所（ROAE）の職員も含んでいる。また、2004 年 7 月に経済分析担当の専門家が短期専門家から長期専門家へ切り替わったことを受けて、経済分析担当の C/P の人数を増やした（詳細な C/P の配置については、付属資料のミニッツ ANNEX I-8 を参照）。

2）機材・施設

OAE は、坪枠や秤等の坪刈調査に必要な資機材、GPS や衛星写真等の面積調査に必要な資機材を自らの予算で購入した。情報ネットワーク整備に必要なフレームリレー機材とサーバーは、プロジェクトの初期段階で OAE が購入して設置した（OAE の購入機材については、付属資料のミニッツ ANNEX I-10 を参照）。

3）研修・調査費用

坪刈調査と面積調査の研修費用では、研修に参加した調査員の日当と宿泊費を除き、OAE 側がほぼ全額負担している。坪刈調査と面積調査の現地調査費は全て OAE が負担している。経済分析に必要な食料消費調査の費用も全て OAE が負担している（詳細な OAE の研修・調査費の負担額については、付属資料のミニッツ ANNEX I-10 を参照）。

4）C/P 研修

本邦研修に参加された C/P32 人のうち、11 人は OAE とのコストシェアで派遣された。OAE は派遣に必要な費用（旅費、日当、宿泊費等）を負担した（コストシェアで派遣された研修員については、付属資料のミニッツ ANNEX I-7 を参照）。

２－２　成果達成状況

(1) 成果 1：アセアン加盟国への支援のため、データ収集方法、情報ネットワークシステム、食料需給予測を主とした農業経済分析における OAE の人材が育成される。

プロジェクト活動を通じて、C/P の農業統計と経済分析に関する技術レベルは全体的に向上しつつある。また、AFSIS の研修・ワークショップ、プロジェクト・OAE 主催の国際ワークショップ、技術交換等の国際的な舞台において、英語で講義・発表した実績を持つ C/P はすでに 15 人に達している。しかし、英語で複数回の講義・発表をした経験を持ち、AFSIS の講義を任せられるレベルに達していると認められる C/P は、中間評価時点では 5 人である。これは指標 1.1 で掲げている 13 人の約 3 分の 1 にあたる。各分野での内訳は以下の通り（付属資料のミニッ

ツ ANNEX II-2 を参照)。

・農業統計調査　2 人（Mr. Chanchai、Ms. Suraporn）
・情報ネットワークシステム　1 人（Mr. Montol）
・経済分析　2 人（Ms. Pornpun、Ms. Supaporn）

全体的にみて、農業統計調査の分野では多くの C/P に講義・発表の機会が与えられているが、情報ネットワークと経済分析の分野では少数の C/P に限られており、分野での偏りが見られる。それを補うことも含めて、経済分析担当の C/P には、2006 年 3 月に国際ワークショップで活動実績を発表する機会が与えられたが、情報ネットワーク分野ではその様な機会はほとんど無かった。

前述の AFSIS 講師として認められる 5 人の C/P は、全員が課長以上の管理職であり年齢層が高い。プロジェクトの自立発展性を考えると、残りの期間は若手職員に国際舞台での発表・講義の経験を積ませ、AFSIS プログラムで講義を担当する実力を身につけさせることが重要である。今回のインタビュー調査では、多くの C/P が、機会があれば AFSIS プログラムで講義を担当したいと答えており、英語力には依然問題があるものの、C/P の AFSIS に取り組む姿勢は前向きである。

(2) 成果 2：OAE と 9 カ所の ROAE における（主要作物の）データ収集手法が改善される。

2006 年 3 月時点で、主要 5 品目（コメ、キャッサバ、トウモロコシ、サトウキビ、ダイズ）の坪刈調査の全国的な本格調査は一通り終えていた。地方事務所（ROAE）職員への坪刈調査手法の研修も一通り終えており、現場調査を行う短期雇用の調査員（Enumerator、タイ国では Sokoto と呼ぶ）への技術指導研修もすでに ROAE 職員が実施している。調査員の調査状況の確認、収穫したサンプルの収集・計量、記録帳の回収等、坪刈調査の実施管理も ROAE ですでにこなせるようになっている。また、面積調査では、2005 年に OAE 内のワークショップを実施し、現在は全国規模のプリテストを実施している。

この様に坪刈調査の OAE 本局と ROAE 職員への技術指導はほぼ完了しており、OAE 内で坪刈調査が計画・実施できるところまできている。面積調査も坪刈調査と同じアプローチで全国規模の本格調査を実施する準備に入っている。

指標 2.1 で掲げる「収穫時期に合わせた現地調査の実施」については、坪刈調査が本格的に導入されたことにより、主要 5 品目の収量調査は全て収穫時期に計画・実施されるようになっている。

指標 2.2 の「現地調査終了から 4 カ月以内に調査結果ができ上がる」については、2005 年度に実施した坪刈調査の結果では、現地調査終了から 4 カ月以内で全ての主要 5 品目の調査結果ができ上がっていた。これは、坪刈調査と歩調を合わせて開発された、web を利用したデータ入力･処理システムが本格的に導入され、データ入力と同時にデータが処理されることで、データ分析期間を大幅に短縮できたことによるところが大きい（付属資料のミニッツ ANNEX II-3 を参照)。

しかしながら、調査結果が完成した後に、実際に統計データを公表するには、

OAE 内部委員会での内容確認や OAE 幹部の決裁などの手続きを経なければならず、そのデータ確認・決裁過程に数カ月以上、時には 1 年近くを要していた。この OAE 内部の確認・決裁過程の短縮は、今後、正確で信頼性の高い統計データを早期に公表させるための大きな課題である。

指標 2.3 で掲げる「調査結果の精度」については、主要 5 品目の調査結果の誤差（Precision Index）が、全国レベルで 3%以内にあり、地域レベルでもほとんどの値が 5%以内に収まっている。これは坪刈調査で得られた収量調査についての調査結果が信頼性の高いことを表している（付属資料のミニッツ ANNEX II-4 を参照）。

(3) 成果 3 : OAE と 9 カ所の ROAE 間の情報ネットワークシステムが確立・開発される。

プロジェクト開始当初は、試験的に開始した坪刈調査では、地域事務所（ROAE）が Excel シートに収集データを入力し、OAE 本局に Excel シートを電子メールで送り、OAE 本局で集計する作業を採用していた。その後、OAE の予算でフレームリレー機材とサーバーが設置され、OAE 本局と 9 カ所の ROAE がオンラインで接続されたことから、短期専門家の支援を受けて、web ベースでのデータ入力システムが開発された。現在は、全ての坪刈調査の収集データは ROAE でオンライン入力され、そのまま OAE サーバーのデータベースに集積される。入力されたデータは即時に分析され、Web 画面上で調査結果が確認できるようになっている。このシステムの導入より、ROAE で地域毎にデータを集計し、更に OAE 本局で全国データを集計する作業が省け、データ集計と分析作業が大幅に軽減された。

加えて、このシステムは、データ入力の際に実際にあり得ない数値の入力はできない様な入力データのエラーチェックや、他のデータとの比較による不自然なデータを抽出する機能を備えており、収集データの精度を分析段階で更に高めている。

指標 3.1 の「データ処理期間の 50%以上の短縮」であるが、サトウキビを除く対象 4 作物について、2003 年度の OAE で以前に実施していたデータ処理期間と 2005 年度のオンライン入力・分析システムを利用したデータ処理期間を比較すると、コメで約 20%、キャッサバで約 60%、トウモロコシで約 50%のデータ処理期間が短縮された。しかし、ダイズの場合は実際の数字では短縮効果は見られなかった（付属資料のミニッツ ANNEX II-5 を参照）。

このデータ入力･分析システムを本格的に使用し始めたのは 2005 年からであり、新しいシステムに不慣れなため、一部の ROAE ではデータ入力作業が遅れた。同じ作物でも地域・地区毎に収穫期が異なることから、データ収集作業が予想以上に延びることもあり、こうした事情もデータ入力・処理期間に影響した。そのため、開発されたデータ入力・分析システムによる実際の作業時間の短縮効果は非常に高いが、作業行程全体から見ると様々な要因の影響を受けて、現状では 0～60%の短縮効果に留まっている。

指標 3.2 に掲げる「全 ROAE に Web Site が設立される」については、2005 年 2 月までに 9 カ所の ROAE での Web Site が設立され、各担当地域の農業統計情報を掲載している。また、Web Site のアップデートも ROAE 職員が実施している（付属資料のミニッツ ANNEX II-6 を参照）。

(4) 成果 4：農業経済分析手法が開発される

産業連関表（Input - Output Table）、マクロ経済モデル、食料需給モデルの 3 つの経済モデルによる経済分析手法を指導している。マクロ経済モデルと食料需給モデルについては、すでに分析モデルはでき上がり、現在は最新の統計情報を入力してモデルの修正と見直しを行っている。この経済モデルの修正・見直し作業は、C/P が経済モデル毎にタスクチームを作り、独自に取り組んでいる。産業連関表については、最近 2000 年の産業連関表ができ上がり、2006 年 3 月の農業経済分析の国際ワークショップでその結果が報告された。この産業連関表のモデル作りも、C/P によるタスクチームが独自に取り組んでいる。

この様に基本的な経済モデルの形成・分析に関する技術移転はほぼ終了しており、C/P のタスクチームが独自に経済モデル分析に取り組む体制ができ上がっている。しかし、C/P からは、基本的な経済理論や作業手順はすでに理解して実際のモデル分析に取り組めるようにはなったが、数字を扱う細かな作業過程を伴うことから、タスクチームだけで全ての状況に対応できるまでには至っていないとの意見があり、更に数年の実務的な指導が必要との要望があった。

指標 4.1 「年 2 回の経済分析レポート作成」では、プロジェクト 1 年目と 2 年目に 4 冊、3 年目に 7 冊の経済分析の作業結果を記したレポートを作成した（経済分析レポート実績の詳細については、付属資料のミニッツ ANNEX II-7 を参照）。

指標 4.2 は「年 1 回の 3 つの経済モデルの報告」を掲げている。プロジェクト 1 年目と 2 年目の 2 年間にでき上がった経済分析モデルを、産業連関表では 3 回、マクロ経済モデルでは 3 回、食料需給モデルでは 2 回報告した。プロジェクト 3 年目（2005 年 7 月以降）は、まだ経済分析モデルの報告は行われていない（詳細な経済分析モデルの報告実績については、付属資料のミニッツ ANNEX II-8 を参照）。

指標 4.3 では「100 人以上が参加する、経済分析セミナー・ワークショップの年 1 回の開催」を掲げており、プロジェクト 1 年目に 1 回、2 年目に 3 回、3 年目に 2 回、経済分析セミナーや研修を開催した。これらのセミナーや研修は、年 2 回の OAE 総会と併せて開催されることが多く、100 人以上の OAE 内部、外部の関係者を集めている。また、2006 年 3 月にはプロジェクトと OAE が主催で、農業経済分析の国際ワークショップがバンコクで 3 日間にわたり開催され、シンガポール国とブルネイ国を除くアセアン加盟国から、農業経済分析に従事する各国政府の担当者や大学・研究機関の研究者が招待された（経済分析セミナー実績の詳細については、付属資料のミニッツ ANNEX II-9 を参照）。

(5) 成果 5：OAE 職員の研修実施能力が開発される。

坪刈調査手法を中心に現地研修会が実施されており、多くの OAE 本局と地方事務所（ROAE）の職員が研修会での技術指導に従事している。坪刈調査に関しては、すでに ROAE 職員対象の研修を通じた技術指導は終え、ROAE が調査員（Sokoto）の坪刈調査の研修会を企画・実施している。坪刈調査と同様のアプローチで、現場研修会を通じた面積調査の技術指導にも取り組み始めている。

情報ネットワークシステム関連の研修会は OAE が独自に実施しており、その際には AFSIT センターの設備・機材を活用している。しかし、ほとんどの研修会は民間システム会社に外注されており、OAE 本局と ROAE 職員の研修指導能力の向上にはまだつながっていない。

経済分析の研修会は、必要に応じて専門家と C/P の間で適宜開催している。産業連関表セミナー（I/O Seminar）は、他部局の OAE 職員を対象に開催している。

指標 5.1 は「年 8 回の研修会が開催され、300 人の OAE 職員が指導を受ける」である。プロジェクトが予算・人材面で関わった研修会の回数は、プロジェクト 1 年目には 10 回、2 年目には 21 回、3 年目には 8 回に上り、現在までのところ、目標の年 8 回開催は達成している。研修会により指導を受けた OAE 職員の人数は、プロジェクト 1 年目には約 200 人、2 年目には約 260 人であり、目標の 300 人にはまだ達していない。しかし、全体で 700 人規模の OAE の中で、毎年 200 人以上の職員に研修会を通じて技術指導した効果は十分に大きいと考えられる。指標で示された 300 人は努力目標として、今後、取り組むことになると思われる（研修実績の詳細については、付属資料のミニッツ ANNEX II-10 を参照）。

指標 5.2「OAE 本局で 15 人、ROAE で 3 人の職員が研修指導に従事する」については、プロジェクト報告書から、15 人の OAE 本局職員が研修会での指導に従事した経験があることが確認された。経済分析分野では、更に 3 人が産業連関表セミナーで指導経験があることが指摘された（OAE 本局職員の指導実績については、付属資料のミニッツ ANNEX II-11 を参照）。プロジェクト報告書からは、各 ROAE で坪刈調査の研修指導に 2 人従事した経験があることが確認された。また、ROAE での訪問インタビューや質問票調査により、坪刈調査に関しては、多くのデータ収集担当官が研修会で調査員に技術指導できるレベルに達していることも確認された。

２－３　プロジェクト目標の達成状況

プロジェクト目標：OAE が、タイ国の農業統計情報・経済分析、並びに AFSIS の人材養成を支援する、中心的組織として強化される。

プロジェクト目標には、「OAE の農業統計・経済分析の能力強化」と、それに伴う「AFSIS への人材養成支援」の 2 つの目標が含まれている。OAE の能力強化に関しては、OAE の積極的なプロジェクトへの取り組みによって円滑に技術移転が進んでおり、活動計画表（PO：Plan of Operation）に基づいた活動が確実に実施されている。現状のまま、活動計画表に沿ってプロジェクトを実施することによって、プロジェクト終

了時までに、OAE の技術面での能力強化は達成されることが見込まれる。

もう 1 つの目標である AFSIS への人材養成支援では、アセアンやアジア地域でのセミナーやワークショップを通じて、OAE 職員が英語で農業統計や経済分析を指導・発表する機会が徐々に増えてきている。現状では指導や発表に必要な英語力には問題があるものの、OAE 職員の農業統計や経済分析の技術レベルは上がっていることから、プロジェクト終了時までに OAE がより一層の AFSIS への人材養成面の支援ができるものと期待される。

プロジェクト目標の指標 1 は「農業統計情報や経済分析結果の政府・民間機関での活用度」である。しかしながら、坪刈調査で収集した収穫量データは一部の県について最近公表されたに過ぎず、まだ多くの県の収穫量は従来の聞き取り調査に基づいており、全国規模での坪刈調査データの公表には至っていない。OAE は、科学的な裏付けがある坪刈調査で収集したデータは正確で信頼性が高いことを認めているものの、従来の聞き取り調査に比較して、1〜2 割程度も収穫量が高く出ることから、そのデータの活用や公表には慎重を期している。このため、プロジェクト効果として期待されている、統計情報の正確さと信頼性の向上による政府・民間機関での統計情報の一層の活用については、中間評価時点で評価することは難しい。OAE の食料生産統計を活用している FAO アジア太平洋事務所では、現在の統計ではデータをそのまま活用するのは難しいとの意見もあり、坪刈調査や面積調査で得られた統計値の早い段階での公表が望まれる。

プロジェクト目標の指標 2 では「OAE が AFSIS の研修コースの 50%を指導する」を掲げている。OAE が多くの AFSIS の研修・ワークショップを担当しているが、中国や韓国が経費負担して開催された研修・ワークショップもプロジェクト期間中に計 3 回に上った。この中国・韓国主催のプログラムでは OAE 職員が講師として指導する機会が無かったため、OAE が担当した研修・ワークショップ（計 5 回）のみを対象にして、OAE 職員が講義・発表した割合を評価した。OAE が担当した 5 回の AFSIS の研修・ワークショップの内、C/P が担当した講義・発表時間は全体時間の 86%になり、これまでのところ 50%を上回っている（AFSIS での指導実績については、付属資料のミニッツ ANNEX II-1 を参照）。

第３章　５項目評価の結果

３－１　妥当性

(1) タイ国の農業政策との妥当性

タイ国政府が定める第9次国家経済・社会開発計画（2002年～2006年）では、5カ年計画達成のための重点課題として、①公平な経済発展、②生活レベルの向上、③良い統治、④貧困削減を掲げている。そして、良い統治（Good Governance）を実現するためのアプローチとして、政府機関の能力向上と適切な情報ネットワーク形成による、政府業務の効率性と有効性の向上が掲げられている。当プロジェクトは、OAEの農業統計調査と経済分析の能力向上と情報ネットワークシステムの整備を目的にしており、この国家開発計画の重点課題に合致している。

この国家開発計画に基づき、農業・協同組合省（MOAC）では、2004年～2008年の5年間の戦略計画を策定している。この戦略計画は、①農業生産の向上、②付加価値の創出、③国際市場への食料供給、④農家の所得向上、⑤農業行政の効率性の改善の5つを重点戦略として掲げている。更に農業行政の効率性の改善を実現する実施計画の1つとして、農業情報ネットワークの整備と正確な農業情報の伝達が示されている。これは当プロジェクトの実施目的と一致している。

MOAC の公式な方針では、適切な農業開発計画や実施計画を策定するために、的確な農業統計情報と経済分析結果を提供することが、OAEの重要な任務とされている。すなわち、OAEは適切な方法で統計データを収集・分析し、農業経済予測のための経済分析モデルを構築することが常に求められている。この OAEの業務目的と当プロジェクトの実施目的は合致している。

(2) 日本国の援助方針との妥当性

2002年に策定された対タイ国の JICA 国別援助実施計画では、5つの開発重点課題として、①社会開発、②環境保全、③農村開発、④経済インフラ整備、⑤地域協力が掲げられている。更に農村開発の課題解決に向けて、①地方分権化に伴う地方自治体の能力強化、②零細農家の農業経営能力の強化、③農業経営と市場に関する情報の改善の3つの取り組みが示されている。具体的な協力内容として、的確な農業統計情報の提供、情報システム整備のための人材育成、農業情報システムの強化が指摘されており、これは当プロジェクトの目的と合致している。

(3) 日本国の技術優位性

日本国の農林水産省では、農業生産や食料消費の統計調査・分析が長年にわたって実施され、農業統計の調査・分析手法が確立されている。正確で迅速な農業統計情報と経済分析結果は、国家や自治体レベルの農業政策の策定や実施に十分に活用されている。農業情報ネットワークもすでに確立されており、政府、自治体、関係団体が農業統計情報を常に共有できる体制が整っている。

更に日本国は、インドネシア国、シリア国、パラグアイ国等の開発途上国で、

農業統計整備の技術協力プロジェクトを実施した数多くの実績を持っている。この様な技術協力を通じて、様々な現地の作付けや環境に適応した農業統計調査の手法を開発している。

こうした日本国の高度な農業統計や経済分析の技術と、開発途上国の現状に適応した農業統計手法を組み合わせることで、より効果的な技術協力がタイ国で実施することが期待される。

(4) アセアン地域での食料保障支援との妥当性

2001 年、アセアン加盟国に中国、韓国、日本国の 3 カ国を加えた、ASEAN＋3 地域の農林大臣会議がインドネシア国で開催され、①米備蓄システムの共同研究の実施、②アセアン食料安全保障情報システム（AFSIS）の検討が合意された。その後、ASEAN＋3 地域の第 2 回農林大臣会議で、AFSIS プロジェクトの実施計画が承認された。同時に東アジア緊急米備蓄パイロットプロジェクト（EAERR）の実施も承認された。これらの ASEAN＋3 地域の食料安全保障プロジェクトに連携する形で、FAO アジア太平洋事務所でアジア太平洋諸国食料・農業統計の地域データ交換システム強化プロジェクトの実施が始まった。これらのプロジェクトは、ASEAN＋3 地域の食料安全保障プログラムとして展開されている。

AFSIS プロジェクトでは、加盟国の食料安全保障の連携を築き、更に食料安全保障に関する情報やデータを集積・分析することで、アセアン地域の食料安全保障システムの活動計画策定、その活動実施のモニタリング・評価を促進することを目指している。この目標を達成するためには、AFSIS 事務局と AFSIT センターの運営を担当しているタイ国農業経済局（OAE）が、農業情報ネットワークの開発と農業統計や経済分析に関する人材育成に向けた十分な技術能力を備えていることが重要である。当プロジェクトは OAE 職員の農業統計と経済分析の技術能力を高めることを目標としており、アセアン地域の食料安全保障政策にも合致している。

３－２　有効性

(1) プロジェクト目標の達成見込み

すでに２－３の章で述べた通り、プロジェクト目標で示されている OAE の技術面の能力強化と AFSIS の人材養成の支援については、すでに計画通りの成果が上がりつつある。今後も計画通りに活動を実施することができれば、プロジェクト終了時までにプロジェクト目標を達成することが見込まれる。特に AFSIS の人材育成への支援については、中間時までにタイ国で開催した AFSIS の研修・ワークショップ全体の約 8 割を OAE 職員が受け持っており、今後もより一層の OAE による支援が期待される。

現時点では坪刈調査や面積調査で収集された統計データが完全に公表されていないため、正確で信頼性の高い統計データの提供により、他の政府・民間機関の OAE 統計データの活用度に変化があったかどうかを把握することは難しい。しかし、C/P は積極的な取り組みで日本人専門家から技術を吸収しており、OAE の技術面の能力強化は順調に進んでいる。特に、坪刈調査の全国規模の本格調査の実

施と、Web でのデータ入力・分析システムの導入は統計情報・データの改善に大きく貢献している。この様な今までの経過を考えると、プロジェクト活動を通じて、OAE 職員は農業統計調査や経済分析を的確に実施する能力を備えてきており、プロジェクト終了時までに、OAE が他の政府・民間機関に正確で信頼性の高い農業統計情報と経済分析結果を提示することが期待される。

(2) プロジェクト目標達成の促進要因

プロジェクト目標の達成を最も効果的に促進している要因は、OAE 職員の積極的な姿勢である。自ら提案・質問を日本人専門家や OAE 幹部に投げかけたり、自ら研修や調査の計画や実施を取り仕切ったりする等、プロジェクト活動の運営管理を専門家任せではなく、C/P は前向きにプロジェクト活動に取り組んでいる。特に、坪刈調査と面積調査の調査員への研修と現地調査については、すでに OAE 本局と ROAE 職員が独力で計画・実施に取り組んでいる。この様な C/P の積極的な取り組みは、技術移転をより効果的なものにしている。

(3) プロジェクト目標達成に必要な外部要因

プロジェクト目標達成の外部要因の 1 つは「AFSIT センターが円滑に運営される」であるが、AFSIT センターは AFSIS の研修・セミナーだけでなく、OAE の研修・セミナーにも有効に活用されている。2004 年 4 月からの AFSIT センターの活用度は、月平均で約 5 回の研修で約 140 人の OAE 職員が利用している。このことから、AFSIT センターの運営は順調に進んでいることがうかがえる。

もう 1 つの外部要因として「OAE が関係機関との良い連携を保つ」があるが、農業・協同組合省（MOAC）の中で OAE は他の部局と常に連絡を取り合い、政策や実施計画の策定に必要な農業統計情報の提供と共有に努めている。また、OAE は AFSIS 事務局の運営を担当するだけでなく、EAERR や FAO のプロジェクトと連絡を取り合い、アセアン地域の食料安全保障に関する意見や情報交換にも努めている。この様に OAE は MOAC の部局や他機関との連絡を保ちながら、プロジェクトの運営に携わっている。

(4) プロジェクト目標達成に向けた課題

今後、AFSIS の人材育成への貢献を高めるためには、OAE 職員の英語能力の改善が必要である。若手の職員の中には、プロジェクト活動を通じて技術面では十分な能力を備えてきた者も出てきているが、十分な英語力が無いために国際的な研修やセミナーの場で講義・発表する機会が与えられていない。

坪刈調査で得られた収穫量の数値は、従来のインタビュー調査よりも、1～2 割程度高く出ていることから、OAE は坪刈調査のデータの公表と活用には慎重に対応している。そのため、一部の作物で一部の県に限って坪刈調査のデータが採用されているだけで、まだ農業統計全体には正確な数値が反映していない。

３－３　効率性

(1) 成果の達成度

各成果の達成度については、２－２の章に記述した。

(2) 投入の質、量、タイミング

日本人専門家の人数、専門分野、派遣時期は適切だったと思われる。特に、情報ネットワークシステムの 2 人の短期専門家は、Web でのデータ入力・処理システムの開発段階に合わせてタイミングよく派遣され、坪刈調査のデータシステム開発の促進に効果的だった。

地方事務所（ROAE）に供与したパソコンは、情報ネットワークによるデータ入力、web site の設立・管理、調査員の研修会等で特に有効に活用されていた。また、ROAE で管理している坪刈調査の機材（水分計、脱穀機等）も有効に活用され、管理が徹底していた。AFSIT センターに設置されたパソコンやモニター等の研修関連機材は、AFSIS と OAE の研修・セミナーで効果的に活用されている。ミニバンは､地方での研修会や現地調査の時に OAE 職員の移動や機材輸送用として有効に活用されていた。ミニバスは AFSIS や OAE 研修時の現地調査等で活用されているが、その利用頻度は高いとは言えず、今後の課題である。更に OAE 予算で導入されたフレームリレー接続の機材は､プロジェクトの初期段階に OAE 本部と全 ROAE に設置され、Web でのデータ入力・処理システムの開発に大いに貢献している。

日本国での C/P 研修は、C/P の意識を高める上で非常に有効であった。日本国での研修を終えた C/P が、日本国で学んだ内容を下敷きに企画書を作成して、日本人専門家や OAE 幹部に提案するケースが見られた｡実際に C/P が提案した面積調査の企画には実施予算も認められ、全国規模の面積調査のプリテストに早めに着手することができた｡更に C/P 研修に参加した 32 人のうち 11 人については OAE が派遣・滞在費用を負担しており、コストシェアについての認識がよく普及していた。

C/P の人数は 65 人と多いが、当プロジェクトは C/P の所属部署と担当分野を考慮して、関連した業務を割り当てるように心がけ、また同じ業務担当者でタスクチームを作ることで効率的に活動を進めていた。また、ほとんどの C/P は異動もなく、同じ配属先で業務できるように配慮されていた。プロジェクトから離脱する C/P もほとんど見られなかった。

(3) 類似プロジェクトとの費用対効果の比較

他の農業統計プロジェクト（インドネシア国）と比較して、当プロジェクトの効率性を評価した。インドネシア国のプロジェクトは、長期専門家 10 人、短期専門家 31 人が 5 年間にわたり派遣され、2 つのモデル地域（州）での農業生産データ収集と、農業統計データ分析のシステム開発が主な目的であった。それに対して本プロジェクトは、2.5 年が経過した時点で、長期専門家 6 人と短期専門家 7 人が派遣され、すでに全国規模での坪刈調査が一通り実施され、加えて情報ネッ

トワークを活用したデータ入力・処理システムが開発されている。以上により、専門家投入量の観点から、当プロジェクトの費用対効果は高いと考えられる。

(4) プロジェクトの効率性を促進する要因

日本人専門家と C/P はオフィスが近いこともあり、特に定例会を設けていないが、日常から互いに緊密に連絡を取り合い、情報共有や意見交換に努めている。また OAE 本局は地方事務所（ROAE）とは密に連絡を取り合っており、現場での研修会や調査活動を円滑に実施することができる。この様に、OAE 職員が日本人専門家や地方事務所との連絡を緊密に取ることにより、プロジェクト関係者内の情報共有や意見交換がよく進み、効率的なプロジェクト運営に貢献している。

(5) プロジェクトの効率性を阻害する要因

坪刈調査や面積調査の導入により、地方事務所（ROAE）の業務負担が増えており、ROAE 職員への質問票調査では、業務量の多さが第一の問題として指摘されている（ROAE 職員への質問票調査の結果については、付属資料ミニッツの ANNEX III を参照）。坪刈調査では、調査地を訪問して調査員を現地で指導したり、採集したサンプルを入手して事務所に持ち帰ったり、調査員から調査データ記録帳を回収したりする等、ROAE のデータ収集担当者は何度か調査地と事務所を往復しなければならない。調査対象地域は広域であることから調査地への移動にかなりの時間が取られるとの指摘があった。

坪刈調査の収集データは ROAE で直接オンライン入力するシステムになっているが、OAE 本局のサーバーとのリンクが安定せず、度々リンクが切れる事態が起きている。リンクが切れるとデータをサーバーに書き込めないため、一度入力したデータを再入力したり、時にはリンクが回復するまで、夜遅くまで待機したりしなければならない。リンクが切れた時に対応できる様に、ROAE においてオフライン状態で打ち込んだデータをアップロードできるシステムはできないかとの指摘もあった。

経済分析モデルの作成には、OAE が収集する統計データだけでなく、他の省庁や機関が提供する統計データも必要である。しかしながら、他の省庁・機関からの統計データには大きな誤差を含んでいるものも多く、経済分析モデルを作成・見直す上での障害になっている。

３－４　インパクト

(1) 上位目標の達成見込み

当プロジェクトの上位目標は「AFSIT センターで開発された統計情報・経済分析手法がアセアン各国で活用される」と「OAE が提供する統計情報・経済分析により、農業政策・プログラムが MOAC によって効果的かつ効率的に立案・実施される」の 2 つである。

当プロジェクトを通じて、OAE 職員が農業統計調査と経済分析手法を修得することが見込まれることから、プロジェクト終了後も OAE 職員が AFSIS の研修や

ワークショップを通じてアセアン諸国の農業統計や経済分析の担当官・研究者に指導する機会が十分に与えられれば、当プロジェクトでOAEに技術指導した効果がアセアン諸国にも波及することが将来的に期待される。しかし現行のAFSISプロジェクトは2007年までであり、こうしたアセアン諸国への波及効果を期待するためには、AFSISプロジェクトが当プロジェクト終了後も引き続き延長して実施されることが必要な条件である。

農業・協同組合省（MOAC）では、現在でも、OAEが提供する農業統計情報や経済分析結果はタイの農業セクターの開発政策やプログラムの立案・実施に活用されている。当プロジェクトを通じて、OAEがより正確で信頼性の高い農業統計情報や経済分析結果を提供できる様になるならば、MOACの各部局で、より適切で効果の高い農業政策やプログラムが策定されることが将来的に期待される。そのためには統計情報の迅速な提供が必要であり、データ分析終了後のデータ公表までの手続きもできるだけ短縮化されることが望まれる。

(2) 農業統計や経済分析に与える相乗効果

当プロジェクトは主要5作物（コメ、キャッサバ、トウモロコシ、サトウキビ、ダイズ）に調査対象を絞り込んで坪刈調査を導入し、その研修と現地調査を実施してきた。OAEでは坪刈調査の有効性を十分に理解し、より多くの農産物を対象に坪刈調査を実施したいとの意向がある。OAEはロンガン、パイナップル、タマネギを坪刈調査の対象作物に追加し、2005年からOAE独自でこれら追加作物の坪刈調査を開始した。今後もドリアン、ニンニク、天然ゴム等にも坪刈調査を導入したいと考えている。

フレームリレー接続がOAEに導入されたことにより、Web上でのデータ入力・処理システムの導入が可能になり、すでに当プロジェクトで開発されたシステムは、実際に坪刈調査と面積調査のデータ入力・処理に有効に活用されている。このオンライン入力システムの開発に刺激を受けて、OAEが従来から使用しているデータベース（インタビューによる収穫量調査、価格調査、消費調査等）のプログラムを、Web上でデータ入力できるように独自に書き換えている。またOAEが実施する食料消費調査について、当プロジェクトで開発したプログラムをベースにしたデータ入力システムを作成している。この様に、当プロジェクトの情報システム開発は、OAE内のシステム担当職員に独自開発を促すほどの刺激を与えている。

３－５　自立発展性

(1) 制度・組織面

OAE職員は積極的にプロジェクト活動に取り組んでおり、坪刈調査と面積調査に関してはかなりの技術と業務を修得している。そのためC/Pにかなりの業務を任せても、現地での研修や調査を円滑に実施できる。特に、短期雇用の調査員（Sokoto）への坪刈調査の研修・指導では、地方事務所（ROAE）職員が独自で計画・実施できるレベルまで達している。

経済分析に関しては、マクロ経済モデルと食料需給モデルについては、C/P が見直し・修正するところまで、基本的な技術レベルは上がっている。また、産業連関表も 2000 年のモデルが完成し、その作成過程を通じて、C/P は産業連関表の基本理論と技術を修得している。

当プロジェクトに従事する OAE 職員については、プロジェクトの進捗に応じ、徐々に人数を増やしてきている。プロジェクト 1 年目では C/P は 39 人だったが、2 年目は 63 人に増加した。これは、本格的に坪刈調査と面積調査を実施するために、各 ROAE のデータ収集担当課長を農業統計調査の C/P に含めたことと、経済分析の専門家が短期から長期に切り替わったことにより、経済分析を担当する C/P を増やしたことに起因している。この様にプロジェクト活動の進展に合わせて C/P が増えてきており、これは OAE のプロジェクト運営を支える体制が徐々に強化されていることを意味している。

この様に一部の業務は OAE が主体的に実施していること、プロジェクトの展開に合わせて OAE のプロジェクト運営体制が徐々に強化されていることから、制度・組織面でのプロジェクトの自立発展性が将来も維持されるものと期待される。

将来的な制度・組織面の不安材料として、現在のタクシン政権が掲げている行政改革の実施により、OAE の組織がどの様に取り扱われるのかが明確でないことが挙げられる。OAE の見解では、OAE の組織体制は行政改革の影響を受けないし、それに関する話は一切無いとしている。農業・協同組合省（MOAC）内では、行政改革による部局の組み直しの話は出ているものの、具体的な改革案は何も決まっていない状態である。おそらく当面は OAE の組織を改編する話は出てこないことが予想される。しかし、農業局、水産局等の現業に密着した部局とは異なり、OAE は基本的に調査専門局であり、現業の組織・団体や議員との結びつきはさほど強くないため、将来、行政改革の対象になる可能性もあると思われる。今後、この件に関しては、十分なモニタリングが必要である。

(2) 財務面

JICA 側は技術移転費用として、研修会に参加した調査員の日当、食費、宿泊費、調査用作業着代等を負担し、OAE は研修会や現地調査の費用の大部分だけでなくフレームリレー接続を活用した情報ネットワークの維持管理費用も負担している。この様に、研修や調査等のプロジェクト活動の主な実施費用は OAE で準備できることから、プロジェクト終了後も、OAE は同様の研修や調査を継続して実施するための十分な予算を用意することが期待される。

(3) 技術面

坪刈調査は科学的な根拠に基づいた手法であると同時に、理解し易い簡便な手法でもある。そのため、初めて統計調査に参加する短期雇用の調査員でも、数日の研修会で坪刈調査の理論と実践を十分に習得することができる。この坪刈調査の簡便さは、短期間に全国規模で現地調査を円滑に実施できたことの一因になっている。

また、当プロジェクトで開発した、オンラインのデータ入力・分析システムの導入をきっかけに、OAE のシステム担当職員がフレームリレー接続を活用した情報システムのプログラムを独自に開発し始めている。今後も当プロジェクトが情報ネットワークシステムを開発・改善することで、プロジェクト終了後も OAE が引き続き情報システム開発に強い関心を持ち続け、農業情報ネットワークの構築が促進されるものと期待される。

第４章　評価結果

この様な評価結果を総合的に判断し、C/P への技術移転は順調に進んでおり、当プロジェクトはほぼ計画通りに進捗しているとの結論に達した。プロジェクト目標や成果の一部には、すでに達成している事項も見られる。この順調なプロジェクトの進捗は、日本人専門家と C/P が緊密な連絡を取り合い、プロジェクト計画（PDM）に基づいて活動を進めていることが第一の要因である。

プロジェクト目標の観点では、OAE の技術面の能力強化については、PDM 上で予定された成果が順調に現れつつある。しかし AFSIS の人材養成への支援については、期待された成果が十分に現れているとは言えず、今後の一層の努力が必要と思われた。

しかし、プロジェクト目標の達成を阻害する細かな要因はあるものの、全体的にプロジェクトは順調に進捗しており、プロジェクト後半も現行の PDM と PO に沿って活動することで、終了時までにプロジェクト目標の達成が期待されると考えられた。このため、今回の中間評価では PDM や PO の内容を確認するだけで、内容の変更は行わないとの結論に達した。

４－１　OAE 職員の能力強化

坪刈調査に基づくデータ収集については、OAE 本局と ROAE 職員が坪刈調査の手法を修得し、現地の研修会の開催と現地調査の実施管理を十分に任せることができる技術レベルに達している。しかしながら、面積調査はまだプレテストの段階であり、坪刈調査の同様なレベルで全国規模の現地調査により、正確なデータを収集するためには、より一層の努力が必要である。

情報ネットワークシステムに関しては、Web でのデータ入力・処理システムの導入により、大幅にデータ処理業務を軽減することができた。しかし、構築されたデータベースは 1 年分もしくは 2 年分のデータの集積にしか対応しておらず、ここ数年のデータには十分な対応ができていない。

経済分析に関しては、C/P は、日本人専門家の指導を通じて、最新のデータを入力して経済分析モデルの作成と見直しができるまでの、一通りの技術を身につけている。今後の経済分析の課題は、経済モデル作成と分析の経験を更に積むことで、より深く経済分析手法を理解することである。

研修に関しては、供与された研修関連機材を十分に活用し、OAE 職員の能力向上のための様々な研修プログラムが実施された。最近では、研修プログラムの企画・運営は、OAE 職員が連絡を取り合い、独自に取り組んでいる。

４－２　AFSIS の人材養成事業への支援

OAE の技術面での能力強化が順調に進む中で、数人の C/P は当プロジェクトを介して AFSIS の研修やワークショップで指導する機会を得ることができた。しかし、AFSIS の研修講師としての十分なレベルに達していると認められる C/P は 5 人だけで、目標の 13 人に達していない。英語能力の向上には努力が必要であるが、C/P の多くは AFSIS

で講師を務めることを希望しており、今後の取り組みが期待される。

第５章　提言

前述の調査結果を受けて、後半のプロジェクト実施に向けた提案として、以下の事項を提言した。

(1) 坪刈調査と面積調査の運営体制

地方事務所（ROAE）では、坪刈調査と面積調査の実施により、大きな業務負担を感じている。そのことから、OAE 本局は ROAE が抱えている現地調査の業務負担を軽減するための対策を講じることが必要である。例えば、OAE 本局と ROAE の代表者が集まって話し合う場として両調査の運営委員会を設置し、坪刈調査と面積調査を効率的・効果的に実施するための調整を行う様にすることが考えられる。

(2) データ分析と予測

現在、OAE は坪刈調査や面積調査によるデータ収集に労力を割いており、坪刈調査では、主要 5 作物だけでなく、更に調査対象作物を追加して独自で調査を開始している。しかしプロジェクト後半では、データ収集のみに手を広げて労力を費すべきではなく、データ分析とそれによる生産量の予測にも必要な労力を割くべきである。データ分析と予測は、累年データから傾向を見い出し、収穫前に生産量を的確に推測する上で重要な作業だからである。適切な時期に的確な政策判断をするためにも、データ分析と予測の作業は非常に有効である。

(3) 累年データのデータベースの構築

プロジェクトが開発した、現在の坪刈調査の Web でのデータベースシステムは、1 年目から 3 年目までのデータを集積できる。しかし、複数年のデータ処理しかできないこと及び今後、坪刈調査を継続して実施することで、毎年新しいデータが集まることから、複数年のデータを集積・処理できるデータベースの開発が必要である。なお累年データに対応したデータベースを構築することにより、それぞれの年のデータを細かく比較できるため、全国または地域別の収穫量の予測に有効なツールとしての活用が期待される。

(4) AFSIS の研修講師の育成

OAE の AFSIS の人材養成事業への支援を強化するために、OAE 職員は国際的な、もしくはアセアン地域の研修やセミナーで、講師やパネラーを務める経験を積む機会をもっと与えられるべきである。その準備として、OAE 職員はより一層の農業統計調査や経済分析の能力向上に努めるべきである。また、英語の能力不足が国際舞台での発表意欲をくじいてしまうこともあるため、OAE 職員の英語力を向上させる努力が必要である。

(5) OAE の統計データの調整

坪刈調査で収集された収穫量データは、最近、OAE が出版している農業統計データに部分的に反映されるようになったが、まだ全面的な坪刈調査データの採用には至っていない。それは全ての県の坪刈調査データの採用に、OAE 内で公式な合意が得られていないからである。このため、現在、他の政府・民間機関は、坪刈調査で収集されたデータを利用することができない状況にある。正確で信頼性の高い統計データの活用を促進するため、OAE は坪刈調査や面積調査データの公式な採用により一層の努力をすべきである。

(6) 統計データや情報の公表

広く一般に正確で信頼性の高い農業統計データを活用してもらうために、OAE はメディアを活用して、農業統計調査や経済分析の全ての結果を一般に公開すべきである。この広報活動は、一般の人々の関心を農業統計・情報へ引きつけるだけなく、より多くの組織や団体での OAE 統計情報の活用を促進することにも有効な手段である。

第６章　教訓

(1) コストシェア

プロジェクトの実施経費はOAEとJICAでうまく分担されており、OAEは、研修費用の一部、現地調査の費用、現地調査の必要機材の購入費用及び日本国でのC/P研修の派遣費用等を、主に負担していた。このOAEの高い割合での費用負担は、OAE自身の当プロジェクトへのオーナーシップを強めている。C/Pは当プロジェクトの成功を真剣に考え、独自の提案や意見を日本人専門家に躊躇なく投げかける雰囲気ができ上がっていた。現在の多くの活動は、C/Pの企画や提案に基づいて実施されている。この様なコストシェアによる対等な関係に基づいた技術協力スタイルは、タイ国の様な中進国の発展段階に適している。

(2) 技術の単純さ

坪刈調査は非常に簡便な手法で、短期雇用の調査員でも数日間の研修会を受けるだけで、調査理論と手法を理解することができる。また、データ記録帳やマニュアルに記載された手順に沿って現地調査を進めれば、調査員だけで迷わずに現地調査ができる様な工夫もされている。実際に現場でサンプルを収穫する調査員は統計調査の素人だが、この様な調査技術を簡便にし、誰でも理解しやすく工夫することで、収集されたデータの誤差は数%以内に留められている。この様に、技術移転を成功させる一つの鍵として、現地の状況に応じた適正な技術の開発が挙げられ、それは広範囲の円滑な技術普及を促進する上でも重要である。

付 属 資 料

Minutes of Discussions
between
The Japan International Cooperation Agency
and
The Authorities Concerned of the Government of the Kingdom of Thailand
on
The Agricultural Statistics and Economic Analysis Development Project
Mid-term Evaluation

The Mid-term Evaluation Team (hereinafter referred to as "the Team") organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Shoichi Okumura, was conducted in the Kingdom of Thailand from February 27 to March 22, 2006, for the purpose of the mid-term evaluation of the Agricultural Statistics and Economic Development Project (hereinafter referred to as "the Project").

During the stay in Thailand, the Team assessed the achievements of the Project since its commencement in July 2003 and up to March 2006 by reviewing documents, interviewing relevant individuals and observing project activities. The Team also exchanged views with the concerned authorities of the Kingdom of Thailand in the Joint Coordinating Committee on March 22, 2006.

Through these exercises, both the Japanese and Thai parties came to an agreement regarding the evaluation results including recommendations as described in the Mid-term Evaluation Report attached hereto.

Bangkok, Thailand
March 22, 2006.

Mr. Shoichi Okumura
Deputy Resident Representative of JICA
Thailand Office

Leader of Mid-term Evaluation Team
Japan International Cooperation Agency

Ms. Anchalee Ooraikul
Secretary General of Office of Agricultural Economics

Ministry of Agriculture and Cooperative
Kingdom of Thailand

Mid-term Evaluation Report

1. Background and purpose of the study

In Thailand, the international financial crisis in 1997 and following serious economic contraction starting in June 1997 have newly raised the social and political awareness on agriculture and its related sectors' importance in national social and economic development. The sector was relatively stable during the economic crisis and absorbed adversely affected unemployed people. Consequently, expectations for the sector for national development have risen. Under these circumstances, the Government of Thailand has to respond to the above issues with the appropriate and timely policy and program / formulation and implementation for agriculture and related sectors, and for wider social problems. For formulation of proper policies and programs, comprehension of the real situation is essential. At present, however, agricultural statistics and economic analyses are not sufficient in accuracy / reliability and are not released in a timely manner.

Furthermore, the ASEAN Food Security Information and Training (AFSIT) Center, the executive body for the ASEAN Food Security Information System (AFSIS), was established in the Office of Agricultural Economics (OAE) under the Ministry of Agriculture and Cooperatives (MOAC) of Thailand. AFSIS mainly contributed to establishing the information network to promote the sharing of information regarding food security among ASEAN members' countries. The operation of the AFSIT Center including international training for AFSIS member countries in terms of technical skills and knowledge, as well as exemplary practices in agricultural statistics and economic analyses for the AFSIS, however, exceeds the current capability of the OAE.

Aiming to solve these problems the Government of Thailand requested the Government of Japan for a technical assistance project for the agricultural statistics and economic analyses development. After a series of discussion and preparatory studies, both parties agreed to implement the Agricultural Statistic and Economic Analysis Development Project to strengthen the capacities of OAE for crop data collection, information network system and macroeconomic analysis in the agricultural sector in Thailand and the human resource support to the AFSIS program. The Project was officially initiated in July 2003 to last five years.

The JICA Mid-term Evaluation Team was dispatched in order to monitor and assess the project achievement since the commencement of the Project up to March 2006, from the perspectives of relevance, effectiveness, efficiency, impact and sustainability, and to come up with recommendations for better project management for the rest of the cooperation period.

2. JICA Mid-term Evaluation Team members

Member's Name	Position
Mr. Schoichi Okumura	Deputy Resident Representative, JICA Thailand Office
Ms. Patchara Kosinanont	Program Officer, Thailand International Development Cooperation Agency
Mr. Michiya Otsuka	Deputy Director, Statistic Planning Division, Statistic Department, Ministry of Agriculture, Forestry and Fisheries
Ms. Akemi Inoue	Assistant Resident Representative, JICA Thailand Office
Mr. Mitsuo Iinuma	Consultant, Consulting Division, IC Net Limited

3. Methodology of evaluation

3-1 Method of survey

The Mid-term Evaluation Team (hereinafter "the Team") conducted an extensive review of documents and other materials produced during the course of the Project as well as other sources to quantitatively assess the Project's achievements. The Team also conducted a qualitative assessment through interviews and field observations. The results of these exercises was presented and reviewed in the Joint Coordinating Committee meeting held on March 22, 2006, and finalized as included in this report.

3-2 Method of evaluation

1) Definition of evaluation

An evaluation is an assessment in as systematic and objective a manner as possible of an ongoing or completed project's design, implementation and results. The aim is to determine the relevance of the objectives, effectiveness, efficiency, impact, and sustainability and the extent to which they have been fulfilled. An evaluation should provide information that is credible and useful. Based on the evaluation, recommendations will be made for the project and the lessons learned will be incorporated into similar types of projects.

2) Methodology of evaluation

The evaluation is conducted by comparing the design and outcomes of the project using five evaluation criteria: relevance, effectiveness, efficiency, impact, and sustainability. In this method, the Project Design Matrix (PDM) represents the project design.

An Evaluation Grid is produced to compare the outcomes of the project with its design. Evaluation and survey items are set for each of the above criteria, and a means of verification is decided. In addition, information related to indicators in the PDM is collected by the project prior to the survey

of the Team. This evaluation report will be produced based on the data that was obtained through this process and analyzed in terms of the five evaluation criteria.

3) Criteria of Evaluation

The Team reviewed all the activities and achievement and evaluated the Project based on the following five aspects.

a) Relevance

An overall assessment of whether the project purpose and overall goal are in keeping with the policies of the counterpart country and donors and with the counterpart's needs and priorities.

b) Effectiveness

A measure of whether the project purpose has been achieved. This is then a question of the degree to which the outputs have contributed to the achievement of the intended project purpose.

c) Efficiency

A measure of the extent to which the Product has generated outputs (results) in relation to the total resource inputs.

d) Impact

The positive and negative changes, produced directly and indirectly as the result of the Project, which have foreseen and unforeseen consequences for the society.

e) Sustainability

An overall assessment of the extent to which the positive changes achieved by the Project can be expected to last after the completion of the Project.

4. Revision of PDM

Based on a the discussion with the experts, counterparts and the members of the Team to review the Project Design Matrix (PDM) and Plan of Operation (PO), any revisions of the PDM and the PO were not made at this point. The PDM of the Project is attached as ANNEX I-1.

5. Achievement of the Plan

Achievement of the Plan is determined based on the Achievement Grid (ANNEX I-3) prepared by the Team. The results of the evaluation are as follows.

5-1. Achievement of inputs

1) Inputs from the Japanese side

a. Dispatch of Experts
Six (6) long-term experts and total of seven (7) short-term experts have been dispatched as planned. The list of the experts is attached in ANNEX I-5.

b. Provision of equipment, machinery and materials
Equipment, machinery and materials were provided to carry out the activities effectively as planned as shown in ANNEX 1-6.

c. Training in Japan and technical exchange of OAE counterparts
A total of thirty-two (32) counterparts have visited Japan to participate in technical training. In addition, seven (7) counterparts have visited Indonesia and Laos in technical exchange. The list of trained personnel is attached in ANNEX I-7.

2) Inputs from the Thai side
a. Provision of facilities
The facilities that are essential for the Project, such as office space, have been provided.

b. Assignment of counterparts
Total sixty-five (65) counterparts in OAE have been designated for the Project. The list of assigned counterparts is attached in ANNEX I-8.

c. Provision of equipment and materials
The necessary equipment on data collection and information network system for the Project was also provided by OAE, especially equipment for crop cutting and planted area survey, and internet frame relay system.

d. Allocation of budget
OAE bore expenses for field survey, training and economic analysis other than salary for counterparts and miscellaneous expenses. Details are shown in ANNEX I-10.

e. Cost sharing of training of OAE counterparts in Japan
Regarding eleven (11) out of 32 counterparts' trainees mentioned above, OAE bore most cost for them to participate in technical training in Japan. The personnel trained through the cost sharing of OAE are listed in ANNEX I-7.

5-2. Achievement of Outputs

1) Output 1: *Human Resources of OAE are developed for data collection methodology, information network system and agricultural economic analysis, including demand-supply forecasting, for ASEAN member countries.*

In the Project, OAE counterparts have already acquired experience in giving lectures and presentations on the agricultural statistic survey, information network system and economic analysis through a series of seminars, workshops and training sessions of AFSIS. In addition, some counterparts participated in a technical exchange program with Indonesia and Laos, and

presented their own activities to agricultural statisticians in those countries. Other counterparts were given opportunities to present the result of their agricultural economic analysis at the International Workshop on Agricultural Economic Analysis that the Project hosted in March 2006.

At this point, only five (5) OAE staff members seem to be qualified as instructors for AFSIS programs, if the minimum requirement for AFSIS instructors is tentatively defined as having given more than two lectures of certain subjects on agricultural statistics and economic analysis in English (refer to ANNEX II-2). It means that about one third of 13 staff members who are the target of Indicator 1-1 on the PDM are qualified at present.

The following OAE staff members can be regarded as qualified instructors for AFSIS programs: two (2) staff members in data collection, one (1) staff member in data processing & information network system, and two (2) staff members in economic analysis.

2) Output 2: *Data collection methodology (mainly for major food crops: rice, cassava, sugarcane, maize, soybean) in OAE and 9 ROAEs is improved.*

By introduction of the crop cutting survey to OAE and ROAEs, the regular activities of production data collection in those offices have been changed dramatically. OAE used to carry out interview-based surveys to collect crop production data before the Project. Now OAE and all ROAEs have completely adopted the crop cutting method through the training sessions and practical activities. Most staff members of OAE and all ROAEs in charge of data collection can conduct training sessions and data collection of crop cutting survey by themselves.

In case of area survey, the Project has carried out a nationwide pre-test since September 2005 and currently analyzes the data collected at sampling places.

The crop cutting survey needs to collect production data exactly at the harvest time; therefore, the schedule of production surveys in OAE automatically corresponds to the crop harvest season. Accordingly, at present, OAE and ROAEs carry out the crop cutting surveys of 5 major crops at the harvest time on their original action plans. Thus the indicator 2-1 on the PDM, i.e., "the production survey is conducted at the harvest time of each major food crops by July 2007", has been almost accomplished.

Reduction of the data processing period is the target of the indicator 2-2 (refer to ANNEX II-3). According to the time table of data processing reported by OAE, the entire period of data processing for rice, cassava, sugar cane and maize takes within four (4) months in case of crop cutting survey plus web-based data input and processing system. The results showed that the web-based data input and processing system introduced by the Project effectively shortened the time for data processing itself. If OAE can shorten the period of data finalization, it will effectively reflect the utilization of statistical information by public and private organizations.

The precision index of the crop cutting survey presents the accurate degree of data collection. Most precision indexes are less than 5 % at regional level and 3 % at national level. It means that

the accuracy of data collection by OAE has been guaranteed (refer to ANNEX II-4). The precision index of area survey has not been calculated yet, because the data analysis of the area survey is still in progress at present.

3) Output 3: *Information Network System between OAE and 9 ROAEs is established and developed further.*

By the establishment of the web-based data input system on the frame relay connection, the time for data input and processing is shortened, compared to that of regular data processing of an interview survey. Under the new system, only ROAEs directly input crop cutting data in OAE servers; at the same time, the input data are automatically analyzed in the web system. It completely eliminates the burden of data input in OAE, which occurred after data sheet collection from ROAEs in the previous processing procedure.

As the table of ANNEX II-5 simply compares total periods of data processing of production data between those by interview survey with OAE old program in 2003 - 2004 and those by crop cutting survey with web-based data input in 2004 - 2005, the processing period of rice production data was reduced by one month (about 20 %), that of cassava was reduced by five months (about 60 %) and that of maize was reduced by two months (about 50 %). In case of soybean, the processing period was not changed. At present, it is difficult to compare the data processing process for sugar cane, because its interview survey was not conducted by OAE.

The total period of data processing is easily affected by some external factors, such as delay in data submission and differences in harvest periods in regions. Thus the period doesn't completely reflect the actual effect on the data processing of the introduction of the new online system. However, it is fair to say that the introduction of the online system reduced the data processing period by 0 % to 60 %.

After the provision of computer sets and the internet connection of frame relays were completed for all ROAEs, all ROAEs made their original websites by February 2005 to share agricultural statistical information with related institutions and organizations and the public in the region (refer to ANNEX II-6). Their websites were completely managed and updated by the ROAE staff members who were trained by the Project.

4) Output 4: *Methodology for agricultural economic analysis is developed.*

Despite the one year delay in the dispatch of a long-term expert, the progress of activities was accelerated by positive efforts of the expert and counterparts and the actual activities have almost caught up with the planned schedule.

The macro economic model and commodity demand-supply model had been formulated on the existing data. The counterparts had the ability to analyze those economic models through the guidance and training sessions of the Project, and regularly revise the models by the input of the latest data by themselves. The input-output table in 2000 was almost completed by the expert

Achalee Osmild

and the counterparts, and presented to ASEAN member countries in the international workshop held in March 2006.

According to the Project reports, economic analysis reports were issued twice a year, the above-mentioned three economic models were presented in OAE seminars once a year, and a seminars or workshop with more than 100 participants was held once a year (refer to ANNEX II-7, 8, 9). Therefore, all indicators for Output 4 have been accomplished.

Meanwhile, according to the interview with counterparts, they considered not to deeply understand the practical handlings and operations of economic analysis models by themselves because of only a few years' experiences, even though they have acquired the basic theory and practice of economic analysis through the Project.

5) Output 5: *Training capacity of OAE staff is developed.*

Regarding training sessions, the Project has held thirty-nine (39) courses in total since the beginning of the project. Many of them have been crop cutting training sessions for five (5) major corps for OAE and ROAE staff members and enumerators (refer to ANNEX II-10). According to the Project reports, about 550 OAE and ROAE staff members have already participated in the training sessions of the Project.

On the indicator 5.1 on the PDM, the Project has attained a target of eight (8) training courses every year, but has not reached another target of 300 trained staff members every year. However, 209 participants in 2003 - 2004 and 262 participants in 2004 -2005 are sufficient to effectively transfer the skills of crop cutting, data processing and economic analysis to OAE and ROAE staff members.

At this point, fifteen (15) OAE staff members have experience in teaching agricultural statistics and information to ROAE staff members and enumerators (refer to ANNEX II-11). In addition, the project reports confirm that two (2) staff members of each ROAE also have experience in teaching crop cutting to enumerators. According to the interview with ROAE staff members, more than three (3) staff members have already instructed crop cutting to enumerators in training sessions. Moreover, All ROAEs have started holding crop cutting training sessions by themselves this year. Thus the ROAE staff members in charge of data collection have already mastered the crop cutting skills through the Project's training sessions.

5-3. Achievement of Project Purpose:

Project Purpose: *OAE is strengthened as an institution with a central role in statistical information and economic analysis in terms of agricultural policy in Thailand and in supporting human resources development in AFSIS.*

Many official publications, such as reports, statistics and journals, are issued by OAE to disseminate statistical and economic information on the agricultural sector to public and private organizations concerned (refer to ANNEX II-12). However, OAE publication has only partially

reflected the outcomes of the Project. The crop production information in some provinces has been already adjusted; while, it has not been in others. Accordingly, at this mid-term evaluation, it is difficult to measure how effectively the improvement of statistical data quality and economic analysis promotes the utilization of OAE publications and information.

OAE has organized three (3) workshops and two (2) training sessions in AFSIS during the project period. On average OAE staff members took 86 % of all lectures, practices and presentations in the training and workshops (refer to ANNEX II-1). The OAE share of the AFSIS program is already beyond 50 %, which is shown in the indicator 2 for the Project Purpose.

6. Evaluation Based on Five Evaluation Criteria

Result of the evaluation based on five evaluation criteria are described as follows. Details of each evaluation result can be referred to the Evaluation Grid attached in ANNEX I-2.

6-1 Relevance

The Project is relevant in terms of the need of OAE, the agricultural policies of Thailand, and the cooperation policy of the Japanese government.

1) Relevance to the need identified in the agricultural policies and programs in Thailand
The Government of Thailand including the Ministry of Agriculture and Cooperative (MOAC) formulated the five-year policies and programs for (1) balance economic development, (2) quality of life, (3) good governance and (4) poverty alleviation, which are the necessary targets for the objectives of the Ninth National Economic and Social Development Plan (2002 - 2006). As the first approach for good governance, the National Development Plan aims to upgrade the efficiency and effectiveness of the public sector by capacity building and reliable information system. Because the Project seeks to develop the technical capacity of OAE staff members and information network system for agricultural statistical information and economic analysis, the concept of the Project is consistent with the approach of the National Development Plan.

Corresponding to the national development plan, MOAC established the Ministry Strategic Plan 2004 - 2008, which is composed of the five main strategies: (1) increase of food productivity, (2) creation of added value, (3) food supply for the international market, (4) enrichment of farmers' lives, and (5) efficiency of the agricultural administration system. As one of the implementation plans to improve the efficiency of the administration system, the Strategic Plan states the development of an agricultural information network and the dissemination of proper agricultural information, both of which match the contents of the Project.

In MOAC, OAE takes responsibility for disseminating the statistic and economic information, which are utilized to properly reflect the agricultural policy. Therefore, OAE needs to collect and analyze the statistic data in a proper fashion and develop economic analysis models at all times. The OAE's need is also in line with the concept of the Project.

2) Relevance to the priority of the cooperation policy of the Japanese government
The JICA Plan for the Country-specific Implementation Program that was set in 2002 identifies the five following priority development issues for assistance to Thailand: (1) social development, (2) environmental conservation, (3) rural development, (4) economic infrastructure and (5) regional cooperation. The issue of rural development includes (a) capacity building of local government on the decentralization policy, (b) strengthening of agricultural management capacity of small-scale farmers, and (c) improvement of information of agricultural management and market. Moreover, as a priority for rural development, the JICA plan indicates the cooperation for the purpose of proper agricultural statistics, human resource development for information systems, and strengthening of an agricultural information system, all of which are completely consistent with the concept of the Project. The matter of regional cooperation is mentioned below in 4).

3) Advantage of Japanese technologies
Japan has long experience in carrying out agricultural statistical survey and analysis for crop production and consumption. The statistical data and information are highly accurate and reliable for policy planning and implementation in the agricultural sector. In addition, the network system for agricultural statistic data and information was utilized to make smooth communication between local authorities and the central government for a long time.

Moreover, Japan has experienced the technical cooperation of agricultural statistics to several developing countries, such as Indonesia, Syria and Paraguay, and developed applied methods suitable for the farming types and environmental conditions in the target countries.

The combination between advanced technology and applied methods in agricultural statistical survey and analysis is expected to make a synergetic effect on the Project in Thailand.

4) Relevance to the needs of the ASEAN region
In the Ministerial Meeting of Ministries of Agriculture and Forestry of ASEAN Member Countries, China, Japan and the Republic of Korea (AMAF+3) held in Indonesia in 2001, the following undertakings were agreed upon: (1) the implementation of the joint study on a rice reserve system; and (2) the development of the ASEAN Food Security Information System (AFSIS). The project implementation plan for the AFSIS project was agreed upon at the 2nd AMAF+3 meeting held in Laos in 2002. At the same time, the implementation of the East Asia Emergency Rice Reserve (EAERR) project was also agreed. In collaboration with two regional projects to contribute to regional food security in the ASEAN+3 region, FAO simultaneously started another project titled "Strengthening Regional Data Exchange System on Food and Agricultural Statistics in Asia and Pacific Countries". These projects compose a regional cooperation program for food security especially in the ASEAN+3 region.

The purposes of AFSIS are to facilitate planning, monitoring and evaluation of the food security system in ASEAN region by the organized collection and compilation, storage and analysis of the data and information. To achieve the purposes above, OAE in Thailand, the host organization of the AFSIS secretariat and the AFSIT center, has enough technical capacity for information network system development and human resource development regarding agricultural statistic

survey, information network system and economic analysis. The JICA project contributes to strengthening the technical capacity of OAE staff members, who are expected to support the human resource development in ASEAN member countries through the AFSIS project.

6-2. Effectiveness

1) Prospect of achievement of Project Purpose

The Project has achieved support to human resource development in the AFSIS project. As noted above in Section 5-3, OAE staff members have taken charge of 86 % of lectures in AFSIS training sessions and workshops organized by OAE. If OAE can continue to contribute to AFSIS projects as it does now, the Project Purpose in the aspect of human resource development in AFSIS is expected to be achieved at the completion of the Project.

Because the statistical data and information by crop cutting survey have not yet been published by OAE, it is difficult to know how other organizations utilize the improved statistical data and information at this point. However, OAE staff members aggressively absorbed the methodologies introduced and developed by the Project and the technology transfer to OAE staff members went smoothly in the past project period. The implementation of nationwide crop cutting survey and the introduction of the web-based data input and processing system particularly contributed to the improvement of statistical information. In consideration of the current progress of capacity building in OAE, OAE is expected to perform well in conducting statistical survey and economic analysis and provide reliable statistical information and economic analysis to other organizations and the public by the completion of the Project.

2) Contributing and constraining factors for the achievement of Project Purpose

As mentioned above, OAE staff members are actively involved into the project activities to absorb technical skills and methodologies from the Japanese experts. At present, some project activities are managed and conducted by only OAE staff members. In case of crop cutting survey, OAE staff members can plan and conduct the field survey by themselves. The high motivation of OAE staff members contributed greatly to strengthening the capacity building of OAE.

3) Changes in important assumptions

The AFSIT Center is effectively utilized for AFSIS training sessions and workshops as well as OAE training courses. On average, about 140 participants use the facility and equipment of the AFSIT Center every month. The smooth operation of the AFSIT Center promotes the utilization of its facility and equipment.

OAE often contacted other departments and offices in MOAC to disseminate and share the statistical data and information in the agricultural sector. Moreover, OAE also has a channel to communicate with the AFSIS and EAERR projects and the FAO agricultural statistics project to exchange ideas for the development of an agricultural statistics and information for food security.

4) Important issues in achieving Project Purpose

A good command of the English language is a fundamental requirement for teaching the participants from ASEAN member countries in the AFSIS training and workshop. If OAE

considers supporting larger human resources in AFSIS than the current level, OAE staff members need to improve their English skills by themselves.

Compared with the existing interview survey, the result of crop production by crop cutting survey is higher. OAE should make a consensus to adopt the result of crop cutting survey and adjust the existing statistics as soon as possible.

6-3. Efficiency

Achievement of outputs went according to the plan. The present condition of achievement of outputs is discussed in Section 5-2.

1) Quality, quantity, and timing of inputs
The numbers, specialties and timing of dispatch of Japanese experts were appropriate. The good timing of the dispatch of two short-term experts on information network systems contributed especially to developing the data input and processing system for crop cutting survey effectively.

Crop cutting equipment and computer sets for the information network managed by ROAEs were highly utilized. The training equipment pieces that were provided to the AFSIT Center were also highly utilized for training sessions of AFSIS and OAE. The internet frame relay connection was equipped in OAE and all ROAEs at the initial stage and widely promoted to develop the information network system in the Project. Moreover, experts developed some hand-made equipment by locally available materials.

The scheme of counterpart training sessions in Japan was effective in making OAE staff members motivated to carry out the project activities. For example, some counterparts who participated in the training in Japan proposed the plan for a nationwide area survey with remote sensing technology, which is at the implementation phase at present. The cost of counterpart training is shared by the OAE and JICA sides. 11 counterparts have visited Japan to participate in technical training sessions at OAE's expense.

In spite of a large number of counterparts, the Project managed to allot the project activities to them according to their skills and suitability. Most counterparts so far have not been transferred or given up their posts in the Project.

2) Cost effectiveness in comparison to similar projects
Another JICA-implemented agricultural statistic project received 10 long-term experts and 31 short-term experts from Japan for 5 years to collect food production data in 2 model areas and improve a data processing and analysis system. On the other hand, this Project has received only 6 long-term experts and 7 short-term experts and already managed to conduct nationwide data collection and develop the data input and processing system on an information network system within only 2.5 years. Thus the performance of the Project is much better than that of the previous project.

3) Contributing and constraining factors for efficiency in the Project

By the introduction of crop cutting survey, ROAE staff members have to visit sampling places frequently to monitor the data collection carried out by enumerators, take crop samples to measure their moisture content and collect field data books from enumerators. The process of data collection on crop cutting survey consumed almost the entire working hours of ROAE staff members in charge.

Link disturbance has often occurred on the information network between OAE and ROAE, which is far from Bangkok. At the time of link disturbance, ROAE could not access the server system and input any data of field survey for a long time. Sometime, the ROAE staff member in charge of data input had to wait until night for recovery of network linkage.

Although the Project improved the data quality of OAE agricultural statistics, the other information sources still have problems in data stability and reliability. Therefore, serious errors in the data from other sources sometimes disrupted the process of development of macro economic model and commodity demand-supply model.

OAE counterparts and Japanese experts kept in close touch with one another to discuss issues on an unofficial basis, although there were no formal regular meetings among them. In addition, OAE maintained good communication with 9 ROAEs to smoothly carry out training sessions and field surveys at local sites. Thus each OAE staff member can share their ideas and opinions with other staff members and experts in the Project.

6-4. Impact

1) Prospect of achievement of Overall Goal

OAE staff members are expected to learn sufficient technologies and skills to improve the accuracy and reliability of agricultural statistical information. In the near future, if OAE staff members have opportunities to teach in the AFSIS workshops and training sessions, their knowledge and skills of agricultural statistics and economic analysis are expected to help improve the quality of agricultural statistical information and economic analysis in ASEAN member counties.

MOAC utilizes the agricultural statistics and economic analysis issued by OAE as important materials to design the development plan and program in the agricultural sector. If the statistical information issued by OAE is more accurate and reliable, it is expected to reflect appropriate policy decisions in the agricultural sector.

2) Ripple effects on agricultural statistics and economic analysis

The Project selected 5 major crops (rice, cassava, sugarcane, maize and soybean) as the targets for crop cutting survey. Independently, OAE started crop cutting survey for other crops such as longan, pineapple and onion. It means that the Project gives an impact on the OAE policy of production survey.

The development of the web-based data input and processing system for crop cutting survey influenced OAE staff members working for information network systems. A ripple impact is that the existing OAE statistical database was independently modified to be the web-based data input system by OAE staff members. In addition, OAE staff members also developed another web-based data input system for food consumption survey on the foundation of the program for crop cutting survey.

6-5. Sustainability

1) Institutional aspect
Because OAE staff members mastered the method and skills of crop cutting and planted area surveys, OAE made the original action plan in 2005-2006 for crop cutting and planted area surveys and carried out the survey to collect data independently. The training sessions and field surveys have been managed by OAE staff members. Now the OAE and ROAE staff members can provide guidance to enumerators and manage data collection by themselves.

In the field of economic analysis, OAE staff members can reach the sufficient level to revise the macro economic model and the commodity demand-supply model. In addition, the OAE staff members almost completed the formulation of the input-output table in 2000. After finishing the verification of consistency of the economic models, OAE is expected to independently carry out the economic model analysis.

The number of counterparts gradually increased according to the progress of the Project (refer to ANNEX II-13). The reason is that more ROAE staff members were necessary to work for field surveys and training sessions of crop cutting and planted areas, and additional OAE staff members were required to reinforce the activities for economic analysis after the dispatch of the long-term expert in this field. By the increase of OAE and ROAE staff members as counterparts in the Project, a management body of the project implementation in OAE has been strengthened.

2) Financial aspect
OAE covered most of the cost of field surveys for crop cutting and planted areas, except for a part of the training cost such as allowance and accommodation for enumerators. OAE also covered the operation and maintenance cost of information network system between OAE and ROAE. Moreover, the amount of annual budget allocated by OAE is gradually raised to smoothly operate the activities for the Project. Thus in the financial aspect, OAE is expected to manage the training and field survey as well as information network system on its own.

3) Technical aspect
The method of a crop cutting survey is scientific but very simple. Thus part-time enumerators can understand the theory and practical work of a crop cutting survey in a few days' training. The straightforward approach of crop cutting survey widely contributed to the rapid dissemination and utilization of the survey method all over the country.

By the introduction of internet frame relay connection and the development of web-based data input/processing system, OAE took a strong interest in the establishment of an information

network system and accelerated efforts to develop its original information system independently. In the future, based on the information network system introduced by the Project, OAE is expected to continue to develop on its own the information network system in the agricultural sector.

7. Conclusion

From the results of the evaluation, the Team concluded that the Project is almost carried out as planned in terms of the substantial achievement of the project purpose and outputs, and the smooth technology transfer to the OAE staff members provided by the Project. This smooth progress on the initial implementation plan is attributed mainly to the good collaboration between the Japanese experts and OAE staff members to conduct the activities based on the PDM.

Regarding the prospect of the achievement of project purpose, the technical capability of OAE is fairly strengthened as expected on the PDM; however, the human resource support to AFSIS is not much achieved to the sufficient level yet.

7-1. The capability of OAE staff members to conduct the data collection and processing and economic analysis was enhanced by the Project.

In terms of data collection, OAE and ROAE staff members understood the method of crop cutting survey and conduct the training sessions and field work of the survey by themselves. Meanwhile, OAE has carried out the planted area survey for the first pretest. Thus OAE needed more effort and support to collect the accurate area data by planted area survey at the same level for the crop cutting survey.

In terms of information network system, OAE staff members have reached a substantial level to develop the original information system for data input and processing on the web. However, the current database basically has only one or two year's data, not several years' data.

In terms of economic analysis, OAE staff members can modify and revise the original economic models according to the updated data and information with the assistance of the Japanese expert. The next assignment of economic analysis is how OAE staff members deepen their understanding of economic model analysis by acquiring more experience of the model formulation and analysis process.

In terms of trainings, a variety of training courses were held for OAE and ROAE staff members in the training room which has full educational equipments such as computer and video display and etc. Currently, the planning and operation of trainings sessions are conducted by OAE staff members.

7-2. The OAE support to human resource development in AFSIS was advanced by the Project.

Due to the smooth progress of capacity building in OAE, some qualified staff members had a chance to teach their own subjects in the AFSIS training sessions and workshops. At the current situation, five (5) OAE counterparts are recognized to be the qualified instructors for AFSIS; however the number is still far from the target of the project. In spite of language problems, many OAE staff members hope to stand on the platform in lectures for agricultural statisticians and economists of ASEAN member countries.

8. Recommendation

As the result of the evaluation, the Team made the following recommendations to OAE staff members and experts in the Project.

8-1. Management structure for crop cutting survey and planted area survey
Because ROAE staff members hold a heavy workload in collecting field data in crop cutting and planted area surveys, OAE should take measures to reduce the ROAEs' responsibilities for the operation of both surveys at the regional level. For example, a management board, which is composed of OAE and ROAE staff members in charge of both surveys, can be established to make action plans and control field work by a mutual consent among OAE and ROAEs.

8-2. Data analysis and forecasting
Currently, OAE staff members made every effort to collect data collection in crop cutting and planted area surveys. Therefore, they should spend more time on data analysis and forecasting in the next term. The data analysis and forecasting are important for finding trend among years and estimating the crop production before the harvest. Those analyses and forecasting are very useful for right policy making at the right time.

8-3. Establishment of database system for a couple of years
At present, one to three years' data of crop cutting survey were compiled on the servers through the web-based data input and processing system. After the second and third year data are collected by field surveys and accumulated, the database for a couple of years is necessary for comparing data among different years and forecasting crop production before the harvest.

8-4. Development of AFSIS trainings' lecturers
To strengthen the OAE support for the human resource development in AFSIS, OAE staff members should gain more experiences in teaching and presentation at regional and international seminars and workshops. Besides, OAE staff members need to improve their technical knowledge on statistic survey, information network system and economic analysis. Furthermore, OAE staffs need to obtain English ability, because a poor command of English sometimes discourages them from taking on responsibility for giving a lecture in regional programs.

8-5. Adjustment of OAE statistical data

The finalized production data of crop cutting survey have been only partially published or announced as official ones. Neither have the complete information of crop cutting been released yet to related organizations and the public, because OAE need to reach the official agreement of all data adjustment for all provinces. To encourage utilization of the accurate data and information, OAE should make further efforts to adjust the production data of crop cutting survey.

8-6. Publicity of statistical data and information

To convey the accuracy and reliability of agricultural statistics and economic information to the public, the OAE should publicize all results of production survey and economic analysis through the media. This publicity activity is expected to make the public interested in the agricultural statistics and information, and make related organizations utilize the statistics and information issued by OAE.

9. Lessons learned from the Project

9-1. Cost sharing

The project cost is shared by OAE and JICA in a fair manner. OAE bore most costs of training and field survey and the cost of some necessary equipment as well as a part of the cost of counterpart training in Japan.

By the high share of the project cost, OAE raised the ownership of the Project. OAE staff members seriously considered the success of the Project and actively proposed their ideas and opinions without any hesitation. Many activities were planned and carried out in the Project on the basis of original proposals and suggestions from OAE staff members. This style of cooperation is quite proper for the development stage of the recipient organization.

9-2. Simplicity of technology

The crop cutting method is so simple that part-time enumerators can easily understand the theory and skills in a few days' training including field practice. In addition, the enumerators can carry out the data collection at the standard level under the step-by-step instruction of the manual and data record book. Thus the collected data had only a few percentages of errors at regional and national levels even if amateur enumerators collected all field data. The key to successful technical transfer is to apply technology to suit local situation. It is necessary to encourage smooth dissemination of technology in wider areas.

ANNEX I-1

Project Design Matrix (PDM)
Agricultural Statistics and Economic Analysis Development Project

(Prepared 17/2/2004)
Reviewed 22/3/2006
Project Duration: July 2003 to July 2008
Target Group: Office of Agricultural Economics (OAE)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Super GOAL Food Security in ASEAN+3 region is strengthened.			
Overall GOAL 1. Statistical information and methodology of economic analysis developed by AFSIT Center are utilized in ASEAN Member countries. 2. Policies and programs for the agricultural sector are formulated and implemented by MOAC in more effective and efficient manners through accurate statistical information and economic analysis provided by OAE.	1.1 AFSIS database is regularly updated and used by member countries. 1.2 OAE continues to provide assistance to ASEAN member countries in agricultural statistics/ information and economic analysis. 2.1 Improved survey system and economic analysis methods continue to be used by OAE. 2.2 Statistical data and analysis results are published periodically and referred to or used in documents prepared by MOAC	1.1 Record of AFSIS database updating and utilization 1.2 Survey of OAE activities concerning regional activities on agriculture in ASEAN countries 2. Review of MOAC papers and reports on agricultural development policies	
PROJECT PURPOSE OAE is strengthened as a central institution for statistical information and economic analysis in terms of agricultural policy in Thailand and for supporting human resources development in AFSIS.	1. The statistical information and economic analysis officially issued by OAE are utilized by public and private organizations concerned. 2. Percentage of AFSIS training courses instructed by OAE is not less than 50% of all AFSIS training courses.	1. Review of official papers and reports. Result of bench mark survey. 2. Review of AFSIS training courses. Result of bench mark survey.	Thai government and ASEAN countries continue their activities on agricultural information systems for the ASEAN region.
OUTPUTS <AFSIT Center> 1. Human Resources of OAE are developed for data collection methodology, information network system and agricultural economic analysis, including demand-supply forecasting, for ASEAN member countries.	1. OAE has below-mentioned number of personnel whose capability permits to conduct AFSIS training courses as instructor. Data collection methodology: 4 staff members Data processing & INS: 5 staff members Economic analysis: 4 staff members	1. Review of AFSIS training courses.	AFSIT Center is operated smoothly. OAE has good coordination with the relating organizations.

2. <OAE> 2 Data collection methodology (mainly for major food crops*) in OAE and 9 ROAEs is improved. *major food crops: rice, cassava, sugarcane, maize, soybean	2.1 The production survey is conducted during the harvest time of each major food crops by July 2007. 2.2 Reliable statistical survey results on the production of major food crops are available within 4 months after the survey. 2.3 The precision of sample survey estimates of major food crop yield is no more than 5% (regional level) and 3% (national level), respectively.	2.1 Review of OAE report for each crop. 2.2 Ditto 2.3 Ditto	
3. Information Network System between OAE and 9 ROAEs is established and developed further.	3.1 Time period required for data input and processing at ROAE and OAE for production surveys of major food crops is shortened by 50% compared with that of 2003. 3.2 Web sites are newly established in 9 ROAEs, through which regional statistics are available to the public.	3.1 Review of OAE activities 3.2 Review of web sites	
4. Methodology of agricultural economic analysis is developed.	4.1 The economic analytical report authorized by OAE is issued twice a year. 4.2 Outputs of I/O table (every 5 years), macro-economic model and commodity demand supply model (every year) for agricultural sector are reported once a year. 4.3 The seminar or workshop is held for a release of above-mentioned analytical report at least once a year, with more than 100 participants from public and private sectors.	4.1 Review of project and OAE reports 4.2 Ditto 4.3 Ditto	
5. Training capacity of OAE staff is developed.	5.1 8 training courses are conducted every year for the staff of OAE and ROAE in statistical data collection, data processing/information network system and economic analysis, through which 300 staff members are trained each year. 5.2 OAE has 15 staff members who can teach agricultural statistics and information to ROAE staff members and each ROAE has 3 staff members who can teach data collection methodologies to enumerators.	5.1 Review of project and OAE reports 5.2 Ditto	

Activities 1-1 Build capability of OAE staff in order to develop improved data collection methods for ASEAN countries 1-2 Build capability of OAE staff in order to establish, operate and maintain information network system (INS) for AFSIS 1-3 Build capability of OAE staff in order to develop Economic Analysis (EA) models for ASEAN countries 1-4 Develop OAE personnel's training capability in data collection, EA & INS 2.1 Introduce new data survey methodologies and improve current data collection methodologies 2-2 Conduct training for staffs of OAE and 9 ROAEs staff in new and improved methodologies at OAE 2-3 Conduct field technical guidance to ROAE staff on the data survey 3-1 Design and establish Information Network System (INS) connection between OAE and ROAE 3-2 Introduce data entry and processing system in 9 ROAEs 3-3 Develop/ Improve database systems for agricultural statistics and economic analysis 3-4 Conduct training for management/utilization of information network, data processing and databases 4-1 Identify appropriate methodologies for OAE and develop necessary models 4-2 Identify additional economic data necessary for analysis and conduct Surveys/Studies for the required data (costs, consumption, marketing, etc.) 4-3 Conduct users' training for analyses using these models 5-1 Plan and implement training courses 5-2 Evaluate training courses and develop manuals *<General Activities>* 6-1 Establish required management and execution system 6-2 Set quantitative targets for indicators	Inputs (By Japan) 1. Long-Term experts 1) Chief Advisor 2) Project Coordinator/ Training 3) Agricultural Statistical Survey 4) Data Collection/ Information Network System 2. Short-Term Experts As necessary 3. Provision of following machinery, equipment, and other materials 1) Computer systems. 2) Vehicles 3) Crop cutting tools. 4) Other necessary machinery, equipment, and materials that may be mutually agreed upon. 4. Counterpart training in Japan 5. A part of local cost (By Thailand) 1. Provision of land, buildings and facilities for the Project and project offices, experts' rooms and so on 2. Operational cost 3. Maintenance and repair cost for computers and equipment 4. Cost for conducting training 5. Assignment of counterparts to each Japanese expert and supporting staff	*<<Preconditions>>* OAE accommodates ASEAN Food Security Information Training (AFSIT) Center under ASEAN Food Security Information System (AFSIS).

ANNEX I-2

Evaluation Grid

Five Criteria	Evaluation Questions		Information Source	Data Collection	Evaluation
	Question	Sub-question			
Relevance	Is the project consistent with Thailand's agricultural development policy?		* MOAC Strategy 2004 - 2008	* Review of material	* The project is expected to provide accurate statistical information and economic analysis to contribute to proper decision in agricultural sector in the near future, such as increase of food productivity and food distribution to international market. This concept of the project is consistent with main issues of Agricultural Development Strategies 2004 - 2008.
	Is the project consistent with Japan's foreign aid policy and JICA's plan for country-specific program implementation?	Does the project address the key aid issues?	* Japan's country assistance plan for Thailand	* Review of material	* The project will improve the capacity of OAE staff to support the AFSIS program, which aims to disseminate the agricultural statistic methods to ASEAN member countries. This concept of the project is consistent with Japan's new economic cooperation plan, because it states that Thailand should be a key country in supporting other developing countries.
		Does the project address JICA's plan for a country-specific program implementation?	* JICA's plan for country-specific implementation program	* Review of material	* JICA pointed out several important issues in promoting rural development in Thailand including "improvement of information on agricultural management and market". Because the Project aims to improve the quality of agricultural statistics and economic analysis, the objective of the Project is consistent with the issue above.
	Is the project suitable as a strategy that will be effective with respect to development issues related to agricultural statistics in Thailand?	Is the selection of project approach suitable?	* Project document	* Review of material	* The project approach is appropriate. Most OAE C/Ps made the task teams according to their responsibilities to coordinate the activities smoothly. Cost sharing is an important factor for C/Ps to seriously consider the achievement of the Project under their responsibilities.
		What synergy effects can be generated from the cooperation with other donors, such as ASEAN and FAO?	* AFSIS report * FAO Regional Office	* Review of material * Interview	* Once OAE publishes the crop production data corrected by the scientific data collection such as crop cutting method, FAO or other international agencies have to revise their food production database for the last few years. Many research publications and materials regarding crop production, forecasting and security are written on the previous database offered by these international agencies; therefore, their analysis results should be reviewed in their entirety.
	Is the selection of target group appropriate?	Are the size and location of OAE and ROAEs appropriate?	* Project document * Map	* Review of material	* OAE has a head office in Bangkok and 9 regional offices (ROAEs) to conduct a variety of agricultural statistic surveys throughout the country. Besides, OAE staff members regularly conduct agricultural statistical surveys and economic analysis. Based on this organization structure, it is fair to say that OAE has enough facilities and personnel to manage nationwide agricultural statistical surveys.
	Does Japan have a technological advantage?	Does Japan have a strong background in agricultural statistics and economic analysis?	* Project document * Experts	* Review of material * Interview	* Japan already has experienced several technical cooperation projects for developing countries such as Syria, Indonesia and Paraguay in the field of agricultural statistics and economic analysis. Therefore, Japan side has already developed proper applied knowledge and skills of data collection and analysis suitable for the crop production conditions of developing countries.

Effectiveness (expectancy)	Is there a good chance that the project purpose would be achieved?	Will OAE be able to offer reliable statistical and economic information on agriculture sector?	* Monitoring report * OAE experts * Experts * C/Ps	* Review of material * Interviews	* By the introduction of crop cutting survey, area survey with geographic information and information network system through the Project, OAE C/Ps gradually improve their capacities in agricultural statistical survey and data analysis. OAE C/Ps can plan and conduct regular crop cutting survey and data analysis by themselves. If OAE continues to be involved in the project in such a positive manner, OAE is expected to provide high quality statistical information to the government and private sector by the end of the project.
		Can OAE provide enough instructors to support AFSIS?	* Monitoring report * AFSIS * OAE staff	* Review of material * Interviews	* Through the Project, many OAE C/Ps began to feel confident about their technical skills in agricultural statistical surveys and economic analysis. Therefore, many C/Ps state that their technical abilities have reached the level of lecturers for AFSIS training sessions. * In addition, the Project also gave C/Ps chances to give lectures on agricultural statistics or economic analysis as instructors in AFSIS, have technical exchanges and an international workshop.
	Are there prospect that OAE will provide the reliable statistical information and economic analysis in term of agricultural policy in Thailand?	Is the statistical information being used more?	* Organizations utilizing agricultural statistic information	* Interviews	* Because the statistical information made by the introduced scientific methods, such as crop cutting survey and planted area survey, have not been published yet, the governmental and private organizations related to agricultural sector have no access to these data. If OAE officially decides to release the statistical information, they will have access.
		Is economic analysis being used more?	* Organizations utilizing agricultural economic analysis	* Interview	* OAE expects to utilize the outcome of economic analysis, such as I/O table, macro economic model and commodity demand-supply model, to draw the overall economic picture and forecast the economic trend in agricultural sector.
	Is there potential for OAE to support human resource development in AFSIS?		* Experts * C/Ps	* Interview	* Because the technical capability of OAE is strengthened by the Project, the potential for OAE to support human resource development in AFSIS is high. At present, only five (5) OAE C/Ps are recognized to have attained the level of qualified lecturers for AFSIS training and workshop.
	Can the output contribute to the achievement of the project purpose?	Does human resource development in OAE positively contribute to AFSIS program?	* C/Ps * Experts * AFSIS staff	* Interview	* Through the Project, many OAE C/Ps gradually get confident about their technical skills for statistical survey, and hope to show their skills and experiences at regional seminars such as AFSIS training sessions. Thus human resources development in OAE is expected to fully contribute to AFSIS program in near future.
		Does the improvement of data collection methodology heighten the reliability of statistical information issued by OAE?	* Monitoring report * C/Ps * Experts	* Review of material * Interview	* Before the Project started, OAE collected production and area data through interview-based surveys. After the Project introduced the scientific methods to OAE, such as crop cutting survey and area survey with geographical information, the accuracy of collected production and area data has drastically improved. The reliability of statistical information issued by OAE is also expected to improve.

Effectiveness (expectancy)	Can the output contribute to the achievement of the project purpose?	Does the establishment of network system heighten the reliability of statistical information issued by OAE?	* Monitoring report * C/Ps * Experts	* Review of material * Interview	* By establishing the information network system between OAE and ROAEs through frame relay connection, ROAE staff members can directly input the sampling data of crop cutting survey on the OAE servers. The system dramatically reduced the time for data input and processing. * The data input system had error check function to avoid input mistake and detected unusual and fake data in size and scale in advance. The function will improve the accuracy of statistical information issued by OAE.
	Can the output contribute to the achievement of the project purpose?	Does the development of agricultural economic analysis heighten the reliability of economic analysis issued by OAE?	* Monitoring report * C/Ps * Experts	* Review of material * Interviews	* I/O table, macro economic model and commodity demand-supply model are the necessary tools to estimate the economic trend and forecast in agricultural sector. If OAE deals with the accurate estimation of agricultural economic analysis with the reliable models, OAE can extract and discuss the overall vision of agricultural economics in Thailand.
		Does the training program heighten the reliability of statistical information and economic analysis issued by OAE?	* Monitoring report * Training report * Trainees	* Review of material * Questionnaire	* The series of training sessions of crop cutting survey encouraged OAE and ROAE C/Ps to collect the crop production data in a scientific way. OAE and ROAE focused on collecting accurate production data from the entire country by crop cutting survey. The OAE effort is expected to improve the reliability of statistical information.
	Are there any factors that inhibit / promote the achievement of the project purpose?	Does the AFSIT Center operate smoothly?	* AFSIT Center	* Record of AFSIS center	* The AFSIT Center has been often utilized for the AFSIS and OAE training sessions since April 2004. On average, about 140 persons made use of AFSIT Center to participate in training courses every month.
		Does OAE have good cooperation with ROAEs and the related organizations?	* ROAE * Related organizations	* Questionnaire * Interviews	* ROAE is a local branch of OAE; therefore, OAE regularly contacted ROAE by direct dials, phone, fax and e-mail. ROAE C/Ps often visited OAE to participate in meetings and trainings. Through this mutual communication, OAE established good cooperation with ROAE. * OAE has regular communication with other departments in MOAC to offer / share statistical data and information in agricultural sector.
		Are there any factors that have a positive / negative effect on the achievement of the project purpose?	* Monitoring report * C/Ps * Experts	* Review of material * Interviews	* OAE C/Ps are highly motivated to absorb any ideas and skills from Japanese experts. Their positive attitude is expected to be reflected in the achievement of project purpose.
Efficiency	Can the output be achieved as planned?		(as per Performance Table)		* Please refer to the achievement grid.

Efficiency	Judging from the achieved output, were the quality, quantity and timing of the inputs appropriate?	Were the number of experts dispatched, their fields of expertise and timing of the dispatch appropriate?	* Monitoring report * C/Ps * Experts	* Review of material * Interviews	* Appropriate. * The dispatch of 2 short-term experts in information network system were particularly effective in supporting development of the web-based data input / processing system for crop cutting survey at right timing.
		Were the type, quantity and timing of the installation of the equipment provided appropriate?	* Monitoring report * Equipment, usage and management table * C/Ps * Experts	* Review of material * Interviews	* Appropriate. * ROAE highly utilized computer sets for information network and equipment for crop cutting survey. * Pieces of equipment in AFSIT Center, such as computer sets and projectors, were well utilized by AFSIS training sessions and OAE training courses.
		Were the number of accepted trainees, the fields, the training content, training period, and the timing of trainee acceptance appropriate?	* Table showing the actual acceptance of trainees * C/Ps * Experts	* Review of material * Interviews	* The scheme of training in Japan was carried out by the cost sharing of OAE and JICA. * The training sessions in Japan stimulated OAE C/Ps to be positively involved in the activities of the Project. * Some OAE C/Ps submitted the proposals to carry out their original activities under the Project after returning from the training in Japan.
		Were the number, placement and skills of the C/Ps appropriate?	* Table showing actual placement of C/P * C/Ps * Experts	* Review of material * Interviews	* Actually, the number of counterparts is very large (65 persons). However, the Project controlled counterparts well by forming some task teams according to their responsibilities. * All counterparts have enough abilities to master new methodologies of data collection, information network system and economic analysis, because most of them have bachelor or master degrees.
		Are there any problems in terms of the quality, size and convenience of facilities?	* C/Ps * Experts	* Direct observation * Interviews	* OAE provided enough office space to each of Japanese experts. * OAE set the frame relay connection between OAE and all ROAEs at the beginning of the Project.
		Was the project budget of an appropriate size?	* Table showing actual cost-sharing * OAE's budget table * C/Ps * Experts	* Review of material * Interviews	* OAE and JICA shared the Project budgets. OAE mainly prepared the costs of training sessions and field surveys and a part of the cost for training in Japan. JICA side only prepared part of training cost and the cost of special events such as an international workshop. * The size of budgets from both sides are appropriate for managing / conducting the activities by OAE C/Ps and Japanese experts.
		Are improvements in the skills of C/Ps contributing to the effectiveness?	* Monitoring report * Experts	* Review of material * Interviews	* Because most C/Ps worked for the Project with a positive attitude, they mastered the newly introduced methodologies in a short time. Their positive attitude effectively promote the activities on the planned schedule.

Efficiency	Were the costs appropriate compared to similar projects?		* Evaluation report of similar project * C/Ps * Experts	* Review of material * Interviews	* Other agricultural statistical project received 10 long-term and 31 short-term experts to improve data collection skills in two model areas and develop the data processing system for 5 years. However, the Project received only 6 long-term and 7 short-term experts for 2.5 years to achieve basically the same objectives. In the Project, the nationwide data collection and the development of data input / processing system were almost accomplished. Thus the cost performance of the Project is much better than that of similar projects in the past.
	Are there factors that inhibited / promoted efficiency?		* Monitoring report * C/Ps * Experts	* Review of material * Interviews	* Crop cutting survey requested ROAE staff members to visit sampling places several times to collect production data. The additional work made ROAE busy moving from place to place. * Link disturbance to OAE servers often happened in ROAEs which are located in remote areas. It disturbed smooth data input of crop cutting survey. * Because the data from other sources are not very accurate, constant adjustment of the data to formulate the economic models is needed. * Experts and OAE C/Ps shared ideas and information through daily informal discussions and meetings.
Impact (expectancy)	Are there prospects that overall goal will be achieved?	Will statistical information and methodology for economic analysis as developed by AFSIS be utilized?	* AFSIS	* Interviews	* OAE staff members are expected to learn sufficient technologies and skills to improve the accuracy and reliability of agricultural statistical information. In the near future, if OAE staff members have opportunities to teach in the AFSIS workshops and training sessions, their knowledge and skills of agricultural statistics and economic analysis are expected to help improve the quality of agricultural statistical and economic information in ASEAN member counties.
		Will agricultural policies and programs be formulated / implemented on the basis of accurate statistical information and economic analysis?	* MOAC * OAE	* Interviews	* At present, MOAC utilizes the statistical data and information to decide the policy and program in agricultural sector. Therefore, the reliable statistical information and economic analysis will reflect the proper policy decision for agricultural development in Thailand.
	Are there any other ripple effects on agricultural policy and market?	Change in Thailand's national agricultural policy	* MOAC * OAE	* Interviews	* The statistical data and information arranged by new methodologies of data collection and processing has not been completely released to other organizations and the public. Therefore, any impact to policy and market by the Project cannot be confirmed at the moment.
		Change in the domestic market of main food crop in Thailand	* MOAC * OAE	* Interviews	
		Change in the trading condition of main food crop	* MOAC * OAE	* Interviews	

Impact (expectancy)	Does the project contribute significantly to the impact produced?	Will the improvement in agricultural statistical methods and economic analysis have an impact on agricultural development in surrounding countries?	* MOAC * AFSIS	* Interviews	* The statistical data and information arranged by new methodologies of data collection and processing has not been completely released to other organizations and the public. Therefore, any social and economic impact produced by the Project cannot be confirmed at this moment.
Sustainability (expectancy)	Is OAE's role in agricultural statistics and economic analysis clear?		* MOAC * OAE	* Interviews	* The most important role of OAE in MOAC is to offer the statistical and economic information in agricultural sector to other agencies and departments. Actually, some departments in MOAC roughly collected needed data and information by themselves; however, OAE data and information are recognized / treated as official ones in MOAC.
	Does OAE have the potential to continue the survey of agricultural statistics and economic analysis?	Does OAE have potential in terms of operation and management?	* Project report * C/Ps * Experts	* Review of material * Interviews	* OAE is a key office to collect the proper data and information and present the economic forecast in agricultural sector in MOAC. The data and information issued by OAE are important to decide sector policies and programs, especially 5 year development plan.
		Is OAE's financial situation solid?	* Budget table, various financial tables * C/Ps * Experts	* Review of material * Interviews	* OAE allocated enough budget of training and field studies for crop cutting and planted area surveys in the Project. In addition, OAE provided the necessary equipment of frame relay connection in OAE and ROAEs by own budget. At present, OAE is expected to continuously allocate enough budget to carry out the data collection in new survey methods and maintain the information network system and economic analysis models.
	Are the transferred techniques continuously utilized?	Did the technical capacity of the C/P improve?	* Monitoring report * Experts * C/Ps	* Review of material * Interviews	* Because most OAE C/Ps positively learned through guidance from Japanese experts in their daily work and training, they mastered theory and skills of new methodologies of statistical operation and economic analysis in a short time. The technical capacity of OAE C/Ps has improved significantly in the Project.
		Will the transferred techniques spread in OAE?	* Training report * Experts * C/Ps	* Review of material * Interviews	* Through the training courses in the Project, the new data collection methods of crop cutting and planted area surveys were properly transferred to all ROAEs, which have held the training for enumerators and managed the field samplings by themselves.
		Is the equipment appropriately maintained and managed?	* Maintenance and management report * C/Ps * Experts	* Review of material * Interviews	* All pieces of equipment were properly maintained and managed.

Need for adjustments	Can the project purpose be achieved in current conditions?	Can OAE provide reliable agricultural statistical information in current condition?	* Organizations utilizing agricultural statistic information	* Interviews	* Currently, OAE provides only the statistical data and information based on interview survey, and thus does not have the actual figures. Thank to the Project, OAE gradually mastered some scientific methods to collect the accurate production data. If the Project continues to run smoothly in the next term, it is expected that OAE can provide reliable statistical information.
		Can OAE support human resource development in AFSIS in current condition?	* Monitoring report * AFSIT Center	* Review of material * Interviews	* Some OAE C/Ps have enough experience in teaching in AFSIS training and workshops; others have few chances in AFSIS and other international stages, because of lack of their technical skills and English ability. In order to fully support AFSIS, OAE should give more C/Ps chances to lecture in AFSIS or other opportunities.
	Is it necessary to adjust the input, activities and outputs?	Do the planned inputs (quantity and quality) need to be adjusted?	* Monitoring report * C/Ps * Experts	* Review of material * Interviews	* Basic equipment for field survey and training has been already provided by OAE and the Project. If there are no special requests, it is not necessary to provide additional equipment for the Project activities.
		Do the planned activities need to be adjusted?	* Monitoring report * C/Ps * Expert	* Review of material * Interviews	* Not necessary
		Do the planned outputs need to be adjusted?	* Monitoring report * C/Ps, * Experts	* Review of material * Interviews	* Not necessary
	Are there any new important assumptions that influence the project?		* Monitoring report * C/Ps, * Experts	* Review of material * Interviews	* The national government plans to completely reform the administrative structure in near future. It may affect the organizational structure of OAE.
	What issues remain to be addressed in the future?		* Monitoring report * C/Ps * Experts	* Review of material * Interviews	* On the current job assignment, ROAE has a heavy duty to carry out the crop cutting survey and planted area survey in the field level. OAE should consider how to reduce the duty of ROAE.

ANNEX I-3

Achievement Grid

Category	Contents	Verifiable Indicators	Questions	Accomplishment
Overall Goal	Statistical information and methodology of economic analysis developed by AFSIT Center are utilized by ASEAN Member countries.	AFSIS database is regularly updated and used by member countries.	Will AFSIS database be regularly updated and used by ASEAN member countries?	* Some countries regularly updated AFSIS database; others didn't. * At focal points meetings, member countries are requested to update the crop production information on AFSIS website.
		OAE continues to provide assistance to ASEAN member countries with agricultural statistics/information and economic analysis.	Will OAE provide assistance to ASEAN members through AFSIS program?	* AFSIS secretariat is placed in OAE, and OAE staff often support preparation and implementation of the AFSIS program. * Due to improvement in OAE staff members' technical capacity, OAE is expected to be involved with AFSIS programs.
	Policies and programs for the agricultural sector are formulated and implemented by MOAC in a more effective and efficient manner through accurate statistical information and economic analysis provided by OAE.	Improved survey system and economic analysis methods continue to be used by OAE.	Will OAE continue to use the survey system and economic analysis methods?	* Currently, OAE has stopped traditional interview-based survey and switched to the crop cutting survey for all horticultural products to collect the yield data. * In addition, OAE also has decreased a traditional round survey and started a new area survey utilizing geographic information.
		Statistical data and analysis results are published periodically and referred to or used in documents prepared by MOAC	Will MOAC refer to statistical data and analysis results in preparing agricultural policy making?	* OAE executives and experts are eager for accurate production data and sustainable models of economic analysis to deliver timely and proper forecasts in agricultural commodities and market. * If OAE can improve the quality of production data and economic analysis, the outcome will positively affect the national and regional policies in the agricultural sector.
Project Purpose	OAE is strengthened as a central institution for statistical information and economic analysis in terms of agricultural policy in Thailand and for supporting human resources development in AFSIS.	1. The statistical information and economic analysis officially issued by OAE are utilized by public and private organizations concerned.	Have public and private organizations concerned already utilized the statistical information and economic analysis issued by OAE?	* The new crop yield data produced by crop cutting surveys have neither affected the periodical agricultural reports nor been made public yet. However, CAI decided to correct the statistical information in accordance with the yield data of crop cutting survey. * The results of economic analysis are presented at the OAE general meetings twice a year, and distributed in MOAC through the report papers. The analysis results have been provided to the government upon request.

Project Purpose	OAE is strengthened as a central institution for statistical information and economic analysis in terms of agricultural policy in Thailand and for supporting human resources development in AFSIS.	2. Percentage of AFSIS training courses instructed by OAE is not less than 50% of all AFSIS training courses.	What percentage of AFSIS training courses have been instructed by OAE?	* In 5 AFSIS training sessions / workshops from 2003 and 2005, 86 % of lectures and presentation of their courses were given by OAE C/Ps. * OAE C/Ps have not had opportunities to give lectures in AFSIS program since May 2005, because all 2 AFSIS training sessions were held in China and Korea on their own budgets in 2005.
Output	1. OAE's human resources are developed to utilize data collection methodology, information network systems and agricultural economic analysis (including demand-supply forecasting) for ASEAN member countries.	1.1 OAE has below-mentioned number of personnel whose capability enables them to conduct AFSIS training courses as instructor. Data collection methodology: 4 staff members, Data processing & INS: 5 staff members, Economic analysis: 4 staff members	How many OAE personnel have met the requirements to be AFSIS instructors?	* Data collection: 2 OAE staff members (Mr. Chanchai Toviwat, Ms. Suraporn Issaradetkul) have sufficient experience in teaching data collection technology in AFSIS. * Data processing and information network system: 1 OAE staff member (Mr. Montol Jeamchareon) has sufficient experience in teaching data processing system in AFSIS. * Economic analysis: 2 OAE staff members (Ms. Pornpun Hensawan, Ms. Supaporn Bongsunun) have sufficient experience in teaching this field in AFSIS.
	2. Data collection methodology (mainly for major food crops*) used by OAE and nine ROAEs is improved. *major food crops: rice, cassava, sugarcane, maize, soybean	2.1 The production survey is conducted during the harvest of each major food crops by July 2007.	Has OAE conducted yield surveys during the harvest of each major food crop?	* The first crop cutting surveys for all 5 major crops have been completed by 2005. * The second surveys for cassava and sugar cane, and the second and third surveys for rice have been carried out by OAE and ROAE C/Ps. * Currently, all production survey for 5 main crops are conducted by crop cutting survey at the harvest periods.
			Has OAE conducted area surveys during the harvest of each major food crop?	* The nationwide area survey (7,000 locations) has been started by OAE C/Ps since 2005.
			Has OAE conducted forecasting survey during the harvest of each major food crop?	* Forecasting survey has not started yet.
		2.2 Reliable statistical survey results on the production of major food crops are available within four months of the survey.	Can OAE finalize statistical results on production surveys within four months of field survey?	* The survey results indicate difficulty in minimizing the data processing period to less than 4 months by the traditional interview surveys. * The introduction of the web-based information network dramatically reduced the total period of data processing to less than 4 months. * OAE has started switching the method of yield survey from interviews to crop cutting survey.

Output	2. Data collection methodology (mainly for major food crops*) used by OAE and nine ROAEs is improved. *major food crops: rice, cassava, sugarcane, maize, soybean	2.3 The precision of sample survey estimates of major food crop yield is no more than 5% (regional level) and 3% (national level), respectively.	Has the precision index of sample survey been under 5% (regional level) and 3% (national level), respectively?	* Precision index of crop cutting survey at national level, 2004 - 2006 Rice: 1.7 %, Cassava: 2.1 %, Sugar cane: 2.4 %, Maize: 2.1%, Soybean: 3.0% * Average of precision index of crop cutting survey at regional level, 2004 - 2006 Rice: 2.8 %, Cassava: 3.6 %, Sugar cane: 3.7 %, Maize: 3.7 %, Soybean: 5.1% * Most precision indexes of crop cutting survey are lower than the target level. * Precision index of area survey has not finished yet.
	3. Information Network System between OAE and nine ROAEs is established and developed further.	3.1 Time required for data input and processing at ROAE and OAE for production surveys of major food crops is shortened by 50% compared with that in 2003.	Has OAE and ROAEs shortened the time required for data processing?	* The introduction of the web-based information network enables ROAE to directly input field data on the OAE servers through the frame relay connection. The system reduces time for data input and processing and makes easier basic data analysis at OAE. Total period from data input to data analysis is shortened by more than 0% - 60 % compared with that in 2003.
		3.2 Web sites are set up for nine ROAEs to make regional statistics available to the public.	Have nine ROAEs set up their websites?	* All ROAEs set their own websites to distribute regional statistical information to the public. * Through the training on website maintenance, all ROAE can revise and update the websites by themselves.
	4. Methodology for agricultural economic analysis is developed.	4.1 The economic analytical report authorized by OAE is issued twice a year.	Has OAE issued economic analytical reports more than twice a year?	* The publication of analytical reports: 4 reports from July 2003 to June 2004 4 reports from July 2004 to July 2005 7 reports from July 2005 to March 2006
		4.2 Outputs of I/O table (every five years), macro-economic model and commodity demand supply model (every year) for agricultural sector are reported once a year.	Has OAE reported I/O table, macro-economic model and commodity demand on agriculture more than once a year?	* The reports of the I/O table in the agricultural sector were published twice in 2003 and 2005. * The reports on the macroeconomic model for the agricultural sector were published twice in 2005. * The reports on the agricultural commodity model were published once in 2003 and 2004 and twice in 2005.

Output	4. Methodology for agricultural economic analysis is developed.	4.3 The seminar or workshop is held for a release of above-mentioned analytical report at least once a year, with more than 100 participants from public and private sectors.	Has OAE held a seminar or workshop for the presentation of economic analysis reports at least one a year?	* Internal seminars of agricultural economic analysis were held in OAE once in 2003 and 2004, and four times in 2005. More than 100 attendants including OAE staff and others took part in each seminar. * OAE hosted the International Workshop on Agricultural Economic Analysis in March 2006 and invited more than 100 agricultural officers and researchers not only in Thailand, but also from ASEAN member countries.
	5. Training capacity of OAE staff is developed.	5.1 Eight training courses are conducted every year for the staff of OAE and ROAE in statistical data collection, data processing/information network systems and economic analysis, through which 300 staff members are trained each year.		* 9 training sessions on crop cutting and 2 on data processing for OAE and ROAE staff were held in the first year. Total number of participants in these training sessions was 273 including staff members and enumerators. * 15 training sessions on crop cutting, 2 on data processing, 1 on website management and 1 seminar on economic analysis were held in the second year. Totally number of participants in these training sessions was 677 including OAE staff members and enumerators. * 6 training sessions on crop cutting for enumerators and 2 on data processing for OAE and ROAE were held in the third year. Total number of participants in these training sessions was 213 including staff members and enumerators.
		5.2 OAE has 15 staff members who can teach agricultural statistics and information to ROAE staff members and each ROAE has three staff members who can teach data collection methodologies to enumerators.	How many OAE staff can teach agriculture statistics and information to ROAE staff?	* 14 OAE C/Ps have experience in teaching crop cutting survey to ROAE staff and enumerators in training sessions. * 2 OAE C/Ps have experience in giving lectures on economic analysis to OAE and ROAE staff in seminars.
			How many ROAE staff can teach data collection to enumerators?	* The Project report recorded 2 C/Ps in each ROAE have experience in teaching the method of data collection to enumerators in the lectures and practices on crop cutting survey. * According to the interview with ROAE staff members, more than 3 staff members have instructed crop cutting to enumerators.

Activities	1-1 Build capability of OAE staff in order to develop improved data collection methods for ASEAN countries	* Project report * C/Ps * Experts	Based on information collected, confirm whether the target of this activity is achieved, and the achievement contributes to accomplishment the output of the Project	* OAE C/Ps had chances to teach improved data collection methods at the following events: - Technical exchanges to Indonesia in 2004 and Laos in 2005 - AFSIS Workshop on Data Standardization - AFSIS Training Course on Statistical Survey Techniques - AFSIS Training Course on Statistical Data Analysis and Forecasting - Workshop on Improvement of the Quality of Agricultural Statistics
	1-2 Build capability of OAE staff in order to establish, operate and maintain information network system (INS) for AFSIS	* Project report * C/Ps * Experts		* OAE C/Ps supported the following AFSIS programs: - Training Course on Statistical Data Analysis and Forecasting - Workshop on Construction of the Information Network System - Workshop on Improvement of the Quality of Agricultural Statistics
	1-3. Build capability of OAE staff in order to develop Economic Analysis (EA) models for ASEAN countries	* Project report * C/Ps * Experts		* OAE staff presented the agricultural economic analysis and modeling (input - output analysis, macroeconomics and commodity method) in Thailand to the representatives of ASEAN countries in the International Workshop, March 2006.
	1-4. Develop OAE personnel's training capability in data collection, economic analysis and information network system	* Project report * C/Ps * Experts		* OAE C/Ps had chances to lecture in English at the following AFSIS programs from 2003 to 2005. - Workshop on AFSIS Data Standardization - Training Course on Statistical Survey Techniques - Workshop on the Construction of the Information Network System - Training Course on Statistical Data Analysis and Forecasting - Workshop on Improvement of the Quality of Agricultural Statistics * OAE C/Ps made their presentations in English at technical exchange programs in Laos and Indonesia. * OAE C/Ps made some presentation in English at International Workshop on Agriculture Economic Analysis.
	2-1 Introduce new data survey methodologies and improve current data collection methodologies	* Project report * C/Ps * Experts		Crop cutting survey: * The first year's crop cutting surveys for all 5 target main crops (rice, cassava, sugar cane, maize, soy bean) has been completed by 2005. * The second year's surveys of cassava and sugar cane, and the second and third year's surveys of rice have been carried out by counterparts. Planted area survey: * The methodology of area survey using geographic information has been transferred to C/Ps through the training in Japan and long and short-term experts. * The first national-wide area survey is carried out by OAE C/Ps.

Activities	2-2 Conduct training for staffs of OAE and 9 ROAEs staff in new and improved methodologies at OAE	* Project report * C/Ps * Experts	Based on information collected, confirm whether the target of this activity is achieved, and the achievement contributes to accomplishment the output of the Project	Crop cutting survey: * Through the training series for ROAE staffs, all ROAEs can manage crop cutting survey by themselves. * ROAEs hold crop cutting trainings to enumerators. Planted area survey: * The trainings for ROAE staffs have been conducted.
	2-3 Conduct field technical guidance to ROAE staff on the data survey	* Project report * C/Ps * Experts		Crop cutting survey * Technical manuals and field record books of crop cutting surveys for all 5 target crops have been printed and distributed to all ROAEs through a series of training sessions and seminars. * OAE staff members often monitor training sessions for enumerators conducted by ROAEs and practical surveys as supervisors. Planted area survey: * Technical manuals of area survey have been printed and distributed to all ROAEs through a series of training sessions and seminars. * OAE staff conduct practical area surveys with ROAE staff as supervisors.
	3-1 Design and establish Information Network System (INS) connection between OAE and ROAE	* Project report * C/Ps * Experts		* OAE introduced the frame relay system and server. * All ROAEs were provided computer sets to make direct on-line connection with OAE servers through the Internet. * ROAE staff participated in the web software training to learn the maintenance of the website.
	3-2 Introduce data entry and processing system in 9 ROAEs	* Project report * C/Ps * Experts		* Experts and C/Ps developed the online system of data input of crop cutting survey for all 5 main crops. This system allows OAE and ROAE to observe the process of data accumulation and share the production information.
	3-3 Develop/ improve database systems for agricultural statistics and economic analysis	* Project report * C/Ps * Experts		* Experts and C/Ps developed the online database of crop production collected by crop cutting survey. OAE and all ROAEs can preserve input data on the database through the Internet. * According to the progress of area survey, the expert and C/Ps have started developing and operating the similar web-based database for area survey's data.
	3-4 Conduct training for management / utilization of information network, data processing and databases	* Project report * C/Ps * Experts		* OAE C/Ps hold the training of web software for ROAE staff to maintain their websites by themselves. * Experts and OAE C/Ps visited ROAEs to advise and teach the operation of the web-based data processing system for crop cutting surveys.

Activities	4-1 Identify appropriate methodologies for OAE and develop necessary models	* Project report * C/Ps * Experts	Based on information collected, confirm whether the target of this activity is achieved, and the achievement contributes to accomplishment the output of the Project	* Expert advised OAE C/Ps on the basic theory and method of economic model analysis in training sessions. * C/Ps formulated the demand-supply models for agricultural commodities. * Expert introduced some special software for economic analysis (E-view) and instructed its operation to C/Ps.
	4-2 Identify additional economic data necessary for analysis and conduct surveys/studies for the required data (costs, consumption, marketing, etc.)	* Project report * C/Ps * Experts		* The C/P's team collect and analyze necessary data for I/O table. * OAE C/Ps analyzed and evaluated the data and statistics to be applied for I/O table. * OAE C/Ps analyzed and evaluated the outcomes of food consumption and food production cost surveys which were carried out by OAE.
	4-3 Conduct users' training for analyses using these models	* Project report * C/Ps * Experts		* OAE C/P held the seminar series on I/O table and macro economic model to train OAE staff members on how to manage them. * The expert often had internal training sessions and seminars with C/Ps to convey the basic theory and ideas on agricultural economic analysis.
	5-1 Plan and implement training courses	* Project report * C/Ps * Experts		* OAE C/P can coordinate the training program with other OAE divisions and ROAEs. * OAE and ROAE C/Ps can prepare and conduct the trainings especially for crop cutting surveys.
	5-2 Evaluate training courses and develop manuals	* Project report * C/Ps * Experts		* OAE C/Ps collected questionnaire for training courses to evaluate the quality of instructors and contents. However, its result didn't much feedback to the next courses. * Training manuals and field record books of crop cutting and area survey were prepared for all 5 main corps by C/Ps.
	6-1 Establish required management and execution system	* Project report * C/Ps * Experts		* There is not a management or execution group in the project other than Joint Coordinating Committee; however, experts and C/Ps often communicated each other to discuss the recent topics and issues.
	6-2 Set quantitative targets for indicators	* Project report * C/Ps * Experts		* The quantitative indicators for project purpose and outputs were determined on the discussion with the consultation study team.

Input from Japanese sides				
J-1. Total Expenses	J-1-1: Amount	* Contracts	Based on the record, confirm whether the input was carried out as planned in terms of amount.	* Japan allocated the following budget for the project implementation: - JFY 2003: 13,033,000 baht - JFY 2004: 8,069,000 baht - JFY 2005: 8,130,000 baht - JFY 2006: 8,263,000 bath (Fiscal year in Japan is from April to March)
	J-1-2: Timing	* C/Ps * Experts	By interview, ask about the degree of satisfaction with the quality and the timing of input	* Timing of budget allocation is appropriate.
J-2: Long-term expert	J-2-1: Amount	* C/Ps * Experts	Based on the record, confirm whether the input was carried out as planned in terms of amount.	* 6 long-term experts are dispatched in the following specialized fields: - Chief Adviser - Coordinator / Training - Agricultural Statistical Survey - Data Processing / Information Network - Input-Output and Macro Economic Model for Agricultural Sector
	J-2-2: Quality and Timing	* C/Ps * Experts	By interview, ask about the degree of satisfaction with the quality and the timing of input	* Appropriate. * At the beginning, the expert for economic analysis (Mr. Furukawa) was dispatched as a short-term expert twice in 2003 and 2004 ; he was switched to a long-term expert from July 2004, because his task was considerably difficult to be completed by the work volume of short-term expert.
J-3: Short-term expert	J-3-1: Amount	* C/Ps * Experts	Based on the record, confirm whether the input was carried out as planned in terms of amount.	* 7 short-term experts dispatched in the following specialized fields: - Input-Output and Macro Economic Model for Agricultural Sector (dispatched twice) - Agricultural Statistic Data Processing System - Agricultural Statistic Data Analysis System - Allocation of Agricultural Statistics Population - Survey of Crop Planted Areas - International Workshop on Agricultural Economic Analysis
	J-3-2: Quality and Timing	* C/Ps * Experts	By interview, ask about the degree of satisfaction with the quality and the timing of input	* All short-term experts effectively and timely support the project activities.

J-4: Equipment	J-4-1: Amount	* C/Ps * Experts	Based on the record, confirm whether the input was carried out as planned in terms of amount.	* Vehicle: 1 minibus and 1 wagon * Computer: 31 for AFSIT Center, 7 for CAI, 36 for ROAE * Other equipments for crop cutting survey and trainings.
	J-4-2: Quality and Timing	* C/Ps * Experts	By interview, ask about the degree of satisfaction with the quality and the timing of input	* At the first year, most main equipments were provided to the project. The early equipment provision effectively sustained the progress of the project's activities.
Input from Thai side				
T-1: Total expense	T-1-1: Amount	* C/Ps * Experts	Based on the record, confirm whether the input was carried out as planned in terms of amount.	* OAE allocated the project budget for the Project: 2002 - 2003: 4,570,000 baht 2003 - 2004: 7,060,000 bath 2004 - 2005: 11,960,000 bath (Fiscal year in Thailand is from July to June)
	T-1-2: Quality and Timing	* C/Ps * Experts	By interview, ask about the degree of satisfaction with the quality and the timing of input	* OAE shared the project budget well with JICA side. Most costs for training and survey were paid by OAE.
T-2: Counterpart	T-2-1: Amount	* C/Ps * Experts	Based on the record, confirm whether the input was carried out as planned in terms of amount.	* There are 65 counterparts belonging to OAE and ROAE in the project. - Training: 2 OAE C/Ps and 9 ROAE C/Ps - Statistical Survey: 12 OAE C/Ps and 10 ROAE C/Ps - Data Processing & Information Network: 7 OAE C/Ps and 9 ROAE C/Ps - Economic Analysis: 14 OAE C/Ps
	T-2-2: Quality and Timing	* C/Ps * Experts	By interview, ask about the degree of satisfaction with the quality and the timing of input	* The Project accepted not only all OAE's staff in related fields, but also ROAE's staff as C/Ps; therefore, the number of C/Ps was expanded. It effectively promote to form the task teams for the project activities and coordinate trainings and surveys between OAE and ROAEs.
T-3: Equipment & Facilities	T-3-1: Amount	* C/Ps * Experts	Based on the record, confirm whether the input was carried out as planned in terms of amount.	* OAE provided frame relay servers, computers, survey equipments including GPS to the Project's activities.

T-3: Equipment & Facilities	T-3-2: Quality and Timing	* C/Ps * Experts	By interview, ask about the degree of satisfaction with the quality and the timing of input	* Appropriate. * Especially, the early introduction of frame relay servers effectively promote to develop the web-based input and processing system between OAE and ROAE.
Counterpart Training in Japan (Cost Sharing)				
	Amounts	* C/Ps * Experts	Based on the record, confirm whether the input was carried out as planned in terms of amount.	* The cost for counterpart trainings in Japan were shared between OAE and JICA side. 2003 - 2004: 4 C/Ps 2004 - 2005: 7 C/Ps (3 C/Ps' cost was prepared by OAE) 2005 - 2006: 21 C/P (8 C/Ps' cost was prepared by OAE) (Japan's fiscal year is from April and March)
	Quality & Timing	* C/Ps * Experts	By interview, ask about the degree of satisfaction with the quality and the timing of input	* Appropriate. * According to interview to C/Ps, all C/Ps answered that the trainings in Japan are very useful for their works.

ANNEX I-4

Accomplishment of Implementation Process

Category	Questions	Required Data	Information Source	Accomplishment
Progress of Activities	Were the activities conducted as planned?	* Perception of parties involved	* OAE staff * Experts * Counterparts	* Most activities were carried out as planned.
	What were the major constraints to the achievement of activity targets?	* Perception of parties involved	* OAE staff * Experts * Counterparts	* The limitation of staff and budget sometimes poses constraints on data collection. However, the constraints do not have a serious negative impact on the project.
	What were the major factors contributing to achievement of the activity targets?	* Perception of parties involved	* OAE staff * Experts * Counterparts	* OAE C/Ps are confident and motivated to promote their work through the project activities.
Monitoring	Has the monitoring system been appropriate?	* Perception of parties involved	* OAE staff * Experts * Counterparts	* The expert's team made the original monitoring sheets to trace the planned and actual progress of activities once a year. The sheets are very effective in sharing the project progress with OAE C/Ps.
	How have the project framework and detailed activities changed?	* Perception of parties involved	* OAE staff * Experts * Counterparts	* OAE C/Ps often propose their ideas to experts. Experts have chances to discuss the detailed contents of activities with C/Ps.
	How have the external factors and important assumptions affected the project implementation? How did the project adjust to them?	* Perception of parties involved	* OAE staff * Experts * Counterparts	* No major external factors affected project implementation seriously.
Relationship between experts and counterparts	What is the status of communication between Japanese experts (long and short-term) and counterparts?	* Perception of parties involved	* OAE staff * Experts * Counterparts	* Communication between experts and C/Ps is very smooth. If necessary, experts and C/Ps talk to each other daily.
	Do the experts and counterparts have difficulties in cooperating?	* Perception of parties involved	* OAE staff * Experts * Counterparts	* There are no difficulties identified by the interviews.
	Are there any changes in counterpart members?	* Perception of parties involved	* OAE staff * Experts * Counterparts	* Some C/Ps had been suddenly appointed to other positions by the regular personnel change. Recently, OAE gives serious consideration to fix C/Ps' positions for the Project.
Method for Technology Transfer	What were the major constraints to transferring technology to the staff of OAE, ROAE and enumerator?	* Perception of parties involved	* OAE staff * Experts * Counterparts	* There is no major constraint in technical transfer between experts and C/Ps. * Frequent face to face communication makes up for language barrier between experts and C/Ps. C/Ps try to contact experts to find a good suggestion if necessary.
	What were the major factors contributing to the achievement of the target of technology transfer?	* Perception of parties involved	* OAE staff * Experts * Counterparts	* C/Ps are always highly motivated to learn knowledge and skills for data collection, information network and economic analysis. They eagerly ask experts to help them learn.
Project Management	What were the major constraints in managing the project?	* Perception of parties involved	* OAE staff * Experts * Counterparts	* There is no major constraint on project management between experts and C/Ps.
	What were the major factors contributing to the good management of the project?	* Perception of parties involved	* OAE staff * Experts * Counterparts	* C/Ps are always highly motivated to learn knowledge and skills for data collection, information network and economic analysis. They eagerly ask experts to help them learn.
	Will the relevant laws, rules, regulations and systems become an obstacle to JICA's technical cooperation in Thailand?	* Latest relevant laws, rules, regulations and systems	* OAE staff * Experts * Counterparts	* There is no particular law, rules, regulation and systems to be obstacle to the Project.
OAE's Ownership of the Project	Commitment and involvement of Project Management Unit and Steering Group in the project	* Perception of parties involved	* OAE staff * Experts * Counterparts	* Most project activities, especially crop cutting survey and area survey, are planned and implemented by OAE C/Ps' teams without any supervision by experts.
	Allocation and disbursement of local costs and equipment	* Perception of parties involved	* OAE staff * Experts * Counterparts	* OAE allocated local budget for the Project which is more than that prepared by JICA side.
	Sustainability of counterpart members	* Perception of parties involved	* OAE staff * Experts * Counterparts	* Since last year, most C/Ps have stayed to fully engage in the project activities.

ANNEX I-5

List of Japanese Experts

1. Long Term Experts

	Name	Assignment	Period
1	Mr. Masaaki Sasaki	Chief Advisor	6 July 2005 - 5 July 2007
2	Mr. Toshitaka Kobayashi	Coordinator / Training	16 July 2003 - 15 July 2006
3	Mr. Issei Jinguji	Agricultural Statistical Survey	16 July 2003 - 15 April 2006
4	Mr. Shunichi Yokobori	Data Processing / Information Network	27 July 2003 - 26 March 2006
5	Mr. Shunichi Furukawa	Input-Output Analysis and Macro-Economic Modeling for Agricultural Sector	14 June 2004 - 14 June 2006
	Mr. Yoichiro Kawasaki	Chief Advisor	16 July 2003 - 15 July 2005

2. Short Term Experts

	Name	Assignment	Period
1	Mr. Shoichi Yamashita	International Workshop for Input - Output Analysis	8 - 16 March 2006
2	Mr. Atsushi Yoshimizu	Agricultural Statistics Data Analysis System	16 October - 17 November 2005
3	Mr. Koji Maeda	Survey of Crop Planted Areas	8 May - 4 June 2005
4	Mr. Tatsuo Sasajima	Allocation of Agricultural Statistics Population	5 February - 5 March 2005
5	Mr. Takeyori Arimitsu	Agricultural Statistics Data Processing System	17 October - 18 November 2004
6	Mr. Shunichi Furukawa	Input-Output Analysis and Macro-Economic Modeling for Agricultural Sector	19 January - 18 March 2004
7	Mr. Shunichi Furukawa	Input-Output Analysis and Macro-Economic Modeling for Agricultural Sector	24 October - 23 December 2003

ANNEX I-6

List of Equipments Provided by JICA side

JFY 2003

No	Items	No	Location	Amount (Baht)	
1	Nissan Wagon	1	OAE	910,004.00	
2	PC (Desktop X (AFSIT31+ CAI4+ ROAE27), NotePCX (CAI3, ROAE9), PrinterX3, ServerX2)		AFSIT: 31 CAI: 7 ROAE: 36	7,886,900.00	
3	Software Packages (E-Views 4 StandardX3, SPSS BaseX3, MacromediaX1, FrontPage2003X4)		ASEAD Office	399,000.00	
4	Facsimile (brother2850)	1	ASEAD Office	15,990.00	
5	Projector（EMP-73)	1	ASEAD Office	109,140.00	
6	Copy machine KM-4030	1	ASEAD Office	226,000.00	
7	Plainmeter, Compact Semba, Plane Table Set	4 each	ASEAD Office	344,000.00	*
8	Moisture meter	4	ASEAD Office	62,000.00	
9	Crop Cutting Kits (Bucket, Plastic Sheet, Tape measure)	80	**SKT, ROAE	27,692.00	
10	Balance (35kg, 20kg, 7kg, 2kg)	316	**SKT, ROAE	150,000.00	
11	Digital Balance for training(1kg & 2kg)	5+5	ASEAD Office	24,605.00	
12	Stationeries for Training	280	**SKT, ROAE	57,000.00	
13	Others			302,000.00	
	Total			**10,514,331.00**	

JFY 2004

No	Items	No	Location	Amount (Baht)	
1	HINO Minibus	1	OAE	1,840,000.00	
2	Software Packages (Ms J#S, FrontPage2003, MS-Access2003, MS-SQL Server2000, Office2003 pro, MS Excel2003, Anti Virus)	1	ASEAD	238,000.00	
3	Threshing Machine	2	ROAE	689,000.00	
4	Moisture Meter（PM-499, GMK-303RS)	8	ASEAD Office	346,000.00	*
5	Balance (20kg)	219	**SKT, ROAE	138,020.00	
6	PVC Bag for Crop Cutting (Net, Other)	5,220	**SKT, ROAE	304,000.00	
7	Tape Measure (100m, 10m)	178	**SKT, ROAE	30,000.00	
8	Frame for Crop Cutting	350	**SKT, ROAE	41,195.00	
9	Working ware (boots 55, jackets 830, caps 615)		**SKT, ROAE	130,000.00	
10	Trial Paddy Grading Machine	10	**SKT, ROAE	30,000.00	
11	Trial SEMBA	21	**SKT, ROAE	12,600.00	
12	Pruning Shears	50	ROAE	7,500.00	
13	Steel Sticks for Crop Cutting	400	**SKT, ROAE	20,000.00	
14	Stationeries for Training (calculator, bag, clipboard, pencils)	200	**SKT, ROAE	53,000.00	
15	Others			111,000.00	
	Total			**3,990,315.00**	

JFY 2005

No	Items	No	Location	Amount (Baht)	
1	Threshing Machine	8	ROAE	3,000,000.00	*
2	Plasma Display	4	AFSIT Center	816,000.00	
3	Desktop Computer	3	ROAE 7 branch	201,300.00	
4	Multimedia Board	1	CAI	55,000.00	
5	High Resolution Display	1	CAI	21,000.00	
6	Working Ware (jackets 500, caps 500)	1,000	**SKT, ROAE	195,500.00	
7	Crop Cutting Equipment (bags 700, tags 6000, sheets 250)	6,950	**SKT, ROAE	68,200.00	
8	Stationeries for Training (bag 800, ballpoint pen 1,000)	1,800	**SKT, ROAE	61,500.00	
9	Others			n.a.	
	Total			**4,418,500.00**	

*: Japanese Yen in Thai Baht
**: SKT means Enumerator

ANNEX I-7 (1)

List of Participants of Counterpart Trainings in Japan

No	Name	Position	Training Period	Training Subject	Note
1	Mr. Montol Jeamchareon	Director of Center for Agricultural Information (Project Manager)	7 - 18 Dec. 2003	Agricultural Statistics management	
2	Mr. Chanchai Toviwat	Senior Statistics Technical Officer 8 Director of Geographic Information System Division	22 Feb. - 19 Mar. 2004	Crop Production Survey	
3	Mr. Watcharachai Pasomsaps	Senior Statistics Technical Officer 8 Director of Field Crop Information Division	22 Feb. - 19 Mar. 2004	Crop Production Survey	
4	Mr. Suntorn Hemtanont	Senior Statistics Technical Officer 7	22 Feb. - 19 Mar. 2004	Crop Production Survey	
5	Mr. Porntep Sangsuwan	Senior Statistics Technical Officer 8 Director of Information Technology and Agricultural Database Division	13 Jun. - 2 Jul. 2004	Agricultural information network system management	
6	Mr. Amorn Sangprohm	Statistician 6	4 - 31 Jul. 2004	Monitoring of growing condition and forecasting of production on Rice	
7	Ms. Unchana Tracho	Senior Statistics Technical Officer 8 Director of Livestock and Fisheries Information	10 Aug - 20 Sep. 2004	Agricult6ural Statistics Course for senior Statistical Officers	
8	Ms. Pornpun Hensawang	Policy and Plan Analyst 8 Director of Agricultural Forecasting Division	26 Sep. - 16 Oct. 2004	Input-Output Analysis for Agricultural Sector	
9	Ms. Anyada Penporn	Statistician 5	26 Sep. - 16 Oct. 2004	Input-Output Analysis for Agricultural Sector	*CS
10	Ms. Jutamard Sungudom	Policy and Plan Analyst 5	26 Sep. - 16 Oct. 2004	Input-Output Analysis for Agricultural Sector	*CS
11	Ms. Suprama Rojanaburanon	Policy and Plan Analyst 4	26 Sep. - 16 Oct. 2004	Input-Output Analysis for Agricultural Sector	*CS
12	Ms. Pornpun Hensawang	Policy and Plan Analyst 8 Director of Agricultural Forecasting Division	12 Jun. - 2 Jul. 2005	Input-Output Analysis	*CS
13	Mr. Vongtaworn Tantienratn	Statistician	12 Jun. - 2 Jul. 2005	Input-Output Analysis	*CS
14	Ms. Parjyaporn Sankat	Statistician	12 Jun. - 2 Jul. 2005	Input-Output Analysis	
15	Mr. Ponwate Thaomahawong	Senior Expert	10 - 30 Jul. 2005	Capacity building of ROAE for Statistics and information	*CS
16	Ms. Roongthip Kunnakulsoontorn	Statistician	10 - 30 Jul. 2005	Capacity building of ROAE for Statistics and information	*CS

17	Ms. Sumanya Ngandee	Computer Technician	10 - 30 Jul. 2005	Capacity building of ROAE for Statistics and information	
18	Mr. Silavat Attayothin	Chief of Agro-Economic & PG Eva of ROAE1	10 - 30 Jul. 2005	Capacity building of ROAE for Statistics and information	
19	Mr. Pramot Puprasirt	Director of ROAE2	10 - 30 Jul. 2005	Capacity building of ROAE for Statistics and information	
20	Mr. Surasak Pannop	Director of ROAE3	10 - 30 Jul. 2005	Capacity building of ROAE for Statistics and information	
21	Mr. Panich Puensan	Director of ROAE4	10 - 30 Jul. 2005	Capacity building of ROAE for Statistics and information	*CS
22	Mr. Udom Sitthidech	Director of ROAE5	10 - 30 Jul. 2005	Capacity building of ROAE for Statistics and information	
23	Ms. Suwakon Songsangthum	Director of ROAE6	10 - 30 Jul. 2005	Capacity building of ROAE for Statistics and information	
24	Mr. Sanarn Chanphandee	Director of ROAE7	10 - 30 Jul. 2005	Capacity building of ROAE for Statistics and information	
25	Mr. Kitti Suvithayaporn	Duty head of Information Group of ROAE8	10 - 30 Jul. 2005	Capacity building of ROAE for Statistics and information	
26	Mr. Sompong Nuniam	Chief of Agricultural Information G. of ROAE9	10 - 30 Jul. 2005	Capacity building of ROAE for Statistics and information	
27	Mr. Premchai Gatesumpao	Senior Statistician	2 Aug - 11 Sep. 2005	Agricultural Statistics Course for Senior Statistical Officers	
28	Ms. Gulya Chatbusayamas	Programmer 7	28 Nov. - 17 Dec. 2005	Agricultural Statistics Data Processing and Reporting System	
29	Ms. Supaporn Bongsunun	Policy and Plan Analyst 8	22 Jan. - 11 Feb. 2006	Macro Economic Analysis	
30	Mr. Narongsak Kanun	Policy and Plan Analyst 5	22 Jan. - 11 Feb. 2006	Macro Economic Analysis	*CS
31	Ms. Busaya Pinsuwan	Statistician 5	22 Jan. - 11 Feb. 2006	Macro Economic Analysis	*CS
32	Ms. Jariya Sutthichaiya	Economist 5	22 Jan. - 11 Feb. 2006	Macro Economic Analysis	*CS

*CS: Cost Sharing supported by OAE

ANNEX I-7 (2)

List of Participants of Technical Exchange Program

Visit to Indonesia

No	Name	Position	Training Period	Training Subject	Note
1	Ms. Wanarat Muangprom	Senior Statistics Technical Officer 8	1 - 7 Aug. 2004	Technical Exchange	
2	Mr. Suntorn Hemtanont	Senior Statistics Technical Officer 7	1 - 7 Aug. 2004	Technical Exchange	
3	Mr. Surachai Chanakai	Statistical Technician 7	1 - 7 Aug. 2004	Technical Exchange	
4	Ms. Gulya Chatbusayamas	Programmer 7	1 - 7 Aug. 2004	Technical Exchange	

Visit to Lao PDR

No	Name	Position	Training Period	Training Subject	Note
1	Mr. Chanchai Toviwat	Senior Statistics Technical Officer 8 Director of Geographic Information System Division	13 - 19 Nov. 2005	Technical Exchange	
2	Mr. Amorn Sangprohm	Statistician 6	13 - 19 Nov. 2005	Technical Exchange	
3	Mr. Yunyonk Saensingha	Statistical Technician 7	13 - 19 Nov. 2005	Technical Exchange	

Visit from Sri Lanka

No	Name	Position	Training Period	Training Subject	Note
1	Mr. Montol Jeamchareon	Director of Center for Agricultural Information (Project Manager)	16 Jan. 2006	Technical Exchange	
2	Mr. Chanchai Toviwat	Senior Statistics Technical Officer 8 Director of Geographic Information System Division	16 Jan. 2006	Technical Exchange	
3	Mr. Amorn Sangprohm	Statistician 6	16 Jan. 2006	Technical Exchange	
4	Mr. Porntep Sangsuwan	Senior Statistics Technical Officer 8 Director of Information Technology and Agricultural Database Division	17 Jan. 2006	Technical Exchange	

ANNEX I-8

Counterpart List

Field of Experts	Name	Position
	Ms. Anchalee Ooraikul	Secretary General of OAE (Project Advisor)
1) Chief Adviser	Mr. Surasak Tongpian	Deputy Secretary General of OAE (Project Director)
	Mr. Montol Jeamchareon	Director of Center for Agricultural Information (Project Manager)
2) Coordinator / Training	Mr. Prakobkit Phusirimongkol	Director of Agricultural Economics Information Division
	Ms. Suraporn Issaradetkul	Director of Horticultural Crop Information Division
	Mr. Urat Visrutvanij	Director of 1st ROAE
	Mr. Pramot Puprasirt	Director of 2nd ROAE
	Mr. Surasak Pannop	Director of 3rd ROAE
	Mr. Panich Puensan	Director of 4th ROAE
	Mr. Udom Sitthidech	Director of 5th ROAE
	Ms. Suwakhon Songsaengthum	Director of 6th ROAE
	Mr. Sanarn Janphakdee	Director of 7th ROAE
	Mr. Montri Muangphrom	Director of 8th ROAE
	Ms. Yindee Kaewprakob	Director of 9th ROAE
3) Agricultural Statistical Survey		
3.1) Survey Design	Ms. Suraporn Issaradetkul	Director of Horticultural Crop Information Division
	Ms. Wanarat Muangprom	Statistical Technician 8
3.2) Data Collection	Mr. Chanchai Toviwat	Director of Geographic Information System Division
	Mr. Watcharachai Pasomsaps	Director of Field Crop Information Division
	Ms. Unchana Tracho	Director of Livestock and Fisheries Information Division
	Mr. Suntorn Hemtanont	Statistician 7
	Mr. Surachai Chanakat	Statistical Technician 8
	Mr. Amorn Sangprohm	Statistician 7
	Ms. Pantila Kordpol	Statistician 7
	Mr. Kasem Prapabkul	Statistician 8
	Mr. Wongtaworn Tunteanrat	Statistical Technician 6
	Ms. Rungtip Gunnakulsuntorn	Statistician 7
	Mr. Sathaphon Poripord	1st ROAE
	Mr. Cosit Virojpet	2nd ROAE
	Mr. Sawat Jampeesri	3rd ROAE
	Mr. Banloo Chansam	4th ROAE
	Mr. Yunyonk Saensingha	5th ROAE
	Mr. Thawatchai Prayoonsin	6th ROAE
	Ms. Tipaya Thanawut	7th ROAE
	Mr. Sommart Yingyuad	7th ROAE (sub)
	Ms. Nuankhae Burapah-sikarin	8th ROAE
	Mr. Sompong Nuniam	9th ROAE

Field of Experts	Name	Position
4) Data Processing / Information Network System	Mr. Porntep Sangsuwan	Director of Information Technology and Agricultural Database Division
	Mr. Chusak Aswamongkonsiri	Statistician 7
	Ms. Gulya Chatbusayamas	Programmer 7
	Mr. Suchart Phupang	Programmer 6
	Mr. Chumni Hyoothong	Programmer 6
	Ms. Sumanlaya Ngandee	Programmer 5
	Ms. Panida Huaprasert	Programmer 5
	Mr. Silavat Attayothin	1st ROAE
	Mr. Chalermsin Intachaisri	2nd ROAE
	Mr. Sawat Jumpeesri	3rd ROAE
	Mr. Supachai Srisurak	4th ROAE
	Mr. Bundit Wattanaphutikul	5th ROAE
	Mr. Sunti Wisutisup	6th ROAE
	Ms. Sombat Puttha	7th ROAE
	Mr. Banjob Soonsuwan	8th ROAE
	Mr. Nikorn Sangket	9th ROAE
5) Input-Output Analysis and Macro-Economic Modeling for Agricultural Sector		
5.1) Input - Output Table	Ms. Pornpun Hensawang	Director of Agricultural Forecasting Division
	Ms. Anyada Penporn	Statistician 5
	Ms. Pariyaporn Sengad	Statistical technician 5
	Ms. Chutamard Sungsuwan	Policy and Plan Analyst 5
	Ms. Suprama Rojanaburanon	Policy and Plan Analyst 4
5.2) Macro Economic Model	Ms. Supaporn Bongsunun	Policy and Plan Analyst 8
	Mr. Siriwat Songtanasak	Policy and Plan Analyst 7
	Mr. Narongsak Karat	Policy and Plan Analyst 5
	Ms. Busaya Pinsuwan	Statistician 5
5.3) Commodity Demand - Supply Model	Ms. Pakapan Soralam	Economist 8
	Ms. Preeyawan Pavamai	Economist 8
	Ms. Wareeporn Pojeen	Economist 7
	Ms. Patchararat Limsirikul	Statistician 6
	Mr. Krit Aiemtanon	Economist 4

ANNEX I-9

Budget Allocation from JICA Side

(Baht)

	Item	JFY2003	JFY2004	JFY2005	JFY2006 *	Total	Remarks
1	**Local Cost**	1,827,000	3,387,000	4,684,000	3,290,000	13,188,000	Training for SKT etc , Crop Cutting Equipment, Traveling, Office supply,
2	**Equipment**	10,514,000	-	-		10,514,000	PC, Office Software, Projector, Wagon car, Minibus, Copy Machine, Fax
		-	3,990,000	-		3,990,000	Moisture meter, Web Soft, Threshing Machine
		-	-	1,214,000		1,214,000	Plasma Display, Desktop PC, Multimedia Board
					729,000	729,000	Desktop PC, GPS
3	**Counterpart Training ****	692,000	692,000	2,232,000	4,244,000	7,860,000	
	Total	13,033,000	8,069,000	8,130,000	8,263,000	37,495,000	

* ASEAD Project requested budget allocation for JFY 2006.

** Counterpart training cost in Japan except cost sharing by OAE.

ANNEX I-10 (1)

OAE Budget Allocation for ASEAD Project, 2003 - 2004

Fiscal year	Activities	Item	Amount (Baht)
2002-2003	1. Renovation of Project rooms and Training Room	Renovation of Training Room, CAI	2,097,200
	2. Consumption Survey for I/O Table data	Enumerator costs, ROAE travel & accommodation	375,200
	3. Wage for temporary staff	To support project activities in OAE and ROAE	2,099,000
	Total		**4,571,400**
2003-2004	1.Trip to ROAE	Travel and accommodation for OAE staff	236,000
	2. Consumption Survey for I/O Table data	Enumerator costs, ROAE travel & accommodation	800,400
	3. Pre-testing cassava cutting (Kanchanaburi & Uthai Thani)	Accommodation for OAE counterparts	80,000
	4. Training for cassava cutting in Kanchanaburi		200,000
	5. Seminar		250,000
	6. ROAE training for cassava cutting	Accommodation for OAE and ROAE counterparts	178,000
	7. Cassava crop cutting field work	Enumerator costs, ROAE travel & accommodation	250,000
	8. ROAE training for sugar cane	Accommodation for OAE and ROAE counterparts	58,000
	9. Sugar crop cutting field work	Field survey	450,000
	10. Data processing training for cassava crop cutting	Accommodation and travel	36,000
	11. Training courses for OAE and ROAE staff		400,000
	12. Monitoring and guidance to ROAE for network	Accommodation and travel	36,000
	13. Surveys on production costs and marketing		216,000
	14. Monitoring activities in ROAE	Accommodation and travel	90,000
	15. Seminar		250,000
	16. Miscellaneous		100,000
	17. Wage for temporary staff	To support project activities in OAE and ROAE	3,434,400
	Total		**7,064,800**

ANNEX I -10 (2)

OAE Budget Allocation for ASEAD Project, 2004 - 2005

Items	Amount
Total	**11,959,980**
1. Crop Cutting Survey	**2,445,271**
1.1 Rice (423 muban)	868,200
- Expense for ROAE Officer (111 muban)	133,200
- Honorarium for Enumerator (312 muban)	312,000
- Reward for Farmer	423,000
1.2 Upland Rice (14 muban)	120,155
- Expense for OAE Officer	106,155
- Reward for Farmer	14,000
1.3 Cassava (206 muban)	417,400
- Expense for ROAE Officer (27 muban)	32,400
- Honorarium for Enumerator (179 muban)	179,000
- Reward for Farmer	206,000
1.4 Sugarcane (266 muban)	638,400
- Expense for ROAE Officer (36 muban)	43,200
- Honorarium for Enumerator (230 muban)	276,000
- Reward for Farmer	319,200
1.5 Longan (175 muban)	366,916
- Expense for OAE Officer	278,116
- Reward for Farmer	88,800
1.6 Operated Manual for ROAE Officer and Enumerator	34,200
2. Economic Analysis	**1,610,200**
2.1 Consumption Survey (934 sample)	1,594,400
- Expense for ROAE Officer	1,120,800
- Reward for Farmers	373,600
- Edit and Data Processing	100,000
2.2 Meeting and Seminar	15,800
- Seminar on Statistics and Input - Output Table in Japan	9,800
- Working Group Meeting	6,000
3. OAE Officer Training	**3,268,256**
3.1 Human Resource Development Training	3,268,256
3.2 Crop Cutting Training for OAE and Enumerator	
4. Counterpart Training	**1,186,486**
4.1 Study Tour in Japan	786,486
4.2 Counterpart Training in Japan	400,000
5. AFSIT (ASEAN Food Security Information Training) Center	**1,897,200**
6. Frame Relay for ROAE (10 Sets)	**1,310,750**
7. Equipment for Crop Cutting	**241,817**
- Moisture Meter	189,500
- Balance (1 kg, 2 kg, 7 kg)	18,012
- Digital Balance (1 kg)	31,825
- Others (Steel Stick, Scissor)	2,480

ANNEX I-10 (3)

OAE Budget Allocation for ASEAD Project, 2005 - 2006

Items	Amount
Total	**11,693,501**
1. Crop Cutting Survey	**4,560,752**
1.1 Rice (624 muban)	1,421,400
- Expense for OAE Regional Officer	374,400
- Honorarium for Enumerator (423 muban)	423,000
- Reward for Farmer	624,000
1.2 Cassava (224 muban)	537,400
- Expense for OAE Regional Officer	134,400
- Honorarium for Enumerator (179 muban)	179,000
- Reward for Farmer	224,000
1.3 Sugarcane (280 muban)	780,000
- Expense for OAE Regional Officer	168,000
- Honorarium for Enumerator (230 muban)	276,000
- Reward for Farmer	336,000
1.4 Maize (245 muban)	592,000
- Expense for OAE Regional Officer	147,000
- Honorarium for Enumerator (200 muban)	200,000
- Reward for Farmer	245,000
1.5 Soybean (184 muban)	444,400
- Expense for OAE Regional Officer	110,400
- Honorarium for Enumerator (150 muban)	150,000
- Reward for Farmer	184,000
1.6 Longan (240 muban)	408,000
- Expense for OAE Officer	288,000
- Reward for Farmer	120,000
1.7 Pineapple (55 polygons)	164,930
- Expense for OAE Officer	131,930
- Reward for Farmer	33,000
1.8 Operated Manual for ROAE officer and Enumerator	62,520
1.9 Seminar on Development for Crop Cutting Survey	150,102
2. Area Survey	**3,651,120**
2.1 Workshop Training on Area Survey by Geo-information Method	1,256,578
2.2 Seminar on Development for Area Survey	240,442
2.3 Satellite Imagery (Landsat 5, Ikonos)	2,056,580
2.4 Arial Photograph	97,520
3. Economic Analysis	**937,720**
3.1 Consumption Survey (934 sample)	921,920
- Expense for OAE Regional Officer	448,320
- Reward for Farmer	373,600
- Edit and Data Processing	100,000
3.2 Meeting and Seminar	15,800
- Seminar on Statistics and Input - Output Table in Japan	9,800
- Working Group Meeting	6,000
4. OAE Officer Training	**1,235,188**
4.1 Human Resource Development Training	941,200
4.2 Crop cutting Training for OAE and Enumerator (5 crops)	293,988
5. Counterpart Training	**1,308,721**
5.1 Study Tour in Japan (3 persons)	460,891
5.2 Counterpart Training in Japan (5 persons)	847,830

ANNEX II-1

Table: Instruction of OAE C/Ps in AFSIS Training / Workshop hosted by OAE

Name of AFSIS Training / Workshop	Date	Place	Total hours of Training Seminar (hours)	Hours instructed by OAE C/Ps (hours)	Percentage of instruction of OAE C/Ps
Workshop on AFSIS Data Standardization	29-31 July, 2003	Ayutthaya	11	11	100%
Training Course on Statistical Survey Techniques	1-5 December, 2003	Bangkok	23.5	19	81%
Workshop on the Construction of the Information Network System	25 February, 2004	Chiang Mai	6.5	6.5	100%
Training Course on Statistical Data Analysis and Forecasting	22-26 November 2004	Bangkok	29.5	24.5	83%
Workshop on Improvement of the Quality of Agricultural Statistics	25-27 April 2005	Chiang Rai	13	11	85%
Total			**83.5**	**72**	**86%**

ANNEX II-2

Table: Qualification of AFSIS instructors

OAE counterparts	AFSIS	Technical Exchange		International Seminar	Total Time of lectures in charge (times)	Lecturer's experience more than twice
	Time of lectures in charge (times)	Lectures in Indonesia	Lectures in Laos	Time of lectures in charge (times)		
Data Collection						
Ms. Suraporn Issaradetkul	2				2	Qualified
Mr. Chanchai Toviwat	3		1		4	Qualified
Mr. Prakobkit Phusirimonkol	1				1	
Ms. Busaya Pinsuwan	1				1	
Ms. Unchana Tracho	1				1	
Mr. Amorn Sangprohm			1		1	
Ms. Yunyonk Saensingha			1		1	
Mr. Surachai Chanakat		1			1	
Ms. Wanarat Muangpron		1			1	
Mr. Suntorn Hemtanont		1			1	
Data Processing & Information Network System						
Mr. Montol Jeamchareon	13				13	Qualified
Ms. Gulya Chatbusayamas		1			1	
Economic Analysis						
Ms. Pornpun Hensawang	4			1	5	Qualified
Ms. Supaporn Bongsunun	1			1	2	Qualified
Ms. Pakapan Soralam				1	1	

ANNEX II-3

Table: Actual process of data collection and processing of crop cutting survey in 2004 - 2006

Crop	Crop Harvest Period		Survey Period		Data Processing		From end of survey to end of data processing	
	Beginning	End (A)	Beginning	End (A)	Beginning	End (B)	(A)	(B)
Rice	Sep-04	Dec-04	Dec-04	Feb-05	Dec-04	Jun-05	Feb-05	Jun-05
	3 months		2 months		6 months		**4 months**	
Cassava	Oct-04	Mar-05	Jan-05	Mar-05	Feb-05	Jun-05	Mar-05	Jun-05
	5 months		2 months		4 months		**3 months**	
Sugar cane	Oct-04	Mar-05	Jan-05	Mar-05	Feb-05	Jun-05	Mar-05	Jun-05
	5 months		3 months		4 months		**3 months**	
Maize	Aug-05	Dec-05	Sep-05	Nov-05	Oct-05	Jan-06	Nov-05	Jan-06
	5 months		2 months		3 months		**2 months**	
Soybean	Sep-05	Nov-05	Oct-05	Nov-05	Nov-05	Mar-06	Dec-05	Mar-06
	2 months		1 month		4 months		**3 months**	

ANNEX II-4

Precision Index of Crop Cutting Survey in 2004 - 2006

Crop	Region	Average yield (kg / rai)	Precision index (%)
Rice	Northern	564	2.6
	North-Eastern	401	3.0
	Central plain	586	3.1
	Southern	439	3.4
	National total	**477**	**1.7**
Cassava	Northern	4,233	5.2
	North-Eastern	3,981	3.5
	Central plain	4,657	2.2
	National total	**4,236**	**2.1**
Sugar cane	Northern	11,051	3.2
	North-Eastern	9,068	2.7
	Central plain	10,246	5.3
	National total	**9,958**	**2.4**
Maize	Northern	721	3.2
	North-Eastern	733	3.9
	Central plain	736	4.0
	National total	**728**	**2.1**
Soybean	Northern	278	3.9
	North-Eastern	250	7.0
	Central plain	385	4.4
	National total	**291**	**3.0**

Notice: 1 rai = 1,600 m2
Rice, Cassava, Sugar cane: Data in 2004 - 2005
Maze, Soybean: Data in 2005 - 2006

ANNEX II-5

Table: Comparison of actual process of data collection and processing between interview survey in 2003 - 2004 and crop cutting survey in 2004 - 2005

Crop	Survey + data processing	Crop Harvest Period		Survey Period		Data input in ROAE		Data processing in OAE		From end of survey to end of data processing		Percentage of time reduction
		Beginning	End	Beginning	End (A)	Beginning	End	Beginning	End (B)	(A)	(B)	
Rice	Interview survey + OAE program	Sep-03	Dec-03	Dec-03	Apr-04	Mar-04	Aug-04	Jul-04	Aug-04	Apr-04	Aug-04	**20.0%**
		3 months		4 months		5 months		1 months		**5 months**		
	Crop cutting survey + Web-base input	Sep-04	Dec-04	Dec-04	Feb-05	Dec-04			Jun-05	Feb-05	Jun-05	
		3 months		2 months		5 months				**4 months**		
Cassava	Interview survey + OAE program	Oct-03	Mar-04	Dec-03	Dec-03	Jan-04	Feb-04	Feb-04	Aug-04	Dec-04	Aug-04	**62.5%**
		5 months		1 month		1 month		6 months		**8 months**		
	Crop cutting survey + Web-base input	Oct-04	Mar-05	Jan-05	Mar-05	Feb-05			Jun-05	Mar-05	Jun-05	
		5 months		2 months		4 months				**3 months**		
Sugar cane	Interview survey + OAE program	Oct-03	Mar-04	n.a	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	**n.a.**
		5 months										
	Crop cutting survey + Web-base input	Oct-04	Mar-05	Jan-05	Mar-05	Feb-05			Jun-05	Mar-05	Jun-05	
		6 months		2 months		4 months				**3 months**		
Maize	Interview survey + OAE program	Jul-05	Dec-05	Dec-03	Dec-03	Jan-04	Feb-04	Mar-04	Apr-04	Dec-03	Apr-04	**50.0%**
		7 months		1 month		1 month		1 months		**4 months**		
	Crop cutting survey + Web-base input	Aug-05	Dec-05	Sep-05	Nov-05	Oct-05			Jan-06	Nov-05	Jan-06	
		5 months		2 months		3 months				**2 months**		
Soybean	Interview survey + OAE program	Oct-04	Apr-05	Oct-04	Apr-04	Nov-04	May-04	Dec-04	Jun-04	Apr-04	Jun-04	**0.0%**
		6 months		6 months		6 months		1 months		**3 months**		
	Crop cutting survey + Web-base input	Sep-05	Nov-05	Oct-05	Nov-05	Nov-05			Mar-06	Dec-05	Mar-06	
		2 months		1 month		4 months				**3 months**		

Note: Process information of interview survey of sugar cane is not available in OAE, because the interview survey of sugar cane is conducted by Ministry of Industry.

ANNEX II-6

Table: Condition of Website Setup in ROAEs

Regional Office	Office has Website (Yes or No)	Date of Website opening	Does the site include statistical data?	Are the data updated regularly?
No.1	Yes	Jan. 2005	Yes	Yes
No.2	Yes	Jan. 2005	Yes	Yes
No.3	Yes	Sep. 2003	Yes	Yes
No.4	Yes	Jan. 2005	Yes	Yes
No.5	Yes	Nov. 2003	Yes	Yes
No.6	Yes	Dec. 2004	Yes	Yes
No.7	Yes	Jul. 2004	Yes	Yes
No.8	Yes	Feb. 2005	Yes	Yes
No.9	Yes	Jul. 2004	Yes	Yes

ANNEX II-7

Table: Authorized report of economic analysis by OAE

Title of report	Date of issue	Published by	Objectives and major subjects of the report	Methodology of analysis	Counterparts in charge
Gross Outputs by Agricultural Input-Output Sector	20-Dec-03	CAI/OAE	Analyzing the agricultural gross outputs and value added. The data are utilized for AIO.	Statistical Analysis	Ms. Pornpun Hensawang
Imports and exports of Agricultural Products by Agricultural Input-Output Sectors	20-Dec-03	CAI/OAE	Analyzing the agricultural foreign trade.	Statistical Analysis	Ms. Pornpun Hensawang
Agricultural Commodity Model (I)	20-Dec-03	CAI/OAE	Analyzing the demand-supply situation of agricultural commodities (Rice)	Econometric Analysis	Ms. Anyada Penporn
Agricultural Commodity Model (II)	20-Jun-04	CAI/OAE	Analyzing the demand-supply situation of agricultural commodities (Maize)	Econometric Analysis	Ms. Anyada Penporn
Revised Gross Outputs by Agricultural Commodity and Input-Output Sector	20-Dec-04	CAI/OAE	Analyzing the agricultural gross outputs and value added. The data are utilized for AIO.	Statistical Analysis	Ms. Pornpun Hensawang
Manual For Reconciliation Work for 2000 AIO	20-Dec-03	CAI/OAE	Analyzing the agricultural foreign trade.	Statistical Analysis	Ms. Pornpun Hensawang
Agricultural Commodity Model (III)	20-Dec-04	CAI/OAE	Analyzing the demand-supply situation of agricultural commodities (Cassava)	Econometric Analysis	Ms. Pakapan Solarum
Agricultural Commodity Model (IV)	20-Jun-05	CAI/OAE	Analyzing the demand-supply situation of agricultural commodities (Sugar Cane)	Econometric Analysis	Ms. Pakapan Solarum
Revised Gross Outputs by Agricultural Commodity and Input-Output Sector	20-Dec-05	CAI/OAE	Analyzing the agricultural gross outputs and value added. The data are utilized for AIO.	Statistical Analysis	Ms. Pornpun Hensawang
Agricultural Commodity Model (V)	20-Dec-05	CAI/OAE	Analyzing the demand-supply situation of agricultural commodities (Soybean)	Econometric Analysis	Ms. Pakapan Solarum
Exports and Imports of Agricultural Commodities by Commodities by Input-Output	20-Dec-05	CAI/OAE	Analyzing the agricultural foreign trade.	Statistical Analysis	Ms. Pornpun Hensawang
Food Consumption by Commodities by Input-Output Sectors for 2000 AIO	20-Dec-05	CAI/OAE	Analyzing the food consumption.	Statistical Analysis	Ms. Pornpun Hensawang
Agricultural Input-Output Table for 2000	1-Mar-06	CAI/OAE	Analyzing the input-output table for 2000	Statistical Analysis	Ms. Pornpun Hensawang
Agricultural Commodity Models	13-Mar-06	CAI/OAE	Analyzing the demand-supply situation of agricultural commodities	Statistical Analysis	Ms. Pakapan Solarum
Macro-Economic Analysis for Agricultural Sectors	13-Mar-06	CAI/OAE	Analyzing the economic situation.	Statistical Analysis	Ms. Supaporn Bongsunun

ANNEX II-8

List of Economic Analytical Reports Issued by OAE

Title of report	Date of issue	Published by	Objectives and major subjects of the report	Methodology of analysis
Progress Report of Construction of 2000 Agricultural Input-Output Table	15-Jun-2004	OAE	Presenting the basic data and progress of construction of 2000 AIO.	Input-Output Analysis
Macro-Economic Basic Model for Agricultural Sector	15-Jun-2004	OAE	Analyzing the agricultural GDP growth and economic forecasting.	Econometric Analysis
Agricultural Commodity Models (III)	15-Jun-2004	OAE	Analyzing the demand-supply situation of agricultural commodities (Rice and Maize)	Econometric Analysis
Application and Theory of Input-Output Analysis and Macro-economic Modeling	15-Mar-2005	OAE	Explaining the basic theory and application of Agricultural Input-Output Analysis	Input-Output Analysis
Progress Report of Construction of 2000 Agricultural Input-Output Table (II)	15-Mar-2005	OAE	Presenting the basic data and progress of construction of 2000 AIO.	Input-Output Analysis
Macro-Economic Model for Agricultural Sector in OAE	15-Mar-2005	OAE	Analyzing the agricultural GDP growth and economic forecasting.	Econometric Analysis
Agricultural Commodity Models (IV)	15-Mar-2005	OAE	Analyzing the demand-supply situation of agricultural commodities (Cassava)	Econometric Analysis

ANNEX II-9

Table: Seminar / Workshop on Agricultural Economic Analysis

Title	Date	Organized by	Objectives and major subjects	Number of participants
Progress and Action Plan of Economic Analysis in OAE	15 Dec. 2003	OAE	Disseminating the basic theory of input-output analysis, macro-economic models, and commodity demand-supply models	110
Progress and Action Plan of Economic Analysis in OAE	26, 27 Aug. 2004	OAE	Disseminating the input-output analysis, macro-economic models, and commodity demand-supply models	150
Basic Model for Macro-Economic Analysis			Disseminating the progress of macro-economic modeling	
Commodity Modeling in OAE and Future Commodity Production			Disseminating the progress of commodity modeling	
Training on Macro-economic Theory	5-May-2005	OAE	Lecture of the macro-economic theory	200
Agricultural Economics Situation	30 Jun. 2005	OAE	Disseminating the progress of macro-economic modeling	350
Input-Output Analysis and Compilation for 2000	26 Aug. 2005	OAE	Disseminating the progress of commodity modeling	150
Agricultural Economics Situation	1 Dec. 2005	OAE	Disseminating the progress of macro-economic modeling	35
International Workshop on Agricultural Economic Analysis	13 Mar. 2006	OAE	Disseminating the input-output analysis, macro-economic models, and commodity demand-supply models	120

ANNEX II-10

Table 1: Training Programs in ASEAD Project in the First Year (July 2003 to June 2004)

No.	Date	Name of training course	Duration (days)	Location	Subjects	No. of Participants				Trainers	
						OAE Staff	ROAE Staff	Enumerator	Total	Lecture	Practice
1	25 Dec, 2003	Workshop on Forcesting & Surveying Data in Quantitative of Agricultural Production	1	Knajanaburi.	Lecture on data collection of cassava by crop cutting and practice in field.	20	14		34	Mr. Chanchai, Mr. Watcharachai	Mr. Chanchai, Mr. Watcharachai, Mr. Amorn, Mr. Surachai, Mr. Sunthon
2	13-14 Jan, 2004	Cassava crop cutting	2	Uthai Thani	Lecture on data collection of cassava by crop cutting and practice in field.		10	9	19	Mr. Chanchai, Mr. Watcharachai	Mr. Chanchai, Mr. Watcharachai, Mr. Amorn, Mr. Surachai, Mr. Sunthon
3	15-16 Jan, 2004	Cassava crop cutting	2	Khon Kaen	Lecture on data collection of cassava by crop cutting and practice in field.		7	15	22	Mr.Chanchai, Mr. Watcharachai	Mr. Chanchai, Mr. Watcharachai, Mr. Amorn, Mr. Surachai, Mr. Sunthon
4	20-21 Jan, 2004	Cassava crop cutting	2	Nakhon Ratchasima	Lecture on data collection of cassava by crop cutting and practice in field.		21	12	33	Mr.Chanchai, Mr. Watcharachai	Mr. Chanchai, Mr. Watcharachai, Mr. Amorn Mr. Surachai, Mr. Sunthon
5	22-23 Jan, 2004	Cassava crop cutting	2	Chonburi.	Lecture on data collection of cassava by crop cutting and practice in field.		4	11	15	Mr. Chanchai, Mr. Watcharachai	Mr. Chanchai, Mr. Watcharachai, Mr. Amorn Mr. Surachai
6	6 Feb, 2004	Operational Training on Data Processing of Cassava	1	AFSIT Center	Operation of Data Processing Software through input of cassava crop cutting data.	12	10		22	-	Mr. Chamuni
7	8-9 Mar, 2004	Sugarcane crop cutting	2	Khon Kaen.	Lecture on data collection of sugarcane by crop cutting and practice in field.		10	17	27	Mr. Amorn, Mr. Surachai	Mr. Amorn, Mr. Surachai
8	31 Mar, 2004	Workshop on Data Processing of Sugarcane	1	AFSIT Center	Operation of Data Processing Software through input of sugarcane crop cutting data.	12	7		19	-	Mr.Chamuni

9	20-22 May, 2004	Survey method of major rice yield / rai by practical survey in sample field	3	Pitsanulok	Lecture on survey method of major rice by crop cutting and practice in field and presentation of result by participants.	15	27		42	Mr. Chanchai, Mr. Watcharachai Mr. Amorn	Mr. Chanchai, Mr. Watcharachai, Mr. Amorn, Mr. Surachai, Mr. Sunthon
10	23-25 May, 2004	Survey method of major rice yield/rai by practical survey in sample field	3	Supanburi	Lecture on survey method of major rice by crop cutting and practice in field and presentation of result by participants.	18	22		40	Mr. Chanchai, Mr. Watcharachai Mr. Amorn	Mr. Chanchai, Mr. Watcharachai, Mr. Amorn, Mr. Surachai, Mr. Sunthon
		Total	19			77	132	64	273		

Table 2: Training Programs in ASEAD Project in the Second Year (July 2004 to June 2005)

No.	Date	Name of training course	Duration (days)	Location	Subjects	No. of Participants				Trainers	
						OAE Staff	ROAE Staff	Enumerator	Total	Lecture	Practice
1	17-19 Jul, 2004	Longan Crop Cutting by trial method for Officers (ROAE1)	3	Chaing Mai	Lecture on longan crop cutting and practice in field and input data of survey result.	10	20		30	Mr. Chanchai, Mr. Watcharachai Ms. Suraporn, Mr. Kasem Ms. Patchara	Mr. Chanchai, Mr. Sunthorn Mr. Watcharachai Ms. Suraporn
2	18-19 Sep, 2004	Crop Cutting of major Rice for ROAE Officers	2	CAI	Lecture on rice crop cutting method.	27	25		52	Mr. Chanchai, Mr. Watcharachai Mr. Surachai, Mr. Amorn Mr. Wongtaworn	
3	29-31 Oct, 2004	Crop Cutting of major Rice for Sokotos (ROAE4)	3	Mahasarakam	Lecture on rice crop cutting method and practice in field.			40	40	Mr. Watcharachai, Mr. Chanchai	Mr. Watcharachai, Mr. Chanchai
4	1-3 Nov, 2004	Crop Cutting of major Rice for Sokotos (ROAE3)	3	Nonkai	Lecture on rice crop cutting method and practice in field.			30	30	Mr.Watcharachai, Ms. Suraporn	Mr.Watcharachai, Ms. Suraporn
5	4-5 Nov, 2004	Crop Cutting of major Rice for Sokotos (ROAE5)	2	Nakhon Ratchasima	Lecture on rice crop cutting method and practice in field.			36	36	Mr. Watcharachai, Ms. Pornpun	Mr. Watcharachai, Ms. Pornpun
6	4-6 Nov, 2004	Crop Cutting of major Rice for Sokotos (ROAE6)	3	Sakaeo	Lecture on rice crop cutting method and practice in field.			18	18	Mr. Amorn Mr. Suntorn	Mr. Amorn Mr. Suntorn
7	4-6 Nov, 2004	Crop Cutting of major Rice for Sokotos (ROAE1)	3	Chaing Mai	Lecture on rice crop cutting method and practice in field.			24	24	Mr. Chanchai, Mr. Motol Mr. Surachai, Mr. Sataporn	Mr. Chanchai, Mr. Surachai
8	8-10 Nov, 2004	Crop Cutting of major Rice for Sokotos (ROAE 2)	3	Phitsanulok	Lecture on rice crop cutting method and practice in field.			45	45	Mr. Chanchai, Ms. Unchana Mr. Surachai	Mr. Chanchai, Ms. Unchana Mr. Surachai

9	8-10 Nov, 2004	Crop Cutting of major Rice for Sokotos (ROAE7)	3	Petchaburi	Lecture on rice crop cutting method and practice in field.			23	23	Mr. Amorn Mr. Kasem	Mr. Amorn Mr. Kasem
10	28 Nov - 2, Dec,2004	Web Training	5	AFSIT	Lecture and practice on Web software, FrontPage and Typo3.	25	18		43	Mr. Porntep Mr. Suchart	Mr. Porntep Mr. Suchart
11	1-3 Dec, 2004	Crop Cutting of major Rice for Sokotos (ROAE8)	3	Surathani	Lecture on rice crop cutting method and practice in field.			23	23	Mr. Watcharachai, Mr. Chanchai, Ms. Wanarat, Mr. Surachai, Mr. Amorn	Mr. Watcharachai, Mr. Chanchai, Ms. Wanarat, Mr. Surachai, Mr. Amorn
12	9 Dec, 2004	Data Processing of Major Rice Crop Cutting	1	AFSIT	Practice on Data Processing through data input	16	18		34	Mr. Wongthaworn	Mr. Wongthaworn, Mr. Chamuni
13	21-23 Dec, 2004	Cassava and Sugarcane Crop Cutting for Sokoto (ROAE5)	3	Nakorn Ratchasima	Lecture on cassava and sugarcane crop cutting method and practice in field.			32	32	Mr. Watcharachai, Mr. Chanchai	Mr. Watcharachai, Mr. Chanchai
14	22-24 Dec, 2004	Cassava and Sugarcane Crop Cutting for Sokoto (ROAE7)	3	Lopburi	Lecture on cassava and sugarcane crop cutting method and practice in field.			26	26	Ms. Unchana, Mr. Amorn	Ms. Unchana, Mr. Amorn
15	23 Dec, 2004	I/O semoinar	1	OAE 8F	Lecture on I/O analysis for agricukture sectior in Japan	66	8		74	Ms. Pornpun Ms. Anyada	
16	27-29 Dec, 2004	Cassava and Sugarcane Crop Cutting for Sokoto (ROAE4)	3	Korn kaen	Lecture on cassava and sugarcane crop cutting method and practice in field.			25	25	Mr. Watcharachai, Mr. Suntorn, Ms. Patcharatana	Mr. Watcharachai, Mr. Suntorn, Ms. Patcharatana
17	5-7 Jan, 2005	Cassava and Sugarcane Crop Cutting for Sokoto (ROAE2)	3	Phitsanulok	Lecture on cassava and sugarcane crop cutting method and practice in field.			30	30	Mr. Chanchai	Mr. Chanchai
18	5-7 Jan, 2005	Cassava and Sugarcane Crop Cutting for Sokoto (ROAE6)	3	Rayong	Lecture on cassava and sugarcane crop cutting method and practice in field.			19	19	Mr. Watcharachai, Mr. Porntep, Ms. Suraporn, Mr. Suntorn	Mr. Watcharachai, Mr. Porntep, Ms. Suraporn, Mr. Suntorn
19	6-8 Jan, 2005	Cassava and Sugarcane Crop Cutting for Sokoto (ROAE3)	3	Loei	Lecture on cassava and sugarcane crop cutting method and practice in field.			27	27	Ms. Unchana, Mr. Amorn	Ms. Unchana, Mr. Amorn
20	8-10 Feb, 2005	Crop Cutting of major Rice for Sokotos (ROAE9)	3	Phatthalung	Lecture on rice crop cutting method and practice in field.			17	17	Mr.Watcharachai Mr. Amorn Mr. Sompong	Mr.Watcharachai Mr. Amorn Mr. Surachai Mr. Sompong
21	11 Feb, 2005	Data Processing for Cassava & Sugarcane Crop Cutting	1	AFSIT Center	Practice on Data Processing through data input	9	20		29	Mr. Wongtaworn	Mr. Wongtaworn Mr. Chamuni
		Total	57			153	109	415	677		

Table 3: Training Programs in ASEAD Project in the Third Year (from July 2005)

No.	Date	Name of training course	Duration (days)	Location	Subjects	No. of Participants				Trainers	
						OAE Staff	ROAE Staff	Enumerator	Total	Lecture	Practice
1	18 - 19 Aug, 2005	Crop Cutting Training on Soybean and Maize for Sokoto (ROAE6)	2	Chantaburi	Lecture on soybean and maize crop cutting method and practice in field.			21	21	Mr. Wacharachai Mr. Amorn, Ms. Busaya	Mr. Wacharachai Mr. Amorn, Ms. Busaya
2	25 - 27 Aug, 2005	Crop Cutting Training on Soybean and Maize for Sokoto (ROAE2)	3	Phistnulok	Lecture on soybean and maize crop cutting method and practice in field.			22	22	Mr. Amorn, Ms. Busana	Mr. Amorn, Ms. Busana
3	30 -31 Aug, 2005	Crop Cutting Training on Soybean and Maize for Sokoto (ROAE7)	2	Saraburi	Lecture on soybean and maize crop cutting method and practice in field.			21	21	Mr. Amorn, Ms. Busana	Mr. Amorn, Ms. Busana
4	2 - 4 Sep, 2005	Crop Cutting Training on Soybean and Maize for Sokoto (ROAE1)	3	Chaing Rai	Lecture on soybean and maize crop cutting method and practice in field.			36	36	Mr. Amorn, Ms. Busana	Mr. Amorn, Ms. Busana
5	6 - 7 Sep, 2005	Crop Cutting Training on Soybean and Maize for Sokoto (ROAE5)	2	Ubonratchathani	Lecture on maize crop cutting method and practice in field.			17	17	Mr. Amorn	Mr. Amorn
6	18- 19 Sep, 2005	Crop Cutting Training on Soybean and Maize for Sokoto (ROAE3, 4)	2	Loei	Lecture on soybean and maize crop cutting method and practice in field.			16	16	Mr. Wacharachai, Mr. Amorn, Ms. Changchai	Mr. Wacharachai, Mr. Amorn, Ms. Changchai
7	6 Feb, 2006	Computer Mantainance	3	OAE		40			40		
8	6 Mar, 2006	Geographic Information System	5	OAE		40			40		
		Total	22			80		133	213		

ANNEX II-11

Table: Lecture Experience in OAE training sesions

	Counterparts	Subject	No. of lectures
1	Mr. Watcharachai	Crop cutting, lecture & field practice	12
2	Mr. Amorn	Crop cutting, lecture & field practice	12
3	Mr. Chanchai	Crop cutting, lecture & field practice	10
4	Mr. Surachai	Crop cutting, lecture & field practice	5
5	Mr. Suntorn	Crop cutting, lecture & field practice	4
6	Ms. Busaya	Crop cutting, lecture & field practice	4
7	Ms. Pornpun	Crop Cutting, I/O seminar	4
8	Mr. Wongtaworn	Crop cutting, lecture & field practice	3
9	Ms. Unchana	Crop cutting, lecture & field practice	3
10	Ms. Suraporn	Crop cutting, lecture & field practice	2
11	Mr. Kasem	Crop cutting, lecture & field practice	2
12	Mr. Chamuni	Crop cutting, lecture & field practice	2
13	Ms. Patchararat	Crop cutting, lecture & field practice	1
14	Mr. Suchart	Crop cutting, lecture & field practice	1
15	Ms. Anyada	I/O seminar	1
16	Ms. Suprama	I/O seminar	1
17	Ms. Supaporn	Macroeconomic model analysis	1
18	Ms. Juthamard	I/O seminar	1

ANNEX II-12

Publication, Journal, Statistics issued by OAE

No.	Name of publication, journal, paper	Issued / prepared by	Date of issue	Data content (subject, time reference, national / regional /
1	Annual Production Survey Report	Centre for Agricultural Incorporation (CAI),	Annual (Crop year)	Field crops, horticulture and livestock, Whole Kingdom
2	Annual Cost of Projection Survey Report (secret report: field crops, horticulture and livestock)	CAI	Annual (Crop year)	Field crops, horticulture and livestock;
3	Agricultural Commodity Price Report (2004)	CAI	Monthly	Price, Central and / or important markets (Specific Markets) sold by
3	Price Received by Farmers for Agricultural Products in Important Markets	CAI	Daily	
4	Monthly, Weekly and Daily Prices	CAI	Monthly, Weekly and Daily	
5	Agricultural Statistics of Thailand (Year 2003)	CAI	Annual	Whole kingdom (by region and province)
6	Thailand Foreign Agricultural Trade Statistics (2003)	CAI	Annual	Exports and imports by commodity (quantity and value)
7	Agricultural Economic Indicators of Thailand	CAI	Annual	Main indicators of agricultural sector in Thailand
8	Collecting Information of Yield Per Rai by Crop Cutting Method	CAI	August 2004	
9	Crop Forecasting Report (2004 & 2005)	CAI	Quarterly	National total and by region
10	OAE Newsletter	OAE	Biweekly	
11	Leaflet: Importance of Agricultural Statistics	CAI		
12	Monthly Journal of Agricultural Economics	OAE	Monthly	
13	Weekly Production Situation and Agricultural Early Warning Report	CAI	Weekly	
14	Report of Production and Marketing of Agricultural Production	Bureau of Agricultural Economic Research	Monthly	
15	Demand Supply Balance Sheet	Bureau of Agricultural Economic Research	Annual	Rice, maize, soybeans, sugar cane
16	Policies	Bureau of Agricultural Development Policy		Rice
17	Agricultural Household Socio-Economics and Labor Survey (Crop year 2001/02)	CAI	Biennial	
18	International Agricultural Economics News	Division of International Agricultural Economic Affairs	Monthly	
19	Commodity Profile	CAI		One for each commodity (Cassava, others)
20	Provincial Profile	CAI		One for each province

ANNEX II-13

Table: The Number of OAE and ROAE Counterparts for the Project

	2003 - 2004			2004 - 2005		
	OAE Head Office (person)	**ROAE (person)**	**Total C/Ps (person)**	**OAE Head Office (person)**	**ROAE (person)**	**Total C/Ps (person)**
Chief Adviser	5	0	5	2	0	2
Data Collection	7	9	16	11	10	21
Data Processing / Information Network System	5	9	14	7	9	16
Economic Analysis	5	0	5	14	0	14
Training	3	0	3	3	9	12
Total C/Ps in the Project	**21**	**18**	**39**	**35**	**28**	**63**

Total is not equal to the sum of C/P numbers in all fields, because some counterparts take in charge of 2 or 3 fields.

ANNEX III

Result of Questionnaire for ROAE Activities in the Project

Respondent of ROAE staffs

ROAE No.	1	2	3	4	5	6	7	8	9	Total
No. of respondents	4	5	6	1	6	5	6	4	6	43

Evaluation of Data Collection Activities

Q1. What kind of data collection has you been carried out?

	Crop Cutting Survey	Area Survey
No. of answers	33	25
Percentage	77 %	58 %

Q2. Are the data collection knowledge and skills that you acquired useful in your work?

	Crop Cutting Survey		Area Survey	
	No. of answers	Percentage	No. of answers	Percentage
1. Very Useful (more than 90%)	15	**45 %**	3	12 %
2. Useful (70% - 90%)	16	**48 %**	20	**80 %**
3. Moderately useful (50 - 70%)	2	6 %	1	4 %
4. Somewhat useful (30 - 50%)	0	0 %	0	0 %
5. Slightly useful (less than 30%)	0	0 %	0	0 %
6. no answer	0	0 %	1	4 %

Q3. Do you have any problems in utilizing the data collection knowledge and skill you acquired for your daily work?

	Crop Cutting Survey		Area Survey	
	No. of answers	Percentage	No. of answers	Percentage
1. Yes	15	45 %	15	**60 %**
2. No	18	**55 %**	8	32 %
3. no answer	0	0 %	2	8 %

Q4. Do you have any problems in utilizing the data collection knowledge and skill you acquired for your daily work? You may choose multiple answers.

	Crop Cutting Survey		Area Survey	
	No. of answers	Percentage	No. of answers	Percentage
1. Lack of trained enumerators (sokoto)	1	3 %	1	4 %
2. Lack of survey equipment	4	12 %	6	24 %
3. Insufficient knowledge and skills	4	12 %	8	**32 %**
4. Heavy workload / lack of time	12	**36 %**	10	**40 %**
5. Lack of support from OAE	1	3 %	3	12 %
6. Lack of funds for carrying out the field survey	7	21 %	7	28 %
7. Lock of support and recognition	7	21 %	2	8 %
8. Lack of coordination between OAE and ROAE	3	9 %	2	8 %

Q5. Has your office frequently offered technical guidance and training for enumerators (Sokoto) ?

Yes		No	
No. of answers	Percentage	No. of answers	Percentage
27	**63 %**	16	37 %

Q6. How many times have technical guidance and training been offered to enumerators for data collection at your ROAE in 2005?

Average: 2.6, Range: 1 - 6

Q7. How would you assess the ability of staff in your ROAE to teach data collection to enumerators as instructors?

	No. of answers	Percentage
1. Completely able teach by themselves	17	40 %
2. Needs assistance from OAE staff to some extent.	24	**57 %**
3. Cannot teach any subject of data collection	1	2 %

Evaluation of Activities of Information Network System

Q8. How would you assess the information network system for agricultural statistics at your office?

	No. of answers	Percentage
1. Very Useful (more than 90%)	15	**36 %**
2. Useful (70% - 90%)	18	**43 %**
3. Moderately useful (50 - 70%)	7	17 %
4. Somewhat useful (30 - 50%)	2	5 %
5. Slightly useful (less than 30%)	0	0 %

Q9. How many times has your ROAE's web site been updated?

Average: 2.5, Range: 1- 4

Q10. Do you have any problems utilizing the knowledge and skills you acquired in your daily work?

Yes		No	
No. of answers	Percentage	No. of answers	Percentage
26	**62 %**	16	38 %

Q11. If yes, what are the major problems? You may choose multiple answers.

	No. of answers	Percentage
1. Lack of equipment	10	38 %
2. Insufficient knowledge and skills	20	**77 %**
3. Heavy workload / lack of time	8	31 %
4. Lack of support from OAE	4	15 %
5. Lack of coordination between OAE and ROAE	9	35 %

Support and Coordination of OAE Head Office

Q12. Do you think that OAE is providing enough support to your ROAE in terms of budget, equipment and materials, technical assistance and other areas?

Yes		No	
No. of answers	Percentage	No. of answers	Percentage
11	26 %	32	**74 %**

Q13. If yes, what type of OAE support is useful? Specify.

	No. of answers	Percentage
1. Technical assistance	7	**64 %**
2. Financial support	3	27 %
3. Personnel	4	36 %
4. Equipment	6	**55 %**
5. Others	2	18 %

Q14. If no, what type of OAE support is insufficient or lacking? Specify.

	No. of answers	Percentage
1. Technical assistance	12	38 %
2. Financial support	22	**69 %**
3. Personnel	13	41 %
4. Equipment	12	38 %
5. Others	4	13 %