ナイジェリア国
コメ収穫後処理技術・マーケティング能力強化
プロジェクト
中間レビュー調査報告書

平成 26 年４月
（2014年）

独立行政法人国際協力機構
農村開発部

農 村
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序　　文

独立行政法人国際協力機構は、ナイジェリア連邦共和国関係機関との討議議事録（R/D）等に基づき、2011年9月から2015年9月までの予定で、「コメ収穫後処理技術・マーケティング能力強化プロジェクト」を実施しています。

今般、プロジェクトの中間地点にあたり、プロジェクト開始後の活動状況を確認し、その情報に基づいて、評価5項目（妥当性、有効性、効率性、インパクト、持続性）の観点から日本・ナイジェリア連邦共和国側双方で総合的な評価を行うとともに、今後の協力の枠組みについても協議を行うことを目的として、2013年11月に中間レビュー調査団を現地に派遣しました。

本調査団は、ナイジェリア連邦共和国側評価委員と合同評価委員会を結成し、評価結果を合同評価報告書に取りまとめました。

本報告書は、同調査団による協議結果、評価結果を取りまとめたものであり、今後広く関係者に活用され、日本国・ナイジェリア連邦共和国両国の親善及び国際協力の推進に寄与することを願うものです。

終わりに、本調査にご協力とご支援を頂いた内外の関係者に対して、心から感謝の意を表します。

平成26年4月

独立行政法人国際協力機構

農村開発部長　北中　真人

目　　次

プロジェクト位置図


ナイジャ州ビダ
ナサラワ州ラフィア
Nigeria
International boundary
State boundary
National capital
State capital
Railroad
Road
0 100 200 Kilometers
0 100 200 Miles
Lambert Conformal Conic Projection, SP 8N/32N
Base 802144 (R00931) 5-93

現地写真

ナイジャ州　伝統的なパーボイル釜

ナイジャ州　インキュベーション・プラント建設予定地

ナイジャ州　精米所

ナサラワ州　精米所

ナサラワ州　改良型パーボイルタンク

ナサラワ州　インキュベーション・プラント

略　語　表

略　語	正　式　名　称	日　本　語
ADP	Agricultural Development Programme	州農業開発プログラム
APM	Deputy Director, Agro-Processing and Marketing Department	農業農村開発省農産物加工・マーケティング局
CARD	Coalition for African Rice Development	アフリカ稲作振興のための共同体
C/P	Counterpart	カウンターパート
FMARD	Federal Ministry of Agriculture and Rural Development	ナイジェリア農業農村開発省
JCC	Joint Coordinating Committee	合同調整委員会
JICA	Japan International Cooperation Agency	国際協力機構
M/M	Minutes of Meeting	協議議事録
MoU	Memorandum of Understanding	覚書
LGA	Local Government Authority	地方政府
NADP	Nasarawa State Agriculture Development Programme	ナサラワ州農業開発プログラム
NAMDA	Niger State Agriculture and Mechanization Development Authority	ナイジャ州農業・機械化局
NFRA	National Food Reserve Agency	国家食糧保全庁
NRDS	National Rice Development Strategy	国別稲作振興戦略
PDM	Project Design Matrix	プロジェクト・デザイン・マトリックス
PO	Plan of Operation	活動計画
R/D	Record of Discussion	討議議事録
RIPMAPP	Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States	コメ収穫後処理技術・マーケティング能力強化プロジェクト
RTA	Rice Transformation Agenda	コメ変革アジェンダ
TOT	Training of Trainers	講師育成研修

為替レート
米ドル、ナイジェリア・ナイラ：158.81 ナイラ/ドル
日本円、米ドル：103.21 円/ドル

出所：Bloomberg.co.jp, 2013 年 12 月 13 日

評価調査結果要約表（中間レビュー）

１．案件の概要		
国名：ナイジェリア連邦共和国		案件名：ナイジェリア国コメ収穫後処理技術・マーケティング能力強化プロジェクト
分野：農業		援助形態：技術協力プロジェクト
所轄部署：農村開発部		協力金額（評価時点見込み）：7億3,900万円
協力期間	2011年9月～2015年9月（4年間）	先方関係機関：ナイジェリア農業農村開発省、ナサラワ州・ナイジャ州農業農村開発省
		日本側協力機関：なし
		他の関連協力：なし

１－１　協力の背景と概要

ナイジェリア連邦共和国（以下、「ナイジェリア」と記す）では、近年の人口増に加え、都市化に伴うコメ食の増加により、コメの需要が大きく伸びているが、年間消費量約500万 t に対し国内生産量は300万 t 前後にとどまっている。また、ナイジェリアはコメ生産量がアフリカで最も多い国であるが、稲作農家、コメ加工業者ともに収穫後処理に関する認識や技術が不十分であり、国産米の品質は低い。このため、市場における国産米の価格は安く、コメ生産拡大への意欲を低下させているとともに、生産農家や加工業者の所得向上の妨げになっている。こうしたことから、ナイジェリア政府は収穫後処理を国産米増産の最大のボトルネックととらえており、州農業開発プログラム（Agricultural Development Programme：ADP）関係者、稲作農家、コメ加工業者等といったコメ生産にかかわる関係者の人材育成を推進するため、「コメ収穫後処理技術・マーケティング能力強化プロジェクト」（以下、「本プロジェクト」）の実施をわが国に要請した。

これを受け、JICAは2010年8月及び10月に詳細計画策定調査を実施し、2011年9月から4年間の技術協力プロジェクトを開始した。

今般、プロジェクトの中間地点通過にあたり、プロジェクト開始後の活動状況を確認し、評価5項目の観点から日本・ナイジェリア国側双方で総合的な評価を行うとともに、今後の協力の枠組みについても協議を行うことを目的として、2013年11月に中間レビュー調査団を現地に派遣した。

１－２　協力内容

（1）上位目標

プロジェクト対象州において、流通する国産米の品質が向上する。

（2）プロジェクト目標

プロジェクト対象地区において、流通する国産米の品質が向上する。

（3）アウトプット

成果1：高品質国産米の流通を促進するための方策が特定される。

成果2：国産米の品質基準が改善される。

成果3：ADP職員のマーケティング、収穫後処理技術、経営に係る研修実施能力が強化さ

れる。

成果4：小規模精米業者、パーボイル業者、コメ生産農家、流通業者の収穫後処理技術、経営能力が強化される。

成果5：対象州以外のADP職員に対し、マーケティング、収穫後処理技術、経営に係る研修が開始される。

（4）投入（評価時点）

日本側：

専門家派遣：8名（現地56.93人/月、国内1.40人/月）、　研修員受入：3名（本邦研修）、30名（第三国研修）、3名（集団研修）

機材供与：総額47.31百万円、ローカルコスト負担：45.99百万円

ナイジェリア国側：

カウンターパート配置：54名（中間レビュー時）

ローカルコスト：APM　7.95百万円（事務所借上げ、光熱費、機材輸送費、関税等）、NADP 46.56百万円（事務所借上げ、スタッフ・研修参加者旅費、インキュベーション・プラント建設費等）

土地・施設提供：プロジェクト事務所（APM、ナサラワ州ADP、ナイジャ州AMDA）

２．評価調査団の概要

調査者	＜日本側＞		
	担当分野	氏　名	所　属
	団長	時田邦浩	JICA国際協力専門員
	評価分析	工藤泰暢	㈱タスクアソシエーツ
	計画管理	笹部佳江	JICA農村開発部　乾燥畑作地帯第二課
	＜ナイジェリア側＞		
	担当分野	氏　名	所　属
	団長	Engr I.U.Nwanko	Deputy Director, APM, FMARD
	団員	Engr. Amos O. Afowowe	Deputy Director, APM, FMARD
	団員	Mr. Andrew Ibili	Chief Administration Officer, Planning Research and Statistics Department, FMARD
調査期間	2013年11月11日～11月29日		評価種類：中間レビュー

３．評価結果の概要

３－１　実績の確認

成果1：高品質国産米の流通を促進するための方策が特定される。

・各種調査の結果、「ナイジェリアの精白米の品質における課題、原因、解決策」を取りまとめた。また、精米価格の決定要素として、石・赤米等の混入、精米の白度、砕米の混入、が重要との結論に達した。

・パーボイル加工工程では、改良タンクの効果（品質向上、価格向上、コスト削減等）が確認できた。

・石抜き機の導入やパッケージ改善等の精米工程の活動をプロジェクト期間の後半で実施

していく。

成果2：国産米の品質基準が改善される。

・パーボイル精米品質基準は作成され合同調整委員会（Joint Coordinating Committee : JCC）で承認された。
・ナサワラ州ラフィア精米・流通業者協会で品質基準の試行を行い、順次協会内での普及を図る。
・試行結果を反映した品質基準の登録について農業農村開発省農産物加工・マーケティング局（Deputy Director, Agro-Processing and Marketing Department：APM）と協議を行う。

成果3 : ADP職員のマーケティング、収穫後処理技術、経営に係る研修実施能力が強化される。

・ナサラワ州での職員への収穫後処理技術、経営・マーケティングの研修は、インキュベーション・プラントの運転・維持管理を除き終了した。これまでの研修の結果、能力評価シートで 5 段階評価で合格点のレベル 3 以上となっている。
・ナイジャ州での職員への研修は、各技術分野の研修は終了し、受益者研修のためのTOT（Training of Trainers）研修の準備中である。

成果4：小規模精米業者、パーボイル加工業者、コメ生産農家、流通業者の収穫後処理技術、経営能力が強化される。

・ナサラワ州の受益者研修は終了し、改良パーボイルタンクや石抜き機の導入支援などのイノベーター支援に移行している。研修終了後の理解度テストでは、各受益者グループで目標値を上回っている。
・ナイジャ州では、現在受益者研修の対象者を選定中である。

成果5：対象州以外のADP職員に対し、マーケティング、収穫後処理技術、経営に係る研修が開始される。

・まだ活動は始まっていない。

プロジェクト目標：プロジェクト対象地域において、流通する国産米の品質が向上する。

・指標の設定値である精米品質グレードAを実現するためには、3,000～4,000 米ドルする石抜き機の導入が必須であるが、ローンへのアクセスが現状では困難であるため、終了時までにプロジェクト目標が達成できるかどうかを予測することはまだ困難である。
・現在、プロジェクトで供与する石抜き機を活用した回転資金の設立、改良パーボイルタンクによる利益向上分を貯蓄しての石抜き機の購入、政府プログラムが行うコメ用機材配布事業との連携、等ローンを使わない方法を検討中である。

３－２　評価結果の要約

（1）妥当性：高い

対象地域及び社会のニーズ、ナイジェリアの国家開発政策等、日本の援助方針との整合性があり、プロジェクトアプローチもおおむね適切である。

(2) 有効性：現時点では、判断は困難

プロジェクト終了時までにプロジェクト目標の指標を達成できるか予測することは困難である。指標中の精米品質グレードAを達成するためには、石抜き機の導入が必要であるが、当初、借入れを支援することでその導入を促す計画だったが、プロジェクト調査の結果、小規模加工業者や流通業者が個人で借りられる適切な条件のローンがないことがわかった。よって、調査段階ではプロジェクト目標の指標の達成の判断はできないとした。ただし、既に改良パーボイルタンクによる加工では、精白米の白度向上、砕米発生減少等の品質の向上が見られることに加え、プロジェクトではローンを活用しない石抜き機の調達（プロジェクトが供与する石抜き機を活用した回転資金で設立する方法、改良パーボイルタンクで生産した精米の利益向上分を貯蓄し、石抜き機を購入する方法、政府プログラムが行うコメ用機材配布事業との連携等）を試していくことを検討しており、その結果如何では、プロジェクト目標の達成に大きく近づくことも可能である。

(3) 効率性：低い

ナサラワ州インキュベーション・プラントの仕様変更による機材価格、調達コストの増加、JICA安全基準変更に伴う専門家の移動にかかる費用の増加、プラント建屋建設遅れによる関連活動の遅れ、がみられる。また、当初APMが主体で行われる予定だったナイジャ州での活動がナサラワ州同様JICA専門家が行っており、JICA専門家の負担が大きくなっている。

(4) インパクト：一定レベルの正のインパクトが見込める。

1) 上位目標「プロジェクト対象州において、流通する国産米の品質が向上する」達成の見通し

改良パーボイルタンクが、イノベーターを越えてラフィア精米・流通業者協会内で普及の兆候がある。また、本プロジェクトに対するナサラワ州のコミットメントの高さ、カウンターパート（Counterpart：C/P）の能力向上レベルを勘案すると、活動予算が確保できれば、ナサラワ州ADPが州内の他ゾーンにおいてスタッフの研修や受益者研修等の支援活動が可能である。よって、石抜き機導入に係る課題はあるものの、ナサラワ州においては、州内でのプロジェクト成果の普及による品質向上は一定レベルで見込まれる。

(5) 持続性：中程度

1) 政策面

国別稲作振興戦略（National Rice Development Strategy：NRDS）は、2018年までを政策の対象年としているため、ナイジェリア政府のコメ振興にかかる政策面での本プロジェクト活動分野への支援は継続すると考えられる。

2) 制度・組織面

APMは、引き続きコメ流通にかかる関係者の能力開発を行っていく任務を担っていく。プロジェクトの成果の他州、他地域への展開については、予算確保のための政府プログラムとして十分なメカニズムと、APMによる強いイニシアティブが必要であるが、いま

だ十分とはいえない。そのため「コメ収穫後処理技術・マーケティング能力強化プロジェクト」“Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States：RIPMAPP”の活動がコメの品質向上に大きく寄与していることを十分にナイジェリア農業農村開発省やコメ変革アジェンダ（Rice Transformation Agenda：RTA）事務所に認知されることが重要である。

3）財政面

APMがコメの品質改善支援を行うことが、政府プログラムとして認知、承認されれば、財務面での持続性は担保される。

4）技術面

ナサラワ州ではインキュベーション・プラント関連の活動以外は計画どおりに進捗しており、収穫後処理技術、経営・マーケティングに関するナサラワ州農業開発プログラム（Nasarawa State Agriculture Development Programme：NADP）スタッフの能力向上、受益者の能力向上についても既に指標で設定した目標を達成している。NADP、受益者のコミットメントも高く、本プロジェクト終了時までこの状態が続けば、技術面での持続性は見込める。

APM C/Pについては、研修講師としての特性があり、能力も発揮できているが、他州への展開で必要になる計画、調整、実施、モニタリング・評価の能力が不十分である。旅費の遅配や未払いなどの問題を組織を上げて早急に解決し、プロジェクト期間後半で他州展開に必要な能力を習得する必要がある。

プロジェクトが受益者とともに行う試行錯誤的な改善の作業工程そのものは、異なる機材や加工方法を行う他の地域でも適用可能である。また、収穫後処理技術は地域によって異なり、改善を行うには多少修正が必要になるが、プロジェクトが採用する技術的アプローチである、①パーボイル加工技術の改善、②石抜き機の導入、③摩擦式精米機の導入、は他地域でも適用可能でアプローチとしての持続性はある。

ナサラワ州のインキュベーション・プラントについて、プロジェクト終了後、所有権はNADPに残しつつ、プラントの運転・維持管理を、技術面・財務面・経営面で能力をもつ民間セクターへ移管することを検討しているが、委託先は未定である。

３－３　効果発現に貢献した要因

（1）計画内容に関すること

・プロジェクトでは、現場の状況にあわせた活動レベルで柔軟に内容を修正しており、効率的な成果発現に貢献している。

（2）実施プロセスに関すること

・コメの価格に敏感な流通業者を対象グループに追加したことは、コメ流通に携わるほかの関係者への品質改善への動機づけを促すうえで非常に効果的である。

・機材の改善方法について、試行錯誤的なアプローチをC/Pだけでなく対象グループと共同で行っていることは、プロジェクト終了後の問題解決においても有効であり、活動の持続性に貢献している。

・州レベルのC/P機関のコミットメントレベルが高く、C/Pの士気も非常に高いレベルで維

持され、活動の進捗に貢献している。特に、ナサラワ州ではAPM局長が本邦研修を経験したことでプロジェクトに対する理解が進み、プロジェクトへの参加意欲が向上している。

３－４　問題点及び問題を惹起した要因

３－４－１　計画内容に関すること

(1) PDMの内容

・成果5について、他州への展開は上位目標の更に上の目標のための活動に値するため、その準備活動は必要であるものの、単独の成果としてプロジェクト目標の成果と設定するには無理がある。よって、成果として取り扱わずに、ADP職員の能力向上のプロセスおいてAPM職員の能力向上を図るという位置づけで、成果3に含めることが適当である。

(2) プロジェクト目標達成のための課題

・受益者レベルでのコメの品質改善技術の導入、特に精米品質グレードAを達成するための石を取り除く機材への投資は必須であるが、そのための金融商品（ローン）へのアクセスに問題がある。プロジェクト活動では、金融商品の紹介を行うまでとなっているため、投資への意思があっても借入れができないことで、機材の導入が不可能となることもあり得る。プロジェクトでは、そのための複数の対策を検討中である。

３－４－２　実施プロセスに関すること

(1) カウンターパート（C/P）機関の関与について

・プロジェクト活動のための予算、特に出張旅費が確保されておらず、APM C/Pの活動への関与が不十分であり、ナサラワ州において研修実施（計画、調整、実施、モニタリング・評価）の一連の活動を行う能力がまだ身についていない。当初ナイジャ州での活動はAPM C/P主体で行われる予定であったが、ナサラワ州と同様にJICA専門家が主体で行われ、JICA専門家の負担が増えている。今後、予算措置を含めより積極的な関与が求められる。

(2) インキュベーション・プラントについて

・ナサラワ州のインキュベーション・プラントの仕様が、ナイジェリア側の強い要請により計画当初から大きく変更になった。これにより調達価格の大幅な変更、調達やその調整に関係者の多くの時間と労力が費やされた。ナイジャ州でも用地の確保はされたものの建屋建設の見込みが立たず、プロジェクト活動の遅れが心配されたが、プロジェクト期間内での活動を考慮し、機材設置に必要とされる適正規模の施設建設を日本側が行うことで先方の同意を得た。

・ナサラワ州インキュベーション・プラントの建屋の建設が遅れ、それに伴う活動も遅れている。特に、同プラントの運転・維持管理及び民間セクターを巻き込んだ運営に係る技術移転には十分な時間が必要なことから、他の活動の進捗への影響も懸念される。プロジェクト終盤にかけ、ナイジャ州でも同分野の技術移転が必要になることか

ら、さらに効率的な活動の実施管理を行う必要がある。

・JICAの安全管理基準の変更により、専門家の現場へのアクセスが制限され、プロジェクト活動の進捗に影響が出ている。

３－５　結論

（1）進捗状況

1）ナサラワ州

一部機材の設置（インキュベーション・プラント）の遅れによる活動への影響はあるものの、最終受益者に対する研修に関しては終了しており、C/Pに対するプラントの操作・維持管理、プロジェクト終了期間後の戦略的な活用体制構築を除いて、それほどの遅れもなく進捗していることが確認された。

2）ナイジャ州

インキュベーション・プラントの用地確保はなされたが、ナイジャ州は予定された期日までに建屋の建設のための予算確保のめどを立てることができなかったことから、これ以上の活動の遅延を避けるために、機材設置に必要とされる適正規模の施設建設を日本側で行うこととし、乾燥場などの付帯施設の建設費については、ナイジャ州が予算措置することで合意した。建設後の瑕疵検査以降は速やかに先方へ維持管理責任を移管することとした。

（2）5項目評価

妥当性については、NRDSでも重点とし、コメ自給及び輸出に向けた政策（コメの関税率100%、2015年に輸入禁止予定）が維持されていることから高い。有効性についてはナサラワ州の品質改善に向けた取り組み意欲の状況からコメ品質の向上への流れが確認できたものの、目標達成の見込みを約束するものではない。効率性について、機材の規模拡大と設置遅延、並びに治安対策強化への支出増などから、低い。インパクトは、流通業者を含め収穫後処理全体のステークホルダーを対象にしていることからその発現が期待される。持続性については、ラフィアでのインキュベーション・プラントの受け皿となる機関が決定されていないため判断をするには早いが、ADPの技術的能力は見受けられる。他地域の展開については予算確保の懸念が残る。

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）

３－６－１　農業農村開発省農産物加工・マーケティング局（APM）が取るべき事項

APMのC/Pについては、研修講師としての能力は十分備わっているものの、計画や評価にかかる実施・管理業務については、JICA専門家に依存しているのが現状である。今後、APMが組織として、プロジェクト活動に主体的にかかわっていくための組織体制を作っていくことが必要である。具体的には、以下の対応をとることを提言する。

（1）研修実施において専門家チームとの円滑なコミュニケーションを図るため、APMにて常時対応可能な研修担当コーディネーターをアブジャに配置する。

（2）ナイジェリア農業農村開発省の予算計画部門の担当者をJCCメンバーとして参加させ

る。

(3) APMがナサラワ、ナイジャ両州で本プロジェクトに係る業務を行う際に必要な予算（特に旅費）を確保する。

３－６－２　ナイジャ州ビダのインキュベーション・プラント

討議議事録（R/D）にて、精米及び貯蔵施設（インキュベーション・プラント）に係る土地・建物はナイジェリア政府により用意される、と明記されている。そのうえで現状は、①ナイジェリア側において既に土地は用意されている（ただし、地盤が砂質なので基礎工事を十分に行う必要あり）、②建屋については、予算措置の遅れから計画期間に間に合わない。よって、インキュベーション・プラントに係る活動の遅れを防ぐために、日本側にてインキュベーション・プラントの建屋建設を行うことを提言する。これについてはナイジェリア側のオーナーシップ醸成のため、以下の対応をとる。

1）インキュベーション・プラント建屋建設のための、ナイジャ州政府による土地造成
2）日本側による建屋の提供と、ナイジャ州政府による電気、水道、研修施設、乾燥場等の付帯設備の提供。
3）建屋の建設・瑕疵検査後の建屋及び維持管理責任のナイジャ州政府への移譲

３－６－３　ナイジャ州ビダに設置するインキュベーション・プラントの適正規模

ナイジャ州のコメ農家、加工業者、流通業者は小規模で、かつこれらは対象地域に点在していることから、このような現状に沿った適正な規模の機械・機材をインキュベーション・プラントに設置することを強く提言する。

３－６－４　PDMの改訂案

以下の項目について、提案された。

(1) プロジェクト目標指標の追加

プロジェクト目標の指標として、高品質米を取り扱う流通業者の数に加え、高品質米の取扱量もモニターすることで、プロジェクト目標の達成度をより具体的にする。

(2) 成果5の削除と成果3の変更

成果5、「対象州以外の ADP職員に対し、マーケティング、収穫後処理技術、経営に係る研修が開始される」は、プロジェクト目標である、「プロジェクト対象地区において、流通する国産米の品質が向上する」のための成果としては論理的に整合性がない。ただし、現在OJT（On-the-Job Training）で行っているAPMの能力向上を図ることで、対象州外のADPの能力向上を図ることが将来可能となるため、成果3における能力向上の対象としてAPMを追加し整理した。

３－６－５　“Rice Transformation Program”の活用

精米品質基準のグレードAを達成するためには石の除去は必須である。政府により実施されている“Rice Transformation Program”の事業との協調による、本プロジェクト対象地域（ラ

フィア、ビダ）での、石抜き機、脱穀機の補助金付き価格での販売が可能となるよう同プログラムとの協調を提言する。

Summary of the Mid-term Review Results

1. Outline of The Project		
Country: Federal Republic of Nigeria		Project title: Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States
Sector: Agriculture		Type: Technical Cooperation Project
In charge: Rural Development Department		Budget (estimated at the time of a review):739 million yen
Period	From September 2011 to September 2015 (4 years)	Federal Ministry of Agriculture and Rural Development, State Mnistry of Agriculture and Rural Development in Nasarawa and Niger states
		Japanese supporting organization: None
		Other supporting organizaitons: None

1-1 Background

In Nigeria, demand of rice has been increasing because of population increase and preference of rice diet due to urbanization. Annual demand is estimated 5 million tons, of which only 3 million tons are produced in Nigeria. Nigeria is one of large rice production country in Africa. By recognizing that inadequate knowledge and technique of farmers or the processors with regards to post-harvest processing make the overall quality as well as the price of domestic rice low, resulting in discouraging farmers from rice production, the Nigerian government requested the Japanese government to assist implementing the "Rice Post-Harvest and Marketing Pilot Project in Nasarawa and Niger States", for the purpose of human resource development of federal and state government officials, rice producers, processors and other concerned personnel in the Project.

In response to the request from the Nigerian Government, the Detailed Planning Survey was conducted in 2011 and the framework of the Project was officially agreed between JICA and the Nigerian authorities concerned of the Project by the signing of R/D on 18th March, 2011.

Since the Project has passed halfway point, JICA plans to conduct the Mid-term Review in order to review the status of the project progress and to examine necessary measures to be taken during the remaining implementation period. An effective and successful joint Japan-Nigeria evaluation exercise is subject to an appropriate design and schedule as well as to the close discussions among stakeholders on the scope and key issues in the review study.

1-2 Summary of the Project Design

(1) Overall Goal

Quality of domestic rice is improved in the target States.

(2) Project Purpose

Quality of domestic rice is improved in the target areas.

(3) Output

Output 1 : Measures to promote distribution of high quality domestic rice are identified.
Output 2 : Rice grading standards for domestic rice is developed and improved.
Output 3 : Capacity of ADP staff regarding training implementation on marketing, post-harvest and business management is enhanced.
Output 4 : Capacity of small-scale rice millers, parboilers, rice farmers and traders on post-harvest, marketing and business management is enhanced.
Output 5 : Training programs for non-targeted ADP staff regarding post-harvest, marketing and business management are commenced.

(4) Input (at the end of September 2013)

Japanese side

8 experts (56.93m/m in Nigeria and 1.40m/m in Japan), Acceptance of 3 participants for training in Japan, 30 participants for third country training, 3 participants for JICA group trainings in Japan

Provision of Equipment: 44.12 million Japanese Yen, Local cost: 42.89 million Yen

Nigerian side

54 counterpart personnel are appointed.

Local cost: APM 7.41 million Yen (office space, power supply, transportation and tax for equipment provided), NADP 43.42 million Yen (office space, allowance for ADP staff and training participant, construction of the incubation plant)

Land and facility: Project office (APM, Nasarawa state and Niger state)

2. Members of Review Team

Members	<Japanese Team>	
	Dr. Kunihiro TOKIDA,	Team Leader, Senior Advisor, Rural Development Department, JICA HQ
	Mr. Yasunobu KUDO,	Evaluation Analysis, Consultant, Task Co., Ltd.
	Ms. Yoshie SASABE,	Project Management, Rural Development Department, JICA HQ
	<Nigerian Team>	
	Engr. I.U.Nwanko,	Team Leader, Deputy Director, APM, FMARD
	Engr. Amos O. Afowowe,	Deputy Director, APM, FMARD
	Mr. Andrew Ibili,	Chief Administration Officer, Planning Research and Statistics Department, FMARD
Period	From 11th to 29th November 2013	Type: Mid-term Review

3. Results

3-1 Achievement of The Project

Output 1 : Measures to promote distribution of high quality domestic rice are identified.

- "Problems, causes and possible solutions on rice quality in Nigeria" was compiled and reported based on the studies conducted by the Project. Stones and colored grain mixture, brightness, and broken rice ratio were identified as factors for determination of rice price.
- 4 technical packages were identified by a stage of quality improvement.
- Improved parboiling tank showed positive results such as quality improvement, price increase and cost reduction.
- Introduction of a destoner and improved packaging will be carried out in the latter half of the project.

Output 2 : Rice grading standards for domestic rice is developed and improved.

- The grading standard was developed and accepted by JCC meeting.
- The standard is being used as trial basis in Lafia millers and traders Association, Nasarawa state. It will be improved and spread in the association.
- Institutionalization of improved standard will be discussed with APM after the trial.

Output 3 : Capacity of ADP staff regarding training implementation on marketing, post-harvest and business management is enhanced.

- Trainings on post-harvest technology, business administration and marketing, and TOT for

Nasarawa ADP were finished except operation and maintenance of the incubation plant. The evaluation sheet shows that all participants scored more than the target score, 3.

- Technical trainings for Niger AMDA were finished. Preparation of TOT is carried out.

Output 4 : Capacity of small-scale rice millers, parboilers, rice farmers and traders on post-harvest, marketing and business management is enhanced.

- In nasarawa state, beneficiary training for small-scale rice millers, parboilers, rice farmers and traders were finished. The innovator support, such as support for introduction of destoner and improved parboil tank, is carried out. Tests after the training showed that participants achieved more than target scores set for each group.
- Selection of participants for beneficiary training is undertaken in Niger state.

Output 5 : Training programs for non-targeted ADP staff regarding post-harvest, marketing and business management are commenced.

- The activities under this Output are expected to commence in the final stage of the Project.

Project Purpose: Quality of domestic rice is improved in the target areas.

- In order to achieve Grade A as target rice quality in verified indicator of the Project Purpose, installation of destoner is indispensable to remove stones from final product. Since there is few suitable loan products, it is difficult to evaluate achievement level of the Project Purpose.
- The Project is seeking alternative ways for innovators to purchase of a destoner other than utilization of a bank loan, such as (i) utilization of accumulation of additional profit by selling improved parboil rice, (2) establishment of destoner revolving fund in Lafia Association, and (3) harmonization with government program of equipment provision.

3-2 Summary of Review Result

(1) Relevance: High

The consistency of the Project with the policies of Nigeria, needs of target areas and society, and Japanese policy for Official Development Assistance remains adequate. And project approaches are appropriate as a whole.

(2) Effectiveness: Uncertain.

Under Output 4, the Project supports beneficiaries for credit access for investment in new equipment through introduction of suitable loan products. However, there are few accessible loan products available for small-sale processors due to strict loan terms for them. Installation of destoner is indispensable to achieve the Project Purpose, and credit access for beneficiaries has to be secured for the investment in destoner. Other than utilization of banks, some countermeasures, such as establishment of destoner revolving fund, utilization of Government equipment supply program, are considered by the Project. These countermeasures have not been verified yet.

Through the innovator support in Nasarawa state, improved parboiling equipment showed significant performance. And other association members started to adopt improved parboiling equipment partially. It is expected to be disseminated in Lafia Association.

The causal relationship is generally considered reasonable and proper between the Project Outputs and the Project Purpose except the Output 5, which does not directly contribute to the achievement of the Project Purpose, rather, contributes to beyond the Overall Goal.

(3) Efficiency: Low

As a specification of incubation plant in Nasarawa was scaled up comparing the planned one, the procurement cost of the plant became higher than the planed one. Cost of maintaining security of JICA experts is additional cost, which was not anticipated. On the other hand, some activities related to the incubation plant, such as trainings on operation and maintenance for APM and ADP staff, is delayed. Activities with Asakio Millers Association, which is one of target groups in Nasarawa state, was discontinued, and the expected outcome with them are no longer appeared.

Focusing rice traders-cum-processors, who are the price sensitive stakeholder as well as the quality control action taker, in the target groups contributed to a significant improvement in efficiency of the project implementation. They are key stakeholders to affect other stakeholders in rice supply chain in terms of improvement of rice quality.

(4) Impact: Expected at Certain level

1) Prospect for achievement of Overall Goal

The difficulty in projecting the possibility of achieving the Overall Goal is found based on the same problem as the Project Purpose with limited access to loan products for installation of equipment such as destoners. In case of Lafia, however, it was found that the results of trial use of improved parboiling equipment by innovators encouraged the adoption of the technology by other members of the association. In addition to the similar beneficiaries' commitment, if activities by NADP CP with strong commitment are expanded to the other two zones of the state, contribution to the Overall Goal can be prospected.

(5) Sustainability: Moderate

l) Policy, legislation and institutional arrangement for sustainability

NRDS covers the period until 2018, therefore, the policy on rice promotion will be maintained until 2018. Apart from the efforts in the federal level, the linkages and support from the State Government may be sought in order to explore the budgetary support from state Government.

2) Organizational capacity of the CP organizations for sustainability

APM is the governmental institution, which implement various supports on rice processing, distribution and marketing. They will continue to prioritize capacity building of stakeholders in rice supply chain. In terms replication of the Project outputs to other areas or other states, it is vital to establish adequate mechanism as a government program securing budget allocation and exercising strong initiative by APM. To that end, RIPMAPP activity should be properly acknowledged in the Federal Ministry of Agriculture and Rural Development, especially Rice Transformation Agenda office, as a project contributing quality improvement of domestic rice.

3) Financial resource allocation

As mentioned above, once the adequate mechanism which supports APM to promote rice quality improvement activities is established, it will be the effective measures for financial sustainability.

4) Possibility in acceptance and sustainable utilization of transferred technology

Training on operation and maintenance skills for the incubation plant are yet to be started. It is expected APM CP will be trained together with the incubation plant in Lafia with NADP CP. And NADP CP is expected to support APM CP to train Niger AMDA CP in operation and maintenance training.

NADP considers that the incubation plant would be utilized for a series of training of NADP staff and beneficiaries in other two zones in the state after the Project termination. After the utilization for these trainings, NADP plans to consign operation of the plant to private sector whoever has a

capability to manage.

APM CP can work as a lecturer of the training, but are not capable enough to plan, organize, monitor and evaluate the training, which are necessary for replication of the project outputs countrywide.

Post-harvest processing technique varies from area to area, and it needs some modification for improvement. But the basic approaches, (1) improvement of parboiling technique, (2) installation of destoner, and (3) installation of friction type milling machine, which RIPMAPP uses are considered to be adapted by other areas.

3-3 Issues Contributing to Outcome

(1) Planning

- In order to realize expected outputs, the Project flexibly changed activities analyzing current conditions.

(2) Implementation Process

- In order to promote quality improvement, adding traders, who are sensitive to price, to target groups is effective for stimulating other stakeholders in rice supply chain.
- Trial-and-error as technical approach is a general approach, and it can be used to tackle further problems after the project termination.
- High commitment level in Nasarawa state, and it affects high morale of state CP. Especially, state project coordinator understand better about the project through CP training in Japan.

3-4 Issues Resulting Problems

3-4-1 Planning

PDM

Regarding to Output 5, the Overall goal is "Quality of domestic rice is improved in the target States." Therefore, it is not logical to include an output in non-targeted states on PDM. It is more appropriate to regard that "training programs for non-targeted ADP staff regarding post-harvest, marketing and business management" is included as Output 3.

(2) Issues for Achievement of the Project Purpose

As mentioned above, installation of a destoner is indispensable for achievement of Grade A rice. Loan access for small-scale processors and traders to invest in a destoner is limited. What the project can do for beneficiary is only introducing them loan products. Therefore, although beneficiary has strong will to invest in destoner, they may not install necessary equipment. Applicability of countermeasures the project considering have to be carefully verified.

3-4-2 Implementation Process

(1) Commitment of counterpart agencies

Since a counterpart budget in APM has not been established, it was often difficult for APM CP to participate in the project activities. As a result, APM CP has not acquire knowledge and skills to fully organize the training program. Activities in Niger state were planned to be mainly conducted by APM CP, but it is still conducted by JICA experts. Commitment of APM has to be enhanced in terms of budget allocation and ownership of the project.

(2) Incubation plant

- Specification of the incubation plant was scaled up due to the strong request by Nigerian side. As a result, procurement cost increased, and more time and work were consumed by JICA experts and JICA staff. In Niger state, land was prepared, but building construction for an incubation plant cannot be expected on time. It was agreed that Japanese side prepares the building, and Nigerian side prepares water and power supply, drying yard, and training rooms.
- Activities related to the incubation plant in Nasarawa has been delayed. Operation and maintenance of the plant is important and it will take time. Meanwhile, activities in Niger state, where beneficiaries exist in scattered area, have started. Therefore, more efficient project management will be necessary.
- Movement of JICA experts is restricted due to change of JICA security code. It affects progress of the project activities.

3-5 Conclusion

(1) Progress of the Project

1) Nasarawa state

Although delay of installation of the incubation plant affected to related activities, other activities such as ADP staff training and beneficiary trainings, has already finished and innovator support has started as planned.

2) Niger state

Land for an incubation plant was prepared, but a building has not constructed on schedule. In order to avoid further delay of project activity, it was agreed on appropriate size of building for the plant would be constructed by Japanese side. And other facilities such as water and power supply, and drying yard has to be prepared by Nigerian side. After the completion of the construction of the building and the defect inspection, the building and its responsibilities of maintenance are transferred to Niger state government.

(2) Evaluation by 5 criterion

Adequacy is high, because quality improvement of rice is highlighted in NRDS, and policy on rice self-sufficient and export is continued. Effectiveness is uncertain, because although intension of rice quality improvement of stakeholders in Nasarawa state were confirmed, uncontrollable issue, such as loan access for destoner, may be negative affect to the Project Purpose. Efficienvy is low, because cost of the incubation plant in Nawarawa state increased, security related cost for JICA experts increased, and activities related the incubation plant delayed. As for impact, certain level of impact can be expected, because the improved parboiling equipment showed positive results and members of the Lafia association started adoption of the improved technology. Sustainability is moderate level, capability of ADP is improved, capability of APM is not sufficient level to expand activity countrywide, and an organization which undertake the incubation plant has not decided yet.

3-6 Recommendations

3-6-1 Issues to be undertaken by APM

It is noted APM CP is knowledgeable on post-harvest and is highly capable of delivering lectures at trainings. On the other hand, it is reported that administrative tasks in preparatory stage and evaluation stage of the training are mostly led by JICA experts. In order for APM staff to take an initiative on training in each state, it is necessary for APM, as an organization, to build an efficient structure to implement the whole stages of the training. Precisely, the following actions are recommended to be

taken by APM.

(1) Appointment of a full-time training program coordinator from APM staff in Abuja as CP to realize smooth communication in reporting line for the training.
(2) Appointment of a budgetary officer from FMARD staff as a JCC member
(3) Secure budget for APM staff for operations and carrying out relevant activities under RIPMAPP project in Nasarawa and Niger states.

3-6-2 Incubation plant in Bida, Niger state

According to R/D (Appendix 5, Main Report), land and buildings for rice milling and storage equipment have to be prepared by Nigerian side. Current situations are; (i) land for the incubation plant has been prepared, and (ii) construction of building cannot be carried out on schedule due to delay of budgetary arrangement. In this context, it is advisable to request the Japanese side to bear construction cost of the building for the incubation plant in order to prevent delay of activities taken place at the incubation plant. From a viewpoint of enhancing ownership of the government of Nigeria, following conditions should be met.

(1) The land clearing and foundation preparation will be implemented for the construction of the incubation plant by Niger state government.
(2) Japanese side offers a shelter for the incubation plant in Niger state. Other facilities including power supply, training hall, drying yard are to be prepared by Niger state government as specified in Annex 9 (Joint Mid-term Review Report).
(3) After the completion of the construction of the building and the defect inspection, the building and its responsibilities of maintenance are transferred to Niger state government.

3-6-3 Specification of incubation plant in Bida, Niger state

Scale of rice farmers, processors and traders in Niger state is small and scattered in the project area. Therefore, specification of the incubation plant has to be carefully considered, and installation of machines and equipment with appropriate specification is recommended in Annex 9 (Joint Mid-term Review Report).

3-6-4 Revised PDM

Details are described in main report.

3-6-5 Utilization of Rice Transformation Program

In order to achieve Grade A rice, removal stones from final product is indispensable. Sales of destoner and thresher with subsidized price in the target areas by harmonization with a program under Rice Transformation Agenda is recommended.

第１章　中間レビュー調査の概要

１－１　要請の背景と調査の目的

（1）協力の背景

ナイジェリア連邦共和国（以下、「ナイジェリア」と記す）では、近年の人口増に加え、都市化に伴う食生活の変化、つまりコメ食の増加により、コメの需要が大きく伸びているが、消費に対する国内供給量は十分ではなく、具体的には年間消費量約 500 万 t に対し国内生産量は 300 万 t 前後にとどまっている。さらに、今後も年間 150～200 万 t のコメを輸入し続ける必要があるという推計も報告されており、世界的な穀物価格高騰が引き起こされた経験から食料安全保障を図るため、コメの自給率向上を政策の重要課題に位置づけている。

ナイジェリアはコメ生産量がアフリカで最も多い国であるが、稲作農家、コメ加工業者ともに収穫後の処理に関する認識や技術が不十分であり、高い砕米率や、石などの夾雑物の混入など、国産米の品質は概して低い。このため、市場における国産米の価格は安く、コメ生産拡大への意欲を低下させているとともに、生産農家や加工業者の所得向上の妨げになっている。言い換えるならば、収穫後の処理技術を改善し、国産米の品質を向上させ、その結果コメの販売価格が上昇することで、稲作農家や加工業者など、農村部住民の所得向上を図り、これにより農家の増産意欲を高めることでコメの自給率向上を図ることができるともいえる。

こうしたことから、ナイジェリア政府は収穫後処理を国産米増産の最大のボトルネックととらえており、州農業開発プログラム（Agricultural Development Programme：ADP）関係者、稲作農家、コメ加工業者等といったコメ生産にかかわる関係者の人材育成を推進するため、「コメ収穫後処理技術・マーケティング能力強化プロジェクト」（以下、「本プロジェクト」）の実施をわが国に要請した。

これを受け、JICAは 2010 年 8 月及び 10 月に本プロジェクトに係る詳細計画策定調査を実施し、2011 年 3 月ナイジェリア国農業農村開発省（Federal Ministry of Agriculture and Rural Development：FMARD）及び国家食糧保全庁（National Food Reserve Agency：NFRA）[1]との間で討議議事録（Record of Discussions：R/D）を、NFRAとの間で協議議事録（Minutes of Meeting：M/M）を交わし、プロジェクトの実施を決定した。

今般、プロジェクトの中間地点通過にあたり、プロジェクト開始後の活動状況を確認し、その情報に基づいて、評価 5 項目（妥当性、有効性、効率性、インパクト、持続性）の観点から日本・ナイジェリア国側双方で総合的な評価を行うとともに、今後の協力の枠組みについても協議を行うことを目的として、2013 年 11 月に中間レビュー調査団を現地に派遣した。なお、本プロジェクトでは、2013 年 2 月 19 日～3 月 8 日にかけて中間レビューが予定されていたものの、治安状況を鑑みて中止、その際は運営指導調査に切り替えたという経緯がある。

１－２　調査団の構成

（1）日本側評価団

担当分野	氏　名	所　属
団長	時田 邦浩	JICA農村開発部　国際協力専門員

[1] 現在、農業農村開発省・農産物加工マーケティング局（APM）。2012年5月に組織改編された。

評価分析	工藤 泰暢	株式会社タスクアソシエーツ
計画管理	笹部 佳江	JICA農村開発部 乾燥畑作地帯第二課 職員

（2）ナイジェリア側評価団

担当分野	氏　名	所　属
Leader	Engr. I.U. NWANKWO	Deputy Director, APM, FMARD
Member	Engr. Amos O. AFOWOWE	Deputy Director, Agro-Processing and Marketing, APM, FMARD
Memebr	Mr. Andrew K. IBILI	Chief Administration Officer, Planning Research and Statistics Department, FMARD

（3）調査日程

月日		調査行程	滞在地
11/11	月	工藤団員アブジャ着	アブジャ
11/12	火	JICAナイジェリア事務所、JICA専門家との打合せ APM表敬、打合せ、ナイジェリア側調査団との打合せ	
11/13	水	ナサラワ州ラフィア移動、インキュベーション・プラント視察	ラフィア
11/14	木	対象グループ聞き取り	
11/15	金	ナサラワ州C/P聞き取り、アブジャ移動	
11/16	土	書類整理	アブジャ
11/17	日	笹部団員アブジャ着、書類整理	
11/18	月	時田団長アブジャ着 JICAナイジェリア事務所打合せ、APM表敬、ナイジェリア側調査団との打合せ	
11/19	火	ナイジャ州ビダ移動、AMDA地域事務所での聞き取り、対象村視察、同州ミナ移動	ミナ
11/20	水	ナイジャ州AMDA表敬、聞き取り、アブジャ移動	アブジャ
11/21	木	ナサラワ州移動、インキュベーション・プラント視察、ADP聞き取り	ラフィア
11/22	金	JICA専門家への聞き取り	
11/23	土	合同中間レビュー報告書(案)の作成	
11/24	日	合同中間レビュー報告書(案)の作成	
11/25	月	合同中間レビュー報告書及びミニッツ協議	
11/26	火	合同中間レビュー報告書署名	
11/27	水	合同調整委員会、ミニッツ署名	
11/28	木	JICAナイジェリア事務所、在ナイジェリア日本大使館への報告	
11/29	金	コメ変革アジェンダ事務所訪問、アブジャ発	

１－３　評価項目・評価方法

（1）本邦での事前調査

1）プロジェクトチームで作成した事前検討資料やこれまでのプロジェクト報告書等をレビューし、プロジェクトの実績・実施プロセスの状況を整理・分析する。

2）PDMに基づき、プロジェクトの実績、実施プロセス、及び評価 5 項目に沿った調査項目とデータ収集方法、調査方法等を検討し、評価グリッドを作成する。

3）上記（2）の評価グリッドに基づき、カウンターパート（Counterpart：C/P）機関を主とする相手国実施機関、専門家、C/P等に対する質問を検討する。

（2）ナイジェリアでの現地調査

1）今回調査に必要な指標の設定案についてナイジェリア側と協議を行う。

2）評価グリッドに基づき、プロジェクト関係者に対する聞き取り調査、サイト視察を行い、プロジェクト実績・活動プロセス等に関する情報・データの収集・整理を行う。

3）上記１）で収集したデータを分析し、プロジェクト実績の貢献・阻害要因を抽出する。

4）事前調査及び上記 1）～3）で得られた結果を総合的に判断し、評価 5 項目の観点から評価を行い、提言とともに合同評価レポート（案）に取りまとめる。

5）上記４）のレポート（案）は日本・ナイジェリア国側双方の合同評価委員で合意した後、ナイジェリア側関係者への説明を行い、その結果を協議議事録（M/M）により合意・署名する。

（3）調査項目

本中間レビュー調査では、以下の評価 5 項目の観点から評価調査を実施する。

1）妥当性（relevance）

プロジェクト目標や上位目標がナイジェリアの開発政策、わが国の援助方針、受益者のニーズに合致しているかどうかを判断する。

2）有効性（effectiveness）

成果及びプロジェクト目標の現時点での達成状況、プロジェクト終了時での達成見込み、及び成果の達成がプロジェクト目標の達成に貢献しているかを判断する。

3）効率性（efficiency）

投入の時期、質、量等により、成果にどう影響を与えたか、投入は成果の達成のために貢献しているか、投入に不足はなかったか、または無駄な投入はなかったかを判断する。

4）インパクト（Impact）

プロジェクト実施によりもたらされる、より長期的、間接的効果や波及効果をみるものであり、プロジェクト計画時に予期された、あるいは予期されなかったプラスまたはマイナスの波及効果を評価する。なお、上位目標は計画立案時に「意図した」「プラス」のインパクトである。

5）持続性（sustainability）

制度的、財政的及び技術的側面から、協力終了後も相手国側によりプロジェクトの成果が継続して維持・発展する見込みがあるかどうかを判断する。

第２章　プロジェクトの進捗状況

２－１　投入実績

以下に、日本側の投入として、専門家派遣、本邦及び第三国研修、機材供与、現地業務費支出、建物・施設等の実績について記述する。

２－１－１　日本側投入

（1）専門家派遣

8 名（チーフアドバイザー、副総括 /収穫後処理技術、コメマーケティング、農民組織/研修/農村金融、農村金融、業務調整 /研修補助（2 名）、研修管理/業務調整）、累計現地 56.93 人/月、国内 1.40 人/月。

（2）機材供与

プロジェクト活動に必要な機材〔収穫後処理機材、品質試験機材等、包装機、刈り取り機、事務機器（エアコン、コピー機、パソコン、プロジェクター、発電機など)〕として累計 26,999,800 NGN。（付属資料 1.合同評価レポート（英文）Annex 3 参照）及び、ナサラワ州ラフィアに設置したインキュベーション・プラントとして 45,795,800 NGN。累計 72,795,600 NGN。

（3）現地業務費支出

42,894,777 円（業務実施契約内一般業務費実績）、〔付属資料 1.合同評価レポート（英文）Annex 5 参照〕

（4）本邦及び第三国研修

本邦研修へ計 3 名を派遣。このほか、プロジェクトの予算外で「ウガンダ共和国コメ振興プロジェクト」の専門技術員及び普及員の研修に 30 名派遣。JICA集団研修で 2 名派遣。〔付属資料 1.合同評価レポート（英文）Annex 4 参照〕

２－１－２　ナイジェリア側投入

以下に、ナイジェリア側の投入として、人員配置、土地・施設の提供等の実績について記述する。

（1）カウンターパート（C/P）の配置

APM：プロジェクト・ダイレクター、プロジェクト・マネジャー、その他収穫後処理、コメバリューチェーン及びマーケティング等

州レベル：プログラム・マネジャー、計画、収穫後処理技術、コメバリューチェーン及びマーケティング、農民組織等のC/Pを配置〔付属資料 1. 合同評価レポート（英文）Annex 6〕

（2）事務所・研修場所等

APM、ナサラワ州、ナイジャ州におけるプロジェクトオフィス、研修会場、機材置き場の提供。

（3）ローカルコスト負担〔付属資料 1. 合同評価レポート（英文）Annex 7 参照〕

1）APM：機材輸入にかかる関税、C/Pの旅費等、累計 12,226,074NGN

2）NADP：インキュベーションセンター建設にかかる用地整序、建屋建設費用、研修参加費、C/Pの旅費等、累計 71,643,401NGN

２−２　成果の達成状況

プロジェクトの実施過程では、プロジェクト開始後に 2013 年 7 月の合同調整委員会（JCC）で協議を行いPDM ver.1 を経て、指標の数値目標を設定したPDM ver.2 を承認している。したがって、本中間レビュー調査ではPDM ver.2 に基づくモニタリングを行った。

成果 1：高品質国産米の流通を促進するための方策が特定される。

指標 1-1　高品質国産米流通のための課題と方策を示した報告書が作成される。

指標 1-2　導入する研修用の機材の仕様書が作成される。

（1）指標 1-1 に関する活動と達成度

プロジェクトが行った調査をもとに「ナイジェリアにおける精白米の品質における課題、原因、解決策」を作成し、各種調査の結果、コメの品質と価格を決める要素として、①石、赤米または不純物の混入、②精白米の白度、③砕米混入率、の 3 点が重要であるとの結論に達し、これらの課題を改善するため段階的な技術パッケージを策定した（表２−１）。プロジェクトでは、すべての技術パッケージで共通のパーボイル工程の改善から活動を開始している（表２−２）。

表２−１　技術パッケージ

番号	技術パッケージの内容
1	改良パーボイル機材、石抜き機
2	改良パーボイル機材、摩擦式小型精米機、石抜き機
3	改良パーボイル機材、ワンパス式精米機、石抜き機
4	改良パーボイル機材、小規模精米プラント、石抜き機

出所：中間レビュー用プロジェクト作成資料から作成

パーボイル工程の改善について、プロジェクトではナサラワ州ADPや受益者ともに、最良のパーボイルタンクを開発するため、さまざまなタイプのタンクやパーツを使った試験を繰り返し行い、これまで使用してきたタンクで、新たにフタと中底を使用することで品質の改善を行うことが可能となった。この改良パーボイルタンクは、ラフィア精米・流通業者協会の会員に貸し出され、白度の改善による販売価格の向上、精米白度の均一化、砕米発生率の低下、蒸し時間の短縮による燃料費の削減と単位時間当たりの処理量の増加が認められた。今後、イノベーター支援を通じ改良パーボイルタンクを普及させていく計画である。

精品パッケージの改善については、少量包装、規格の表示、透明な材質を使用したパッケージデザインを試作した。今後、市場での嗜好を確認しつつ、ナサラワ州での活動で主要なパートナーであるラフィア精米・流通業者協会にて導入を図ることになっている。

(2) 指標 1-2 に関する活動と達成度

ナサラワ州においては、表２−２に示す原料品質や工程ごとの課題や 4 つの技術パッケージに沿って、成果 4 において品質改善に必要な技術や知識の改善に係る研修が行われた。

表２−２　改善分野と活動内容

改善分野	プロジェクトによる活動
生籾（原料）	原料籾への優良種子仕様の効果を見せるため、農家へ優良種子、投入資材を配布し、優良種子で生産した籾から精米したコメと、自家採種を繰り返した種子で生産した籾から精米したコメを比較し、その違いを見せた。
パーボイル工程	パーボイルタンクの改善（フタ、中底の利用）
精米工程	石抜き機の紹介、導入促進 精品パッケージ（量、デザイン他）の改善

出典：中間レビュー用プロジェクト作成資料から作成

このうち技術改善については、現在行っているパーボイルタンクの改良のように、受益者の業種（パーボイル加工業、精米加工業、流通業）やその規模によってそれぞれに合った、かつ継続的な改善活動を今後も行っていく必要がある。プロジェクト期間の後半に計画されている、ナイジャ州における活動においても同様のアプローチが必要となる。精米パッケージの改善の試行とインキュベーション・プラントを活用した精米技術の研修とプラントの運転・維持管理技術の研修も今後の活動として加わってくる。

成果 2：国産米の品質基準が改善される。

指標 2-1　プロジェクトで作成したパーボイル精米品質基準がJCCで承認される。

パーボイル精米の品質基準はJCCで承認されたが、その活用を今後図る必要がある。市場調査や検査機器を使用した検査の結果、精品価格に影響を与える条件は、精白米の白度、砕米混入率、赤米混入、石の混入の 4 点に絞り込まれた。そのうち赤米と石の混入については、ほぼ完全に除去しなければ精品価格の向上は見込めないためこれを前提条件とし、残る 2 点について、8 段階の白度と 15%以下、30%以下の 2 種類の砕米混入率の組み合わせで、A、B、Cの 3 グレードを設定し精米品質基準（第 1 版）とした。その後、実験を繰り返し第 2 版を 2013 年 7 月の第 3 回JCCで承認した。

精米品質基準の活用については、制度化そのものは手段の 1 つであり、コメの加工流通にかかわる関係者にコメの品質の違いを意識させることが目的である。その後、関係者に品質による価格の違いを認知させ品質改善の動機づけを行うことで、プロジェクトの対象グループ内での試用から、グループ外へ品質基準が広がることができる。品質基準が広がる、認知

される過程で、自然な普及よりも制度化が効果的と判断されれば、制度化という手段をとることになる。

成果 3：ADP職員のマーケティング、収穫後処理に係る研修実施能力が強化される。

指標 3-1　ADPスタッフの能力向上評価の結果が評価シートで 3 以上となる。

（1）NADP・NAMDAスタッフ研修準備

NADPとNAMDAのスタッフ研修は、①研修運営・管理、②収穫後処理技術、③ビジネスマネジメントとマーケティング、の能力向上を目的として実施され、さらにナサラワ州では、受益者向け研修のための講師の選定と講師向けの研修（Training of Trainers: TOT）が実施された。研修終了後のテスト結果ではすべての受講者で、評価結果 3 以上となっている。

成果 3 における研修は、JICA専門家とAPMスタッフが共同で行っている。州スタッフの研修計画に基づき、各種研修がプロジェクトで作成した“Training Manual for ADP Staff”を活用して実施されている。この他、 研修カリキュラム、テキスト、研修で使用するプレゼンテーション用資料、理解度把握に使うテスト問題等を作成している〔付属資料 1. 合同評価レポート（英文）Annex 8 参照〕。

NADPスタッフに対する研修計画に基づき行われた研修は表２－３のとおりである。

表２−３　ADPスタッフ向け研修参加者数

研修コース	実施日	参加者数	対象グループ
Training for NADP Staff of Nasarawa State on Marketing and Business Management	30 May, 2012 31 May, 2012 1 June, 2012	26 28 26	Candidates of Trainers for Beneficiary Trainings
Training for NADP Staff of Nasarawa State on Post-Harvest Technology	18 June, 2012 19 June, 2012 25 June, 2012 26 June, 2012 27 June, 2012 28 June, 2012	11 10 14 12 15 15	Candidates of Trainers for Beneficiary Trainings
Training for NADP staff of Nasarawa State on Extension	3 October, 2012	31	Candidates of Trainers for Beneficiary Trainings
Training for NADP staff of Nasarawa State on Training Cycle Management	10 October, 2012 11 October, 2012 12 October, 2012	22 22 13	Candidates of Trainers for Beneficiary Trainings
Training for NAMDA staff of Niger State on Post-harvest Technology	30 July, 2013 31 July, 2013 19 September, 2013 28 November 2013	21 7 7 12 (Planned)	Candidates of Trainers for Beneficiary Trainings

Training for NAMDA staff of Niger State on Marketing and Business Management	13 August, 2013 14 August, 2013 15 August, 2013	20 21 20	Candidates of Trainers for Beneficiary Trainings
Training for NAMDA staff of Niger State on Extension	20 August, 2013 21 August, 2013 22 August, 2013	20 20 20	Candidates of Trainers for Beneficiary Trainings
Training for NAMDA staff of Niger State on Training Cycle Management	28 October, 2013- 1 November,2013	30	Candidates of Trainers for Beneficiary Trainings

出所：中間レビュー用プロジェクト作成資料

（2）インキュベーション・プラント

ラフィアのインキュベーション・プラントは、ナサラワ州によるプラント建屋の建設遅延により、約 1 年の遅れでの 2013 年 11 月に完工したため、中間レビュー時には、インキュベーション・プラントを活用した研修はまだ実施されていないが、本格的な研修は 2 月をめどに開始する計画である。この遅れを取り戻すためにもAPMスタッフやNADAPスタッフへの技術移転方法を、これまでの専門家からAPM、APMからNADAPではなく、専門家からAPM/NADPと同時に行うなど工夫が必要となる。また、ナイジャ州での同様のインキュベーション・プラントを活用した活動を想定すると、APMスタッフの更なる関与、参加が必要である。

成果 4：小規模精米業者、パーボイル加工業者、コメ生産農家、流通業者の収穫後処理、経営能力が強化される。

指標 4-1　小規模精米業者、パーボイル加工業者、コメ生産農家、流通業者の収穫後処理、経営能力について、研修終了後テストの平均点が、それぞれのグループごとに設定した目標点を超える。

指標 4-2　研修参加者の 10%が導入された技術の採用に向けた行動をとる。

指標 4-3　研修参加者の 2.5%が導入された技術を採用する。

ビダでの受益者研修が始まっていないため、進捗状況についてはナサラワ州での活動に限って調査を行った。

（1）指標 4-1 に関する活動と達成度

ナサラワ州では、受益者向け研修を表２−４に示すとおり実施した。ナサラワ州での受益者研修はすべて終了しており、現在、イノベーター支援に活動は移行している。

表２−４　ナサラワ州における受益者向け研修と参加者数

研修コース	実施日	参加者数	受益者グループ
Training on Milling Technology (Nasarawa)	22 October, 2012 12 November, 2012 16 January, 2013 22 January, 2013 23 January, 2013	10 9 10 10 10	Rice Millers in Nasarawa State

Training on Assakio-type Parboiling (Nasarawa)	8 November, 2012 14 November, 2012 29 January, 2013	9 10 10	Female Parboilers in Assakio, Nasarawa State
Training on Threshing and Winnowing (Nasarawa)	19 November, 2012 26 November, 2012 28 November, 2012 3 December, 2012 5 December, 2012 10 December, 2012 12 December, 2012	13 9 13 24 5 13 15	Farmers in Nasarawa State
Training on Marketing and Business Management (Nasarawa)	31 January, 2013 5 February, 2013 7 February, 2013 12 February, 2013 14 February, 2013 21 February, 2013 14 March, 2013	28 31 32 30 28 28 30	Farmers, Parboilers, Millers, and Traders in Nasarawa State
Training on Lafia-Association-type parboiling (Nasarawa)	28 February, 2013 5 March, 2013 12 March, 2013	20 20 20	Parboilers in The Rice Millers and Traders Association Lafia, Nasarawa State

出所：中間レビュー用プロジェクト作成資料

表２−４に示すように、プロジェクトでは、①ラフィア精米・流通業者協会の加工・流通業者向けに「精米技術研修」「ラフィア協会式パーボイル技術研修」「経営とマーケティング研修」、②アサキオ村の女性グループ向けには「アサキオ式パーボイル技術研修」「経営とマーケティング研修」、③農家向けには「脱穀・選別技術研修」「経営とマーケティング研修」が実施された。

研修では、参加者に対して実施前後に理解度テストを実施しており、いずれの研修でも研修後の平均点が研修前の平均点を上回っている。また、研修後のテスト、各回 100 点満点での実績では、小規模精米業者が精米技術研修で目標値の 60 点に対し平均点が 73.6 点で、60 点以上の人数が受講者全体の 75.5%、パーボイル加工業者ではアサキオ式では目標値 60 点に対し平均点が 70 点、60 点以上の人数が受講者全体の 78.9%であったのに対し、ラフィア式では目標値 70 点に対し平均点が 60.4 点と低い。コメ生産者は脱穀・選別技術研修で目標値 80 点に対し平均点が 91.3 点で、受講者の 88.0%が目標値を超えている[2]。流通業者については、加工業者とともに研修に参加しているため、加工業者の数字に含まれる。すべてのグループを対象とした「経営・マーケティング研修」は、207 名が参加し、平均点 73.7 点、88.7%の受講者が目標値の 60 点を超えている[3]。

[2] プロジェクト1年次成果品（資料130228 List of test score new.xlsx、130313 Post test results.xlsx）
[3] 7回研修を実施しているが、数字は第6回までの受講者177名についての結果である。

（2）指標 4-2、4-3 に関する活動と達成状況

イノベーター候補を選出し、イノベーター支援を通じて技術の採用を促す活動が始められている。指標目標値のデータは収集されていないが、指標達成への兆しが見え始めている。

＜ナサワラ州＞

ラフィア精米・流通業者協会からの研修参加者によると、「これまでは今の品質が当たり前で、品質改善そのものを考えたことがなく、研修や機材改良のための試行錯誤の活動に参加していくなかで、コメの品質に関して意識するようになった」ことが、自分たちのなかでの非常に大きな変化として感じているとのことである。改良パーボイルタンクによる品質向上という結果も出たこともあり、ラフィア精米・流通業者協会のプロジェクトに対するコミットメントは非常に高い。

成果 4 のなかで、改善技術の採用につながる重要な活動としてのイノベーター支援は、現在実施中である。候補者は、業態と経営規模を考慮し 49 名に絞り込まれている。

2013 年 9 月、改善技術を認識してもらうため、10 セットの改良パーボイルタンクがイノベーター候補者に 4 週間貸し出された。その結果、精白米の白度の向上による販売価格の向上、砕米混入率の低下、加工時間の短縮による薪の減少と単位時間当たりの処理量の増加が認められた。定量的な数値の把握は今後の作業になるが、既に協会内の他のメンバーが、この改良技術を少しずつ（フタまたは中底）採用し始めているということは、成果の発現に大きく貢献する。現在、改善技術の更なる普及のため、他の 10 名のイノベーター候補者に貸出中である。また、今後このタンクを製作する製作業者の製造技術力向上も必要となるため、NADPが主体となって協会内で製造業を営む 5 社の製造業者への研修も行った。

精米から石を取り除くための石抜き機の導入が次の目標となる。このためには 3,000～4,000 米ドルする石抜き機を購入する必要がるが、そのような高価な機材を現金で購入できる業者は対象グループのなかにはいない。よってプロジェクトでも紹介している金融機関のローンを活用するしかないが、プロジェクトの調査によると、小規模の加工業者や流通業者が使えるローン商品がほとんどない。本プロジェクトには、金融機能はないため、ローン以外で石抜き機を導入する方法を検討する必要がある。現在 3 つの案が検討されている。

1）パーボイル品質改善による利益増分を積み立てて購入する。ラフィア精米・流通業者協会の平均的なパーボイル加工業者は、年間 100 t の籾を加工する。試算結果から、改良パーボイルタンクで生産されたパーボイル米は石が取り除かれていないにもかかわらず 70～80 米ドル/tの販売価格の向上が見込めるため、年間で 7,000～8,000 米ドルの販売価格の向上が期待できる。ここにかかる経費は改良パーボイルタンクへの 300 米ドル程度であるため、計算上は残金で石抜き機の購入が十分可能となる。

2）プロジェクトから 2～3 台の石抜き機をラフィア精米・流通業者協会に貸し出し、協会は会員とリース契約を結び毎月リース代金を徴収する。リース期間が満了すれば、所有権を移転する。協会は徴収したリース代金で新規に石抜き機を購入し他の会員へリースを行い資金を回転させていく。

3）RTA下で行われている品質向上のための機材配布プログラムを活用する。

このプログラムでは2013年から毎年100台の石抜き機を補助金が付いた価格（50～75%の補助金と言われている）でコメ生産地域に配布している。RTA事務局と相談し、ナサラワ州とナイジャ州も対象としてもらい販売することで相乗効果をねらう。

ナサラワ州で、もう1つの対象グループであるアサキオ精米業者協会は、アサキオ村での民族対立を原因とする衝突で、研修後のフォローアップ、モニタリング、イノベーター支援に係る活動ができない状態である。

ナイジャ州においては、本中間レビュー調査時点においては受益者グループの選定の段階にあり、受益者向けの研修は始まっていない。

成果5：対象州以外の ADP職員に対し、マーケティング、収穫後処理技術、経営に係る研修が開始される。

指標 5-1　研修が開講された州がXに達する。

指標 5-2　研修参加者の合計がXに達する。

本成果における活動は、最終段階で実施されることになっている。よって、この活動を実施することになるAPMの能力向上以外の活動はまだ実施されていない。

2－3　プロジェクト目標の達成予測

プロジェクト目標：プロジェクト対象地区において、流通する国産米の品質が向上する。

指標1：プロジェクトの研修を受けた対象グループのうち、少なくとも2.5%のコメ流通業者がプロジェクトで示された品質基準のグレードAレベル以上のコメを取り扱う。

プロジェクト目標達成の評価は不確定である。

指標の目標値である精米品質グレードAを得るためには、最終精米品から石を除去する必要があり、3,000～4,000 米ドルする石抜き機の導入は必須条件である。プロジェクトの計画段階では、小規模精米業者が機械や機材への投資に必要な資金ローンへのアクセスが期待できると考えていたが、プロジェクトの調査によると適当なローンがないことが判明した。プロジェクトでは、成果4（2）で述べた高品質パーボイル米の販売による利益増での現金購入や、プロジェクトから石抜き機をラフィア精米・流通業者協会へ石抜き機を供与し、それを協会内でリボルビングさせる、RTAで行う補助金付き石抜き機・脱穀機配布プログラム活用、など複数の対応策を検討しているが、これら対応策もいまだ具体的な適用可能性の見込は立っていない。さらに、ナイジェリアで販売される石抜き機は電気モーター駆動であり、購入者は追加の投資で発電機も購入しなければならず、負担は軽くない。

精白米の白度や砕米混入率などほかの品質項目については、石抜き機ほど高価ではなく、45,000 ナイラ（300 米ドル）程度の改良パーボイルタンク（中底やフタだけであればそれぞれ6,000 ナイラ程度）への投資で改善が可能である。

2－4　プロジェクト実施プロセス

（1）マネジメントと意思決定

プロジェクト活動が、アブジャ、ナサラワ州に加えナイジャ州に拡大しているため、プロ

ジェクト実施進捗管理と意思決定は効率的になされる必要がある。

プロジェクトの枠組み、実施に関する重要な事項については、 JCCにおいて協議し、意思決定を行ってきた。 JCCはプロジェクト開始後 2011 年 10 月、2012 年 4 月、2013 年 7 月に実施し、 PDM、POの変更や、APMのC/P予算の措置、APM、ADP、JICA三者の役割分担、これを記した覚書（Memorandum of Understanding：MOU）の作成等につき、協議、合意している。

このほか、日常の実施管理にかかわる事項は、その都度実施されるJICA専門家とナイジェリア側C/Pとのミーティングにより情報共有、協議等を行っている。

（2）モニタリング・評価

現在のところモニタリングについては大きな問題は見られない。ナイジャ州は関係者が点在している、使用する機材が小規模である、精米方法が異なるなど、ナサラワ州で得た教訓のナイジャ州での活用については、更なる改善が必要となる。プロジェクト活動全体の進捗管理については、JCCに報告されている。日々の活動の進捗管理についても、各分野のJICA専門家、C/Pによって行われている。技術移転についてはNADPの講師チームによって、研修終了後フィードバックを行い、研修の成果や次回研修への教訓の生かし方など、常に改善を図っている。

（3）JICA専門家、APM/NADP/NAMDA/C/P間の意思疎通

JICA専門家の対象地域へのアクセスが制限されているにもかかわらず、JICA専門家、APM/NADP/NAMDA/C/P間のコミュニケーション、情報共有については、各者から良好であると認識されている。

（4）カウンターパート（C/P）機関のオーナーシップ

NADPのオーナーシップについては、プロジェクトの関係者から非常に高い評価を得ている。また、受益者グループ、特にラフィア精米・流通業者協会からのプロジェクト活動に対する支援により、ナサラワ州での円滑で効率的なプロジェクト実施に貢献している。NAMDAについても、プログラム・コーディネーターの強いリーダーシップと、C/Pのプロジェクト活動への強い関与度により、オーナーシップは高いと判断する。

APMについては、2012 年に組織改革が行われており、業務レベルでの役割・機能、省内での他部局との関係性が十分明確になっていない。特にプロジェクト活動にかかる予算措置が図られていないことからも、オーナーシップが十分発揮されているとは言いがたい。このためC/Pの出張旅費の支払いが度々遅れることがあり、APM C/Pの士気低下の要因となっている。

第３章　評価結果

３－１　５ 項目評価

３－１－１　妥当性

本プロジェクトは、以下の理由により、妥当性が高いと評価される。

（1）ナイジェリア政府の政策との整合性

ナイジェリア政府は、2009 年に「国別稲作振興戦略」“National Rice Development Strategy : NRDS”を策定し、コメの生産量を 2007 年 340 万 t から 2018 年には 1,285 万 t に増産することを目標に掲げ、収穫後処理技術・マーケティングを優先課題の 1 つとして挙げている。

また、2010 年には、「国家農業食料安全保障戦略」“National Agricultural and Food Security Strategy：NAFSS”を定め、コメを 13 の戦略的作物の 1 つとして挙げるとともに、①食料安全保障、②輸入代替を通じた国家及び社会的富の蓄積促進、③産業振興、雇用創出に向けた付加価値の強化、④農業資源の効率的な利用、⑤適正、効率的技術の早期適用に向けた開発と普及の目標を挙げている。

併せて、ジョンソン大統領のイニシアティブとして出された「変革アジェンダ“Transformation Agenda”」の一環として、2011 年に「農業変革アジェンダ“Agricultural Transformation Agenda”」が示され、コメの自給の必要性と輸入代替の促進、民間セクターによる設備投資促進に向けたインセンティブ付与などについて言及している。同アジェンダでは、2015 年のコメ輸入の全面禁止も発表している。

これらのほかに、農業機械への輸入関税撤廃、陸路でのコメ輸入の禁止、コメの関税率を 100％への引き上げ、など自給率向上への施策をとっている。

本プロジェクトはこのような政府の政策に整合性のある取り組みといえる。

（2）わが国のODA政策との整合性

ナイジェリアに対するわが国のODA政策との整合性については、下記の理由で整合性が保たれていると判断できる。コメの生産性、品質、マーケティング向上、農民組織強化、技術者や農家の能力向上を図る農業・農村開発分野は、わが国の対ナイジェリア支援政策の優先分野である。また、ナイジェリアは、アフリカ稲作振興のための共同体（Coalition for African Rice Development：CARD）支援対象国の第 1 部グループにも選ばれている。

（3）戦略の有効性

本プロジェクトの戦略は、次の点から有効であると判断できる。本プロジェクトでは、バリューチェーン全体を俯瞰し、コメの品質に基づく付加価値向上に着目して支援を行っている。特に、市場の価格決定要因が精白米の色の明度と砕米率である点に着目し、パーボイル加工がこの点で大きな影響力をもつことを調査及び実験で確認したのち、パーボイル加工に重点を置いた支援を展開している。

また、プロジェクトでは、精米業者、パーボイル加工業者、流通業者など、①コメの市

場価格に敏感で、価格向上のインセンティブをもつ、②付加価値向上に特に寄与する、③品質向上に向けた設備投資等への投資能力がある等、条件に見合う受益者に対して働きかけを行っている。実際に、提案する技術内容については、ナサラワ州において、技術開発のプロセスから州レベルのC/Pや受益者であるラフィア精米・流通業者協会を巻き込み、双方のオーナーシップを確保している。このことにより、技術移転が受益者ニーズに合致し、さらに、地域で波及していくメカニズムを形成することも予想できる。

3－1－2　有効性

有効性については、下記の理由により中程度と予測される。

(1) プロジェクト目標達成の見込み

プロジェクト目標達成の兆候はあるが、石抜き機に必要な資金借入れが困難な状況により、プロジェクト目標達成の可能性を判断できない。むしろ成果 3 のADPの能力向上を図る過程でOJTによりAPMの能力向上を図ると理解すべきである。

成果 4 で説明したように、ナサラワ州ではイノベーター支援を通じて、パーボイル加工の改善による品質向上、それに伴う価格向上という成果が発現している。そして、他のメンバーも改善技術の採用を少しずつ（フタや中底）始めている。この改良技術は、ラフィア精米・流通業者協会で広まることが期待されている。

(2) プロジェクト目標と成果の因果関係

プロジェクト目標と成果の因果関係については、成果 5 を除きおおむね問題ない。成果 5 はプロジェクト目標よりもむしろ上位目標から上に貢献する活動である。

成果 4 では、プロジェクトは品質改善に必要な機材への投資に関する情報を受益者グループに提供している。しかし、プロジェクトの調査によると、貸出条件が厳しく、小規模加工業者がアクセス可能なローン商品がほとんどないことがわかった。プロジェクト目標の指標中にある精米品質グレードAを達成するためには石抜き機の導入は必須であり、石抜き機導入のための金融アクセスを確保しなければならない。ローンを使った石抜き機の導入のほかに、プロジェクトでは石抜き機を使った回転資金、パーボイル品質改善による利益積立による現金購入、RTAオフィスが行う政府の機材配布プログラムによる補助金付き価格販売、など他の方法も検討されている。

3－1－3　効率性

本プロジェクトの効率性は、以下の理由により低いと評価される。

(1) 成果達成の見込み

専門家や州C/Pの献身的な活動により、ラフィアのインキュベーション・プラント設置遅れの影響を最小限にとどめる努力はなされている。成果 1 について、パーボイル加工工程については、改善の効果は発現しており、改善技術の広まりも期待できる。精米工程については、石抜き機の導入についての検討は行われているものの、実現可能性については現時点で不明である。また、1 つ上のレベルの精米機の導入についても、インキュベーション・プラントを活用したデモンストレーションを通じた活動を行うことになっている

が、その効果については不明である。また、パッケージング等の販売方法についての試行もこれからである。成果 2 については、作成された品質基準をラフィア精米・流通業者協会内で試行・検証していく作業がこれから行われる。成果 3 については、APM C/Pは、専門家の支援を受けながらであれば、必要な指導や助言ができるようになっている。NADP C/Pは組織、個人とも、業務を行う能力や、士気は非常に高い。NAMDAはこれらかTOTが始まるので判断するのは早いが、その士気の高さからNADPレベルになることが期待されている。なお、APM C/Pの能力向上については、NADPやNAMDAの能力向上レベルを測ることで間接的に見ていくことが望ましい。成果 4 については、ナサラワ州では、石抜き機のような高価な機材への投資に必要なローンへのアクセスが容易でないという課題があり、その対策を実施しなければ成果達成は見込めない。本来、ナイジャ州はAPMが主体となって活動を実施することになっているが、実際はナサラワ州同様、専門家チームが主体となっている。全体としてAPMの関与をもっと高める必要がある。

（2）投入の適切性

1）JICA専門家

JICA専門家に関しては、必要な分野と十分な数の専門家が必要な時期に配置されている。しかしながら、JICA安全基準の変更による専門家の対象地域へのアクセスが制限されたことで、今後も活動の進捗にマイナスの影響が出る可能性がある。

2）機材

供与機材は、そのほとんどが研修での説明や品質改善のための試験データ収集に使用されており、状態もよく特に問題は見られない。一部に今後使用される予定で、まだ使われていない検査機器がある。

インキュベーション・プラントの仕様が計画段階に比べ、処理量が大きくなったため、調達コストが大幅に増加した。また、当初想定されていなかったJICA安全基準の変更により、JICA専門家の移動にかかるコストが追加支出された。一方で、NADPやAPMに対するインキュベーション・プラントの運転・維持管理に係る技術移転が遅れている。このように計画に比べて投入の増加、成果の減少があったため効率性は低くなっている。また、インキュベーション・プラントはプラントそのもののコスト増に加え、調達から据え付けまでに関係者により費やされた時間・労力は膨大でこれも効率性を下げた要因である。

3）ナイジェリア側カウンターパート（C/P）

ナサラワ州NADPからの適正なC/Pの投入とその士気の高さは、活動の進捗への大きな貢献要因である。APM C/Pは、成果 3 において研修講師としては十分な貢献しているが、今後は、計画、調整、実施、モニタリング・評価など研修実施の全工程を運営できるような能力を身につけることが期待されている。

4）その他ナイジェリア側からの投入

ナイジェリア側からの投入はおおむね十分といえる。特にNADP/NAMDAによる事務所スペースの確保や活動（研修経費やスタッフの出張旅費等）にかかる予算措置については、努力の結果がうかがわれる。APMも事務所スペースの確保、輸入機材の関税支払いなどの支出を行っている。しかし、APMにはプロジェクト用に特別に確保されたC/P予算

がなく、C/Pの出張旅費の支払いが遅れたり、支給されなかったりしている。これにより、OJTによる技術移転を主としているにもかかわらず、APM C/Pが専門家と行動を共にできないこともしばしばで、彼らの能力向上の進捗に影響が出ている。

5）本邦研修、第三国研修

ナサラワ州ADP局長は、本邦研修に参加後、プロジェクト活動への理解度も増し、コミットメントも高まったことで、ADPスタッフの士気も高くなっている。集団研修へ参加したC/Pが、研修時に製作した平型乾燥機をナイジェリアに持ち帰ってきたため、籾殻を熱源として乾燥機の性能を試験中である。実用化できれば、雨期の乾燥工程の改善が可能となる。ウガンダの第三国研修に参加したC/Pは圃場レベルでの技術移転を行っている。これに政府が行う優良種子配布プログラムと同時に行うことができれば、生産性向上において効果的な結果の発現が期待できると思われる。

(3) 対象グループ

ナサラワ州での対象グループの1つであるアサキオ精米業者協会に対しては、受益者研修まで終わっているが、民族対立による村の崩壊で、その後の活動のモニタリングやイノベーター支援などの活動の継続が不可能となり、期待された成果の発現が確認できないことは効率性低下の原因となる。

価格インセンティブが働きやすく、技術改善もすぐに採用できる流通業者兼加工業者や流通業者を優先ターゲットとしたことは、他のコメ流通関係者への品質向上に関する影響が出やすく、効率性の向上に貢献している。

3－1－4　インパクト

本プロジェクトのインパクトは、以下の理由によりある程度は期待できる。

(1) 上位目標の達成可能性

プロジェクト目標同様、石抜き機に必要な資金借入が困難な状況により、上位目標達成の可能性を判断できない。

しかし、ラフィア精米・流通業者協会ではイノベーター支援を通じた改良パーボイル加工機材が試用され、良好な結果を出している。さらに他のメンバーも一部機材の導入を始めている。NADPの強いコミットメントに維持され、C/Pによって同様の活動が同州の他ゾーンに広がった場合には、上位目標に貢献することが期待できる。また、ナイジャ州においても、C/Pや受益者グループからのコミットメントは、上位目標達成への重要な要因となる。

(2) コメの生産段階（コメ農家）へのインパクト

本プロジェクトでは、コメ生産段階（農家レベル）での収穫・収穫後処理に関しての活動は限定的である。コメの流通段階で品質管理は生産段階から始まるが、品質による買取価格に差がない場合、生産者が籾の品質を向上させるインセンティブは働かない。消費者が品質によって商品を選ぶ場合、むしろ流通段階の川下、つまり消費者に近い流通業者や加工業者のほうがインセンティブが働きやすい。プロジェクトでは、このなかでも、販売

価格によるインセンティブが高く、品質改善への行動をとりやすい流通業者や流通業兼加工業者をイノベーター支援の対象としていることで、コメのサプライチェーンへ刺激を与えようとしている。彼らは加工を通じて品質向上（価格向上）を図ろうとし、次の段階で良い原料を仕入れることで更なる品質向上（価格向上）を図ることができる。つまり彼らが品質別の原料の買取価格を設定して、初めて生産者に高品質籾の生産インセンティブが働き、かつそれに必要な投資を上回る利益が期待できた場合、生産者は品質改善への行動に移ることになる。よって、生産者へのインパクトは、まだ先になると考えられる。

（3）コメ市場拡大への量的インパクト

対象グループにおいて、プロジェクトの研修を受けた流通業者の取扱量をモニターすることで、コメ生産量に対するある程度のインパクトの推定は可能である。

（4）その他のインパクト

負のインパクトについては、本中間レビュー調査の段階では観察されていない。

3－1－5　持続性

本プロジェクトの持続性は、以下の理由により中程度であると評価される。

（1）政策、法制度面

NRDSは、2018 年までを政策の対象年としているため、ナイジェリア政府のコメ振興にかかる政策面での本プロジェクト活動分野への支援は継続すると考えられる。

（2）カウンターパート（C/P）機関の組織能力面

APMはコメに関して加工・流通に係るさまざまな支援を行う政府機関であり、引き続きコメ流通にかかる関係者の能力開発を行っていく。プロジェクトの成果の他州、他地域への展開については、予算確保のための政府プログラムとして十分なメカニズムと、APMによる強いイニシアティブが必要である。そのためにはRIPMAPPの活動がコメの品質向上に大きく寄与していることを十分にナイジェリア農業農村開発省（FMARD）、特にRTA事務所に認知されることが重要である。

（3）財務面

上述のように、APMがコメの品質改善支援を行うことが、政府プログラムとして承認されれば、財務面での持続性は担保される。

（4）移転された技術の適用性と活用

ナサラワ州ラフィアでのインキュベーション・プラントの設置が遅れたため、C/Pに対する精米プラントの運転・維持管理に係る研修が始まっていない。このような精米プラントの運転・維持管理はC/Pにとっては初めての作業であり、単体の機械と異なり、その運転や維持管理技術の習得には一定の時間がかかると思われる。このあと、2014 年にはナイジャ州ビダにインキュベーション・プラントが設置されることになるが、プロジェクト終

了までの限られた期間内で運転・維持管理技術の移転を行わなければならない。計画では、ナサラワ州の経験をもとに、ナイジャ州ビダではAPMが主体となって活動を行うことになっていることを考えると、ナサラワ州のインキュベーション・プラントを使った研修は、APM/NADPのC/Pに対し同時に行うことで時間を短縮し、さらにNAMDAのC/P向け研修では、APMに加えNADP C/Pの支援も検討すべきである。

NADPは、プロジェクト終了後、インキュベーション・プラントを活用し州内の他ゾーン向けの一連のコメ品質改善研修を行うとしている。その後、ナイジャ州に所有権は残しつつ、同プラントの運転・維持管理を、技術面・財務面・経営面で能力をもつ民間セクターへ移管することを検討しているものの適当なパートナーについては現時点で不明である。

加工機材の改善、特にパーボイル用機材ついては、受益者とともに行う試行錯誤的な改善の作業工程そのものは、異なる機材や加工方法を行う他の地域でも適用可能である。

市場でのコメの品質による価格の違いが認識された時点で、品質基準の導入を進めることになる。よって、対象地域でまず品質による価格の違いについて認知を行い、それを他の地域に広げていくことは妥当である。APMは、品質基準を公式に認定したり、品質改善に係る活動で使うなどして、他地域への普及については積極的に活用していく必要がある。

プロジェクトの調査によると、金融機関からの借入条件はコメ流通にかかわる関係者である対象グループには厳しく、適当なローン商品はない。プロジェクトは、借入条件が比較的楽なローン商品を紹介するまでを活動としているため、投資が必要な改善技術については、ほかの何らかの対策を講じる必要がある。

APM C/Pは研修講師としての能力は十分だが、研修の計画、調整、実施、モニタリング・評価についてはいまだ十分とはいえない。

収穫後処理技術は地域によって異なり、改善を行うには少しづつ修正が必要になるが、プロジェクトが採用する基本的なアプローチである、①パーボイル加工技術の改善、②石抜き機の導入、③摩擦式精米機の導入、は他地域でも適用可能でアプローチとしての持続性はある。

3－2　結論

(1) 進捗状況

1) ナサラワ州

一部機材の設置（インキュベーション・プラント）の遅れによる活動への影響はあるものの、最終受益者に対する研修に関しては、プラントの操作・維持管理、プロジェクト終了期間後の戦略的な活用体制構築を除いて、それほどの遅れもなく進捗していることが確認された。

2) ナイジャ州

用地確保がなされたが、約束の期日までに建屋の建設のための予算の確保のめどを立てることができなかったことから、これ以上の活動の遅延を避けるために、機材設置に必要とされる適正規模の施設建設を日本側で行うこととし、電気、水道、研修室、乾燥場などの付帯施設の建設費についてはナイジャ州が予算措置することで合意した。建設後の瑕疵

検査以降は速やかに先方へ維持管理責任を移管することとした。

（2）5 項目評価

妥当性については、NRDSでも重点とし、コメ自給及び輸出に向けた政策（コメの関税率100%、2015 年に輸入禁止予定）が維持されていることから高い。有効性についてはナサラワ州の品質改善に向けた取り組み意欲の状況からコメ品質の向上への流れが確認できたものの、目標達成の見込みを約束するものではない。効率性について、機材の規模拡大と遅延、並びに治安対策強化への支出増などから、低い。インパクトは、流通業者を含め収穫後処理全体の関係者を対象にしていることからその発現が期待される。持続性については、ラフィアでのインキュベーション・プラントの受け皿となる機関が決定されていないため判断をするには早いが、ADPの技術的能力は見受けられる。他地域の展開については予算確保の懸念が残る。

第４章　提言

４－１　APMにおけるカウンターパート配置と予算措置

APMのC/Pについては、収穫後処理分野における講師としての能力は十分備わっている。一方で、研修の計画や評価にかかる実施・管理業務については、JICA専門家に依存しているのが現状である。今後、APMが組織として、対象州の研修全体を実施・管理において主体的にかかわっていくために、効率的な組織体制を作っていくことが必要である。具体的には、以下の対応策を取ることを提言する。

1）研修実施において専門家チームとの円滑なコミュニケーションを図るため、APMにて常時対応可能な研修担当コーディネーターをアブジャに配置する。
2）ナイジェリア農業農村開発省の予算計画部門の担当者をJCCメンバーとして参加させる。
3）APMがナサラワ、ナイジャ両州で本プロジェクトに係る業務を行う際に必要な予算（特に旅費）を確保する。

４－２　ナイジャ州ビダのインキュベーション・プラント

R/D（付属資料 4）にて、精米及び貯蔵施設（インキュベーション・プラント）に係る土地・建物はナイジェリア政府により用意される、旨明記されている。そのうえで現状は、①ナイジェリア側において既に土地は用意されている（ただし地盤が砂質なので基礎工事を十分に行う必要あり）、②建屋については、予算措置の遅れから計画期間に間に合わない。よって、インキュベーション・プラントに係る活動の遅れを防ぐために、日本側にてインキュベーション・プラントの建屋建設を行うことを提言する。これについてはナイジェリア側のオーナーシップ醸成のため、以下を条件とする。

1）インキュベーション・プラント建屋建設のための、ナイジャ州政府による土地造成
2）日本側による建屋の提供と、ナイジャ州政府による電気、水道、研修施設、乾燥場等の付帯設備〔付属資料1. 合同評価レポート（英文）Annex 9参照〕の提供。
3）建屋の建設・瑕疵検査後の建屋及び維持管理責任のナイジャ州政府への移譲

４－３　ナイジャ州ビダに設置するインキュベーション・プラントの適正規模

ナイジャ州のコメ農家、加工業者、流通業者は小規模で、かつこれらは点在していることから、このような現状に沿った適正な規模の機械・機材〔付属資料 1. 合同評価レポート（英文）Annex 9 参照〕をインキュベーション・プラントに設置することを強く提言する。

４－４　PDMの変更

現在のPDM Ver.2 を以下のとおり変更することを提言する。

（1）プロジェクト目標指標の追加

本プロジェクトは、収穫後処理分野への支援を行う事業の先駆けであり、関係者の行動変容などを含む実施の過程や結果を他案件に生かしたり、対外的に説明する際に使用したりす

るため、さまざまな指標やモニタリング結果を量的、質的に収集しておく必要がある。そのなかで、現在プロジェクト目標の指標である「プロジェクトの研修を受けた対象グループのうち、少なくとも 2.5%のコメ流通業者がプロジェクトで示された品質基準のグレードAレベル以上のコメを取り扱う」において、研修参加者のうち「何人」がグレードA精米を取り扱うかの割合を見ている。ナサラワ州では、延べ 437 人（表 2−4 中の研修受講者延べ人数）が受益者研修を受講しており、この場合の 2.5%は 10.93 人になるが、複数の研修に参加している受講者や、純粋な生産者が含まれるため、実際に流通業を営む参加者の 2.5%は数人程度にとどまると思われる。よって、これに加え、この流通業者のグレードA精米の取扱量から「何トン」流通したかを測ることで、プロジェクト対象地区でのインパクトを取扱業者数とともに取扱量として継続的にモニタリングしていくことが必要と思われる。このため、指標 2 として「プロジェクト対象グループの流通業者が取り扱うコメのうち、少なくとも 2.5%が品質基準のグレードAレベルになる」を追加する。なお、ここでの目標値 2.5%は、指標 1 で使用されているロジャースの普及理論におけるイノベーター数の値を援用した。

（2）成果5の削除と成果3の変更

成果 5、「対象州以外の ADP職員に対し、マーケティング、収穫後処理技術、経営に係る研修が開始される」は、上位目標である、「プロジェクト対象州において、流通する国産米の品質が向上する」のさらに先である対象州以外の活動のための成果であり、本プロジェクト目標のための成果としては論理的に整合性がない。ただし、現在OJTで行っているAPMの能力向上を図ることは、将来APMが対象州外で本プロジェクトの活動を継続し、これら州のADPの能力向上を図ることを可能とするため、成果 3 における能力向上の対象としてAPMを追加し、内容を整理した。APMの能力開発は今後もOJTで行い、成果 3 の活動そのものには変更はない。

Item	Version 2	Proposed revision(Version 3)	Reason for change
Indicators of Project purpose	-At least 2.5% of rice traders of the target groups in the target areas handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project.	- At least 2.5% of rice traders of the target groups in the target areas handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project. - At least 2.5% of amount of Grade A level quality domestic rice is handled by the traders in the target groups.	It is expected not only numbers of rice traders but also the amount of domestic quality rice is actually increased in target areas. In this context, current indicator is not sufficient to measure the achievement level of Project purpose.
Output 3	Capacity of ADP staff regarding training implementation on	Capacity of APM and ADP staff regarding training implementation on	・The Overall goal is “Quality of domestic rice is improved in the target States.” Therefore, it

	marketing, post-harvest and business management is enhanced.	marketing, post-harvest and business management is enhanced.	is not logical to include an output in non-targeted states on PDM. ・On the other hand, expansion of the training programs under the initiative of Nigerian side is highly recommended. In this context, it is more appropriate to regard that “training programs for non-targeted ADP staff regarding post-harvest, marketing and business management” is included as Output 3. It is suggested capacity development of APM staff is implemented through On the Job Training (OJT) at the time of training to ADP. Knowledge and experience are supposed to be shared with other states appropriately by APM who attended this OJT.
Output 5	Training programs for non-targeted ADP staff regarding post-harvest, marketing and business management are commenced.	---(delete)	

４−５　コメ変革アジェンダによる事業の活用

コメ変革アジェンダの事業により、APMは 2014 年も石抜き機と脱穀機を補助金付き価格で販売する計画である。また、精米品質基準のグレードAを達成するためには石の除去は必須である。本プロジェクトの受益者へ石抜き機を安価に販売することができればプロジェクトの成果に大きく貢献することから、プロジェクト対象地域（ラフィア、ビダ）での、石抜き機、脱穀機の補助金付き価格での販売が可能となるよう同プログラムとの協調を提言する。

第５章　団長所感

(1) C/Pに対する能力強化にあたっては、専門家による現場の状況に沿った実務的指導により、専門家チームに対する高い評価が得られている。特にナサラワ州では現場の問題点を共有して技術的改善を加えている。パーボイル機の底にスクリーンを取り付け、蒸気のみが接触することで加工ムラをなくすと同時に汚泥水を籾から切り離すことできれいな仕上がりとなる試作機を貸し出すことで現地の人がそのよさを実感できるような取り組みがなされている。このような指導方法によって他ドナーには見られない技術移転の効果をC/Pが肌で感じている様子が伝わってくる。

(2) 州レベルのC/Pも国別・課題別研修へ参加したことで技術研修で得た知識を活用しようと士気は非常に高くなっている。APMのC/Pも現場での技術指導に注力していることから、2州におけるプロジェクト活動による成果の発現は大いに期待できる。しかし、その成果を展開するにはAPMとしてナイジェリア農業農村開発省から承認を受けて制度的に取り組めるような枠組みが不可欠である。食糧保全庁から農業農村開発省に合併した現在、C/Pの旅費がタイムリーに支給できないという問題が発生しており、従前のように事業予算を確保したうえで支出できるように改善が必要である。また、プロジェクトの位置づけと指揮命令系統を明確にすることでタイムリーな意思決定を行えるシステム構築を進める必要がある。

(3) 当初、ナサラワ州で成功したモデルをナイジャ州で展開することを想定していたが、異なるモデルが必要となっている。ラフィアとビダではその産業構造の違いから、前者は加工業者が集積した状態にあるのに対し後者はパーボイル業者と精米業者が分散している状況で、インキュベーション・プラントの活用方法に関しては大きく異なってくる。ラフィアではプラントが中規模となっているため、その受け皿となる組織規模も大きくなることが想定される。一方、ビダでは個人所有を前提とした小規模のプラントが想定されなくてはならない。ナイジェリア全体としては地方都市に産業集積しているケースは少ないため後者のほうがモデルとしての汎用性はより高いと思われる。

(4) 専門家の安全は継続的に確保されなければならないが、これまでの遅れを少しでも取り戻すべく、効率的な活動実施が求められる。今後、ビダ周辺において、インキュベーション・プラントの設置と技術研修にかかわる活動が増えることになるが、ビダの生産者やパーボイル業者がいる地域まではミンナから片道2時間近く必要となる。特定の期間においては集中的な活動を余儀なくされるため、ビダにおける宿泊先の追加を含めた対応策の検討が重要である。在ナイジェリア日本大使館と連絡を取りつつ、最新の治安情報を得ながら、機動的な活動ができるように安全対策をお願いしたい。

(5) ビダでのインキュベーション・プラントの設置は、その効果的活用を考えると2014年の収穫時期前となる8月までに終えることが望ましい。それには、すぐに調達手続きを進める必要がある。建屋の建設についてもJICA予算を組んだことで大きな遅れは生じないものと思われる。一方、調達手続きにおいてもナサラワ州の事例からもかなりの時間を要することから、

JICA側の理由で遅れが生じないよう細心の注意を払う必要がある。

(6) 対処方針会議では、ビダのプラントの維持管理の技術移転には延長が不可欠であるとの見解が専門家から示された。一方でアフリカにおけるプロジェクト予算の制約から投入規模を大きくできない状況であることがJICAアフリカ部から示された。このような状況においては、専門家の派遣計画を見直して細く長くすることが一案である。今回の調査団では延長については一切発言をしていないが、2015年の9月に終了を迎えることになっているが、少なくとも2015年のシーズンをカバーできるように延長することが妥当と思われる。

(7) R/Dには終了時評価を終了半年前に実施するとの記載がある。JICA本部において評価調査の実施方法等について見直しされているところであり、変更ある場合には先方への十分な説明が必要である。また、効率化を図ることは重要であるが、本プロジェクトはコメのバリューチェーンの加工流通部分を扱う数少ないプロジェクトであり、現場からの貴重な知識情報が得られるものと思われると同時に、外部へ情報発信のため情報公開に耐え得る評価となるよう、しっかりとした体制で終了時評価にあたっていただきたい。

付　属　資　料

１．協議議事録（M/M）及び合同評価レポート

２．PDM ver.3

３．評価グリッド

４．討議議事録（R/D）

５．面談議事録

MINUTES OF MEETINGS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
THE AUTHORITIES CONCERNED
OF
THE FEDERAL GOVERNMENT OF THE REPUBLIC OF NIGERIA
ON
THE RICE POST-HARVEST PROCESSING AND MARKETING PILOT PROJECT
IN NASARAWA AND NIGER STATES

The Joint Mid-term Review Team (hereinafter referred to as "the Team"), which consists of three members from the Japan International Cooperation Agency (hereinafter referred to as "JICA") headed by Dr. Kunihiro Tokida and three members from the Government of Nigeria headed by Engr. I.U.Nwankwo, was organized and jointly reviewed the progress on "Rice Post-harvest Processing and Marketing Pilot Project in Nasarawa and Niger States" (hereinafter referred to as "the Project") from November 11th to November 29th , 2013.

After intensive study and analysis of the activities and achievements of the Project, the Team prepared the Mid-term Review Report (hereinafter referred to as "the Report"), presented at the Joint Coordinating Committee (hereinafter referred to as "JCC") which was held on November 27th,2013, and the both sides agreed on the matters referred to in the document attached hereto.

Abuja, November 27th, 2013

Dr. Kunihiro TOKIDA
Leader
The Mid-term Review Team
Japan International Cooperation Agency

Mr. Akinbolawa OSHO
for Permament Secretary
Federal Ministry of Agriculture and Rural Development
Federal Republic of Nigeria

Attached Document

I. Presentation of the Report

The Team presented the Report to JCC, and attendants of JCC confirmed the current progress and review of the Project. The Report is in APPENDIX.

II. Discussion Points of Major Issues Concerned of the Project

(i) Efficient Appointments and Budgetary Measures for APM staff

It is noted APM CP is knowledgeable on post-harvest and is highly capable of delivering lectures at trainings. On the other hand, it is reported that administrative tasks in preparatory stage and evaluation stage of the training are mostly led by JICA experts. In order for APM staff to take an initiative on training in each state, it is necessary for APM, as an organization, to build an efficient structure to implement the whole stages of the training. Precisely, the following actions are recommended to be taken by APM.

a. Appointment of a full-time training program coordinator from APM staff in Abuja as CP to realize smooth communication in reporting line for the training.
b. Appointment of a budgetary officer from FMARD staff as a JCC member
c. Secure budget for APM staff for operations and carrying out relevant activities under RIPMAPP project in Nasarawa and Niger states.

(ii) Building for Incubation Plant in Bida, Niger State

It is agreed on Record of Discussions in Annex 2 that land and building for rice milling and storage of equipment (i.e. Incubation plant) are the measures to be taken by the government of Nigeria. It is observed that 1) the Nigerian side acquired land for an incubation plant but the land is sandy which needs land preparation and that 2) the building has not been prepared in time due to budget constraints. In this context, it is advisable to request the Japanese side to bear construction cost of the building for the incubation plant in order to prevent delay of activities taken place at the incubation plant. From a viewpoint of enhancing ownership of the government of Nigeria, following conditions should be met.

a. The land clearing and foundation preparation will be implemented for the construction of the incubation plant by Niger state government.
b. Japanese side offers a shelter for the incubation plant in Niger state. Other facilities including power supply, training hall, drying yard are to be prepared by Niger state government as specified in Annex 10 of the Mid-term Review Report.
c. After the completion of the construction of the building and the defect inspection, the building and its responsibilities of maintenance are transferred to Niger state government.

(iii) Appropriate Size of the Incubation Plant in Bida, Niger State

It is observed that rice farmers, parboilers, millers, and traders in Niger state are scattered and small in scale. It is strongly recommended that the machineries and equipment procured for the incubation plant in Bida, Niger State should meet the current condition of those beneficiaries as specified in Annex 10.

(iv) Transfer of Incubation Plant in Lafia, Nasarawa State

The incubation plant in Lafia is completed and the plant will be transferred to Nasarawa State government as soon as possible. The Nasarawa State government will shoulder the whole responsibilities of the plant. APM can use the plant for training purposes upon request.

(v) Utilization of Rice Transformation Program

In 2014, destoners and other machinery will be sold to stakeholders with subsidy under "Rice Transformation Program". Since removal of stones is essential to meet Grade A level of Rice Grade Standard, collaborating with the program, distribution of destoners will greatly contribute to outcome of the Project. It is recommended that distribution of destoners takes place in the target areas of the Project, i.e. Lafia and Bida.

III. Revise of Project Design Matrix (PDM)

The Team proposed revision of PDM below and the both sides accepted the revision.

Item	Version 2	Proposed revision (Version 3)	Reasons for change
Indicators of Project purpose	-At least 2.5% of rice traders of the target groups in the target areas handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project.	- At least 2.5% of rice traders of the target groups in the target areas handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project. - At least 2.5% of amount of Grade A level quality domestic rice is handled by the traders in the target groups.	It is expected not only numbers of rice traders but also the amount of domestic quality rice is actually increased in target areas. In this context, current indicator is not sufficient to measure the achievement level of Project purpose.
Output3	Capacity of ADP staff regarding training implementation on marketing, post-harvest and business management is enhanced.	Capacity of APM and ADP staff regarding training implementation on marketing, post-harvest and business management is enhanced.	✓ The Overall goal is "Quality of domestic rice is improved in the target States." Therefore, it is not logical to include an output in non-targeted states on PDM. ✓ On the other hand, expansion of the training programs under the initiative of Nigerian side is highly recommended. In this context, it is more appropriate to regard that "training programs for non-targeted ADP staff regarding post-harvest, marketing and business management" is included as Output 3. It is suggested capacity development of APM staff is implemented through On the Job Training (OJT) at the time of training to ADP. Knowledge and experience are supposed to be shared with other states appropriately by APM who attended this OJT.
Output 5	Training programs for non-targeted ADP staff regarding post-harvest, marketing and business management are commenced.	---(delete)	

APPENDIX: Joint Mid-term Review Report

Joint Mid-Term Review Report

on

Rice Post-Harvest Processing and Marketing Pilot Project

in Nasarawa and Niger States

(RIPMAPP)

Joint Mid-term Review Team

Abuja

26th November, 2013

Dr. Kunihiro TOKIDA
Team Leader
Japanese Mid-Term Review Team
Japan International Cooperation Agency

Engr I.U. NWANKWO
Team Leader
Nigerian Mid-Term Review Team
Deputy Director, Agro-Processing and Marketing Department, Federal Ministry of Agriculture and Rural Development

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Annex 2: Project Design Matrix (ver.2) and Plan of Operations (ver.2)

Annex 3: List of Machinery and Equipment

Annex 4: List of Counterpart Personnel Participated in Training Courses in Japan

Annex 5: Project Running Cost Covered by JICA

Annex 6: List of Nigerian Counterparts

Annex 7: Budgetary input covered by Nigerian Side

Annex 8: The List of Reports and Manuals Produced by the Project

Annex 9: Specification of Incubation Plant in Bida

Abbreviation

APM	Deputy Director, Agro-Processing and Marketing Department
CARD	Coalition for African Rice Development
CP	Counterpart Personnel
FMARD	Federal Ministry of Agriculture and Rural Development
JICA	Japan International Cooperation Agency
m/m	man-months
NADP	Nasarawa State Agriculture Development Programme
NAMDA	Niger State Agriculture and Mechanization Development Authority
NFRA	National Food Reserve Agency
NGN	Nigerian Naira
NRDS	National Rice Development Strategy
PDM	Project Design Matrix
PO	Plan of Operation
R/D	Record of Discussion
RIPMAPP	Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States
RTA	Rice Transformation Agenda
TOT	Training of Trainers

1. Outline of the Mid-Term Review

1.1. Objectives

The objectives of Mid-term Review are as follows:

(1) To review the inputs to "Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States" (herein after referred to as "the Project"), the progress and achievements of the project activities.

(2) To evaluate comprehensively the Project in accordance with five evaluation criteria (relevance, effectiveness, efficiency, impact and sustainability) by both Nigerian and Japanese sides.

1.2. Schedule

The Mid-term Review was undertaken from 11th to 29th November 2013. The schedule is attached in Annex 1.

1.3. Members

The Mid-term Review was conducted by the Joint Mid-term Review Team (hereinafter referred to as "the Team"), composed by both Japanese and Nigerian team members. The members of the Team are as follows:

[Japanese Member]

Name	Role in the Team	Position
Dr. Kunihiro TOKIDA	Senior Advisor, Rural Development Department, JICA HQ	Team Leader
Ms. Yoshie SASABE	Staff, Rural Development Department, JICA HQ	Project Management
Mr. Yasunobu KUDO	Consultant, Task Co., Ltd.	Evaluation Analysis

[Nigerian Member]

Name	Role in the Team	Position
Engr I.U.NWANKWO	Deputy Director, APM, FMARD	Team Leader
Engr. Amos O. AFOWOWE	Deputy Director, Agro-Processing and Marketing, APM, FMARD	Member
Mr. Andrew K. IBILI	Chief Administrative Officer, Planning Research and Statistics Department, FMARD	Member

1.4. Method

The Progress of the Project was assessed jointly by the Team based on the materials showing the framework of the Project such as the Project Design Matrix (hercinafter referred to as

"PDM", the Plan of Operation (hereinafter referred to as "PO") and the Record of Discussion (hereinafter referred to as "R/D"). The review activities including examination of the project reports, field surveys, and interviews with staff of Agro-Processing and Marketing Department (hereinafter referred to as "APM") of the Federal Ministry of Agriculture and Rural Development (hereinafter referred to as "FMARD"), Nasarawa State Agriculture Development Programme (hereinafter referred to as "NADP") and Niger State Agriculture and Mechanization Development Authority (hereinafter referred to as "NAMDA"), and experts dispatched by JICA. Also beneficiaries of the Project are interviewed including farmers, parboilers, millers, traders and other concerned personnel in the Project. This review was conducted based on the following Five Evaluation Criteria.

1) Relevance	Assess the relevance of the purpose and the overall goal of the Project through confirming Nigerian government policies, needs of the beneficiaries, the assistance policies of Japan, etc.
2) Effectiveness	Check the achievement of the outputs and examine the relationship between the outputs and the project purpose. (Based on prospects)
3) Efficiency	Analyze the outputs produced from the inputs of the Project considering the timing, the quality and the quantity of the inputs.
4) Impact	Consider potential positive and negative impacts, which are caused by the project implementation. (Based on prospects)
5) Sustainability	Examine institutional, organizational, financial and technical sustainability of the results and effects of the Project after the termination of the assistance. (Based on prospects)

2. Outline of the Project

2.1. Background

In Nigeria, about 65% of the population earns their living through agriculture-related jobs and agriculture accounts for about 40% of GDP of Nigeria. Rice is one of those agricultural produce for which the demand is increasing. The domestic production of rice, however, does not meet this demand, and hence, the Nigerian government has decided to increase the self-sufficiency ratio of rice.

By recognizing that inadequate knowledge and technique of farmers or the processors with regards to post-harvest processing make the overall quality as well as the price of domestic rice low, resulting in discouraging farmers from rice production, the Nigerian government requested the Japanese government to assist implementing the "Rice Post-Harvest and Marketing Pilot Project in Nasarawa and Niger States", for the purpose of human resource development of federal and state government officials, rice producers, processors and other concerned personnel in the Project.

In response to the request from the Nigerian Government, the Detailed Planning Survey was conducted in 2011 and the framework of the Project was officially agreed between JICA and the Nigerian authorities concerned of the Project by the signing of R/D on 18th March, 2011.

2.2. Summary of Project Design

The framework of the Project is described in the Annexes of R/D, which was partially modified with the approval of 2nd Joint Coordination Committee held on 2nd April, 2012. The framework is summarized as follows.

Table 1: Summary of the Project Design

Overall Goal	Quality of domestic rice is improved in the target States.
Purpose	Quality of domestic rice is improved in the target areas.
Outputs	1. Measures to promote distribution of high quality domestic rice are identified. 2. Rice grading standards for domestic rice is developed and improved. 3. Capacity of ADP staff regarding training implementation on marketing, post-harvest and business management is enhanced. 4. Capacity of small-scale rice millers, parboilers, rice farmers and traders on post-harvest, marketing and business management is enhanced. 5. Training programs for non-targeted ADP staff regarding post-harvest, marketing and business management are commenced.

2.3. Duration

Four years from September 2011 to September 2015.

2.4. Implementing Agency

Agro-Processing and Marketing Department (APM), Federal Ministry of Agriculture and Rural Development (FMARD) (It was originally National Food Reserve Agency (NFRA) but it was re-organized in 2012.)

2.5. Target Areas

Lafia, Nasarawa state, Bida, Niger state

2.6. Target Groups

Small-scale rice millers, parboilers, traders and rice farmers

3. Project Performance and Implementation Process

The Team reviewed the performance of the Project by measuring the achievement made so far on the project outputs and the implementation process examining the process of provision of inputs and activities.

3.1. Achievement of the Project

3.1.1 Inputs

[Japanese Side]

(I) Dispatch of JICA Experts

Eight (8) experts in total have been dispatched to the Project as listed below. The total duration of the assignment of experts is 45.50 man-months (m/m) with 1.40 m/m of the home-based work as of 30 September 2013.

Table 2: Dispatch of JICA Experts

Name	Field of Expertise	From	To
Ikuo YAMAMOTO	Chief Advisor	3 September, 2011	To date
Shingo FURUICHI	Deputy Chief Advisor/Post-harvest technology/Parboiling	17 September, 2011	To date
Atsushi KOYAMA	Management/Marketing	10 September, 2011	To date
Tomonori WAKISAKA	Rural Finance	29 September, 2012	26 October, 2012
Naoko INADA	Rural Finance/ Organization Strengthening/ Training Planning	3 September, 2011	13 July, 2013
Naoki ITO	Coordinator / Training Assistant	9 October, 2011	25 November, 2012
Hideki MURAKAMI	Coordinator / Training Assistant	3 September, 2011	17 October, 2011
Kwihyang KU	Training Management/ Coordinator 1	14 May, 2012	To date
Takuma TAKAYAMA	Coordinator 2/Training Assistant	17 August, 2013	30 September, 2013

Source: The data provided by the project experts

(2) Provision of machinery and equipment

The machinery and equipment were provided for the purpose of training, rice quality test and management of the Project with total value equivalent to 26,999,800 Nigerian Naira ((hereinafter referred to as "NGN"), and the incubation plant in Lafia with value equivalent to 45,795,800 NGN including electric generator. So, total value of all machinery and equipment provided is equivalent to 72,795,600 NGN. These machinery and equipment, and the milling plant were installed in the offices of APM, NADP and NAMDA, and the incubation plant in Lafia, Nasarawa state.

The majority of the machinery and equipment is utilized as planned with adequate maintenance. The detailed list of the machinery and equipment is as provided in Annex 4. The incubation plant will be utilized for the innovator[1] support through training and demonstration as well as the counterpart personnel (CP) training for operation and maintenance.

(3) Training of the CP in Japan and the Third Countries

Three (3) of the CP were trained in Japan by attending "the High Level Counterpart Training for Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger State (RIPMAPP) Nigeria". The list of CP attended these trainings are as shown in Annex 5. In addition, twenty (20) extension agents and ten (10) researchers from both Nasarawa and Niger states attended the third-country training Rice Cultivation course and Rice Research course in "Promotion of Rice Development Project" in Uganda. A part from above trainings, three (3) CP participated in JICA training course "Development Farm Machinery for Small-Scale Farmers" and "Rice-post harvest processing for English Speaking African Countries at Yamagata University".

(4) Local cost

As of 30 September 2013, the local cost borne by the Japanese side is 42,894,777 Japanese Yen in total (70,776,382 NGN equivalent). The breakdown of the expenditure is shown in Annex 6.

[Nigerian Side]

(1) Appointment of the Counterpart Personnel (CP)

The Nigerian side appointed the Project Director and the Project Manager from FMARD and the State Coordinators from both the Nasarawa and Niger states. In addition, the officers from the relevant offices in charge of three entities have been allocated and undertaken the tasks under the Project. The list of the CP is as shown in Annex 7.

(2) Building and facilities

The office space for the Project is provided both by APM, NADP and NAMDA within their premises with other facilities with the supply of utilities. In addition, NADP provided land, building and drying yard for the incubation plant in Lfia and NAMDA provided land for the incubation plant in Bida.

(3) Local cost

The local cost borne by APM has been 11,698,074 NGN including transportation costs and taxes and excises paid for the machinery and equipment, and travel allowances and costs of the CP. NADP also bears travel allowances, and costs of the state-level CP, expense of

[1] Innovator is someone, from the participants of the training, who has strong will to adopt machinery, equipment, or improved technology for quality improvement. Support consists of providing financial information and its access, support of business planning, technical support of skills or consultation using of incubation plant, etc.

implementation of training to small-scale rice millers, parboilers, traders and rice farmers as well as other miscellaneous expenses such as reporting and meetings expenses. In addition, land acquisition and preparation as well as the construction of the building for the incubation plant in Lafia are covered by the budget of NADP, which is projected to be 30 million NGN. The total amount provided is 88,590,874 NGN including the already banked budget for the construction of the incubation plant in Lafia. The detail of the expenditure of both offices is as shown in Annex 8.

The assignment of expert is appropriate after reviewing dispatch schedule. The assigned number of CP is appropriate.

The local expense by the Japanese side is increased due to measures at higher security level. The local cost shouldered by the Nigerian side is adequate.

The total amount spent for procuring the incubation plant was excessively high due to change of size and specification. The timing of installation of the incubation plant was delayed due to delayed process of construction.

3.1.2 Achievement of the Outputs

The degree of the achievement of Outputs was assessed by comparing between the objectively verifiable indicators and the status of the time of the Joint Mid-term Review.

Output 1: Measures to promote distribution of high quality domestic rice are identified.

1-1) Problems, causes and solutions are specified and reported.

Under Output 1, "Problems, causes and possible solutions on rice quality in Nigeria" was compiled and reported based on the studies[2] conducted by the Project. In the report, some key issues of technology to be tackled in the areas of raw material (paddy), parboiling process and milling process were identified. The Project started to improve post-harvest technologies.

Area/ Process	Activity being tackled by the Project
Raw paddy	In order to show the influence of seed quality on rice quality, quality seed and other inputs were provided to rice farmers. It was demonstrated that the difference in quality of milled rice between rice produced by using non-renewal seed and using quality seed.
Parboiling process	Improvement of parboiling tank (utilization of steaming screen and a lid)
Milling process	Introduction of destoner. Package design and suitable packaging size

[2] Studies on the socio-economic situation in Nasarawa and Niger States, and the rice distribution system and market situations and consumer preference, The Project, 2012

After the designing, improved packaging (smaller size, indication of specification, transparent sack and attractive design) were introduced to the Lafia Rice Millers and Dealers Association (hereinafter referred to as "Lafia Association"), the major partner for the Project in Lafia.

Table 3 Four Technology Packages

Package	Contents
1	A destoner and an improved parboiling equipment
2	Package 1 and replacement of current milling machine with small-scale friction-type milling machine
3	Package 1 and improved one-pass milling machine
4	Package 1 and Small-scale milling plant

Source: The data provided by the experts

The Project has conducted experiments using various types of parboiling tank and its parts in order to identify the optimal design for parboiling equipment together with the NADP and the beneficiaries. The Project reached use of a lid and a steaming screen with conventional type parboiling tank can bring a certain level of improvement. This improved parboiling tank has been rent to innovators in Lafia Association for the trial use, and resulted increase of selling price by better whiteness (brightness), color uniformity, decrease of broken rice ratio. It also improved in reduction of fuel wood and increase of processing volume by shortening of processing time. The Project plans to continue further dissemination of improved parboiling equipment through innovator support.

1-2) Specifications for machinery and equipment to be introduced are produced.

In accordance with four (4) technology packages presented above, a series of training was conducted under the activities of the Output 4. As these types of improvement requires continuous and tailor-made approach according to the business types and scales. The similar tasks in Bida may be expected, which is planned to be undertaken in the latter part of the Project. Some remaining and on-going works were observed regarding trial packaging and improvement of the milling skills and operational procedures using the incubation plant.

Output 2: Rice grading standards for domestic rice is developed and improved.

2-1) Proposed grading standard for parboiled milled rice is accepted at the JCC meeting.

The grading standard was accepted by JCC meeting, but the standard has not utilized well yet. Based on the research findings, the factors, which affect the price of the parboiled rice, were narrow down into brightness of kernel, broken rice ratio, red kernel mixture and stone mixture. Of which, removal of red kernel and stone from final product is absolute requirement in any

grade of quality rice. So, remaining two factors, brightness and broken rice ratio was considered as grading factors. Eventually, 3 grades, A, B and C were determined from combination of 8 levels of brightness and 2 levels (less than 10% and 30%) of broken rice ratio. Through the some experimental activity, second version of the grading standard was approved at the 3rd JCC meeting in July 2013.

Regarding to utilization of the grading standard, a primary purpose of development the rice grading standard is not institutionalization, but stimulating consciousness on rice quality difference among stakeholders in rice value chain. Once stakeholders aware price change depending on quality, motivation for rice quality improvement is enhanced. Then the standard can be applied within the stakeholder group, then it expands beyond the group. As a final stage, application of unified standard in field level of rice value chain is essential for sound rice market development. If institutionalization is necessary for expansion of unified standard after the market recognition, it should be taken into consideration.

Output 3: Capacity of ADP staff regarding training implementation on marketing, post-harvest and business management is enhanced.

3-1) Average score of capacity level of ADP staff of the both target ADPs evaluated by use of evaluation sheet is more than 3.

The indicator was achieved for NADP CP.

(1) The training for NADP and NAMDA staff members

In the period from October 2012 to Feb 2013, evaluation of capability of NADP and NAMDA CP was improved in the area of (1) Capacity of Training Management, (2) Capacity of Post Harvest Technology, (3) Capacity of Marketing and Business Management, and (4) Capacity of Teaching Method, and the evaluation points in all areas scored more than 3.

The activities under the Output 3 were undertaken jointly by Japanese expert and the CP of APM. Based on the training plan for ADP staff, a series of training was conducted utilizing "The Training Implementation Manual for ADP Staff", which was developed in order to operationalize the training of trainers (hereinafter referred to as "TOT") to ADP staff members as well as the training curriculum with modules, and necessary teaching materials (the products developed are as listed and shown in Annex 9).

Table 4 Training Courses Conducted and Participants

Name of the Course	Dates	No. of Participants	Target Participants
Training for NADP Staff of Nasarawa State on Marketing and Business Management	30 May, 2012 31 May, 2012 01 June, 2012	26 28 26	Candidates of Trainers for Beneficiary Trainings

Training for NADP Staff of Nasarawa State on Post-Harvest Technology	18 June, 2012 19 June, 2012 25 June, 2012 26 June, 2012 27 June, 2012 28 June, 2012	11 10 14 12 15 15	Candidates of Trainers for Beneficiary Trainings
Training for NADP staff of Nasarawa State on Extension	03 October, 2012	31	Candidates of Trainers for Beneficiary Trainings
Training for NADP staff of Nasarawa State on Training Cycle Management	10 October, 2012 11 October, 2012 12 October, 2012	22 22 13	Candidates of Trainers for Beneficiary Trainings
Training for NAMDA staff of Niger State on Post-harvest Technology	30 July, 2013 31 July, 2013 19 September, 2013 28 November 2013	21 7 7 12 (Planned)	Candidates of Trainers for Beneficiary Trainings
Training for NAMDA staff of Niger State on Marketing and Business Management	13 August, 2013 14 August, 2013 15 August, 2013	20 21 20	Candidates of Trainers for Beneficiary Trainings
Training for NAMDA staff of Niger State on Extension	20 August, 2013 21 August, 2013 22 August, 2013	20 20 20	Candidates of Trainers for Beneficiary Trainings
Training for NAMDA staff of Niger State on Training Cycle Management	28 October, 2013- 01 November,2013	30	Candidates of Trainers for Beneficiary Trainings

Source: The data provided by the JICA experts

(2) Installation of the Incubation plant in Lafia

Installation of machinery and equipment to the incubation plant in Lafia was completed in November 2013. It was about one year behind of the plan, because of delayed building construction. The training utilizing the incubation plant has yet to start as of the time of the Mid-term Review. In order to catch-up delayed period, approach of technical transfer to CP has to be reconsidered. Considering replication of the activities in Niger state by APM, full participation of APM CP in the activities related to the incubation plant in Lafia.

Output 4: Capacity of small-scale rice millers, parboilers, rice farmers and traders on post-harvest, marketing and business management is enhanced.

Since beneficiary training has not started in Bida in Niger state at the time of the Joint Mid-term Review, the review of the progress was mainly focused on the Nasarawa State.

4-1) Each average score of post-test of small-scale millers, parboilers, rice farmers and traders after training is more than target score which is set for the each beneficiary group.

(1) Training for beneficiaries in the Nasarawa State

The result of post-test shows that in Nasarawa state, 77% of parboiler, 79% of miller and 91% of rice farmer achieved target score. While the training materials and teaching aids were prepared, the trainers (instructors and support staff from NADP) shared the work relevant to the

preparation and coordination as part of the technology transfer in terms of the operationalization and management of the training activities.

The training undertaken as of the time of the Joint Mid-term Review is as indicated in the Table below:

Table 5: The Number of the Training for Final Beneficiaries

Name of the Course	Dates	No. of Participants	Target Participants
Training on Milling Technology (Nasarawa)	22 October, 2012 12 November, 2012 16 January, 2013 22 January, 2013 23 January, 2013	10 9 10 10 10	Rice Millers in Nasarawa State
Training on Assakio-type Parboiling (Nasarawa)	08 November, 2012 14 November, 2012 29 January, 2013	9 10 10	Female Parboilers in Assakio, Nasarawa State
Training on Threshing and Winnowing (Nasarawa)	19 November, 2012 26 November, 2012 28 November, 2012 03 December, 2012 05 December, 2012 10 December, 2012 12 December, 2012	13 9 13 24 5 13 15	Farmers in Nasarawa State
Training on Marketing and Business Management (Nasarawa)	31 January, 2013 05 February, 2013 07 February, 2013 12 February, 2013 14 February, 2013 21 February, 2013 14 March, 2013	28 31 32 30 28 28 30	Farmers, Parboilers, Millers, and Traders in Nasarawa State
Training on Lafia-Association-type parboiling (Nasarawa)	28 February, 2013 05 March, 2013 12 March, 2013	20 20 20	Parboilers in The Rice Millers and Traders Association Lafia, Nasarawa State

Source: The data provided by the JICA experts

4-2) 10% of the participants take actions to adopt introduced technologies.

4-3) 2.5% of the participants adopt introduced technologies.

Activities have been conducted. The project will promote action taking through innovator support. Numerical data for above indicators is yet to be collected, but some signs are observed in Nasarawa state.

Nasarawa *State*

According to the participants of the training, the consciousness on rice quality has been dramatically changed through participating in a series of the training and experiments of equipment improvement. They emphasized this point as the result of the Project intervention. It

is observed that the motivation of Lafia Association is high enough to commit the Project activities.

Innovator support as a key activity in Nasarawa under the Output 4 is on the process of implementation. Considering business size and nature of business, 49 of 111 interviewed candidates, who were interested in investing in the improved technology, were selected as potential innovators.

In September 2013, 10 units of improved parboiling equipment were rented out to the potential innovators as a four-week trial to make them recognize the improved technology. As a result, increase of selling price by brightness, decrease of broken rice ratio, and reduction of fuel wood and increase of processing volume by shortening of processing time were observed. Some other association members already adopted a part of improved technology (a lid or a steaming screen). 10 other potential innovators from Lafia Association are undertaking second turn of the trial for further dissemination of improved technology.

Meanwhile, in order to strengthen the capacity of fabricators, the CP of NADP conducted training on manufacturing improved parboiling tank for 5 fabricators in Lafia Association.

Destoner will be the next target to be disseminated for removal of stone from final product. However, according to the study by RIPMAPP, strict loan terms of banks, such as interest rate, collateral, down payment, hamper stakeholders to borrow money and invest in equipment. Since the Project does not have function of lending money, the Project is seeking alternative ways for purchase of a destoner other than utilization of a bank loan. One is utilization of accumulation of additional profit by selling improved parboil rice. According to the project, a typical parboiler in Lafia Association annually processes 100 tons of parboiled rice. Parboiled rice, which is processed by improved parboiling equipment, can be sold with 70-80 USD/ton higher than the selling price of ordinary quality one, even though stone is not removed. Accumulated additional profit will be 7,000-8,000 USD/year, and it can cover the price of a destoner (about 3,000 USD). Another way is establishment of destoner revolving fund in Lafia Association. Firstly, the Project provide a destoner to Lafia Association, and the association lease the destoner to their member and receive lease fee. Once accumulated lease fee reached to the cost of destoner, ownership is transferred to the member. The association again procures another destoner for leasing, and revolves the fund. Moreover, according to APM, under the program of Rice Transformation Agenda, APM will supply thresher and destoner at subsidized price to rice farmer and processor in 2014. In order to expect synergy, harmonization of the program and the RIPMAPP could be taken into consideration.

As for another target group in Nasarawa, Asakio Millers Association, ethnic group conflict in Asakio village caused discontinuation of follow-up activity and innovator support for this target group.

Niger State

No innovators support has started in Niger state, because beneficiary training has not yet started at the time of Mid-tem review.

Output 5: Training programs for non-targeted ADP staff regarding post-harvest processing, marketing and business management are commenced.

The activities under this Output are expected to commence in the final stage of the Project. Therefore, no activity has been carried out except for the capacity building of APM staff who will be the main implementer of the activities.

3.1.3 Prospect of Achieving the Project Purpose

At least 2.5% of rice traders of the target groups in the target areas handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project.

"Target Group" was defined as small-scale millers, parboilers, rice farmers and traders, who were actually trained in the Project. Achievement of the Project Purpose is uncertain.

Since the target quality of rice was set as Grade A in verified indicator of the Project Purpose, installation of destoner, which costs 3,000-4,000 USD, is indispensable to remove stones from final product. At the planning stage of the Project, it was anticipated that suitable loan products for small-scale millers are available to invest in machinery and equipment. However, there is no suitable loan products according to the study by the Project. Although a few countermeasures are considered by the Project as mentioned above, viability of these countermeasures is still unknown. In addition, destoner available in Nigeria is electric motor driven type, which needs stable power supply, may require further investment in installation of electric generator.

Improvement of other quality factors including brightness and broken rice ratio are prospected by improved parboiling tanks, which do not require as high investment cost as destoner.

3.2. Implementation Process

3.2.1 Management and Decision Making

In addition to Nasarawa and Abuja, scale of the Project activities has been expanded to Niger state. So, the management and decision making of the Project and counterpart agencies has to be strengthened.

The important issues regarding the Project framework and implementation has been discussed with the decision made at JCC held October 2011, April 2012 and July 2013. The issues handled by three JCC include the revision of the PDM and PO, counterpart budget allocation for the Project in APM and decision on undertaking some necessary activities such as drafting

Memorandum of Understanding between three parties, APM, ADPs and JICA to clarify the responsibilities of each party. All parties need to make efforts to execute these clarified responsibilities.

The day-to-day management has been relatively maintained through the communication at the occasional meetings between the JICA experts and relevant counterpart personnel. As the project coordinator in APM is too busy to communicate with JICA experts, a full-time counterpart should be assigned in this position.

3.2.2 Monitoring and Evaluation

The major problems have not been observed on monitoring. A system of utilization of lessons learnt in Nasarawa state to Niger state may need for further improvement of the Project activity. Overall management of the Project has been reported to the JCC. The day-to-day operations of the activities under Output 3 and Output 4 have been managed by the experts and CP in charge of the activities, As a part of the technical transfer, the team of trainers of NADP holds meetings every time after the training to review the performance and utilize the lessons for the next training.

3.2.3 Communication between the Experts, APM and ADP CP

The communication among parties has been well maintained although access of experts to the target areas is restricted due to security measures.

3.2.4 Ownership of the Counterpart Organizations

The ownership of the NADP is highly commendable with the dedicated individuals. It is also noted that the strong support provided by the beneficiary side especially by the Lafia Association contribute to the smooth and effective operation of the Project in the Nasarawa State. The ownership of the NAMDA is observed acceptable and expected to be high because of strong initiative of program coordinator and commitment of counterpart personnel.

Since organizational structure of APM was transformed only last year, and standing point and relation with other departments of the Federal Ministry are not clear enough at the working level. As for APM's ownership with the budgetary commitment, since counterpart fund for the Project has not been allocated, expenses for the activities of the counterpart personnel is often delayed, and it discourages counterpart personnel to actively participate in the Project activity. Relatively low initiative to implement the Project is affected morale of counterpart personnel in APM as well.

4. Evaluation Results

Based on the data and information collected by the Team, the Project was evaluated using five (5) evaluation criteria, namely, relevance, effectiveness, impact and sustainability.

4.1. Relevance

The relevance of the Project is evaluated as high based on the following reasons:

(1) Consistency in the relevant policies of Nigeria

The consistency of the Project with the policies of Nigeria remains adequate.

Project is relevant in relation to the policy outlined in the National Rice Development Strategy (NRDS). The goal of NRDS is to increase rice production in Nigeria from 3.4 million tons paddy in 2007 to 12.85 million tons by the year 2018. One of the prioritized target areas of intervention of NRDS is Post-harvest Handling and Processing.

Further, proposed actions in NRDS for post-harvest processing in short term are as follows; 1) To establish 2,360 nos. small mills of 1,000 tons/yr capacity, and 2) To increase farmers' appreciation of strict quality control through extension services and training. Midterm proposed actions are 1) To establish 916 nos. small mills of 1,000 tons/yr capacity and 2) Capacity building for processors and farmers on post-harvest handling and processing.

A part from above policy, following policies and regulations would promote domestic rice production, and be a driving force for activation of rice value chain in Nigeria.

- Import tariff for agriculture machinery is lifted.
- Import of rice through road transportation has been prohibited.
- 100% tariff of imported rice is maintained.
- A ban of import of rice from 2015 is planned.(RTA)

(2) Consistency in the relevant policies with Japanese policy for Official Development Assistance

Agriculture and rural development is prioritized in cooperation policy of Japan, which explores assistance on improvement of rice productivity, quality, and marketing, strengthening of farmer organization, assistance corresponding with needs like capacity development of engineer and farmer. Japan supports Coalition for African Rice Development (CARD) and Nigeria is one of the important participating countries of CARD.

4.2. Effectiveness

(1) Prospect for of achievement of the Project Purpose

Positive signs of achieving the Project Purpose were observed, but achievement of the Project Purpose cannot be judged at the time of Mid-term Review because of difficulty of loan access for the investment in destoner.

Through the innovator support in Nasarawa state, improved parboiling equipment showed significant performance as mentioned above in Output 4 of 3.1.2. And other association members started to adopt improved parboiling equipment partially (a steaming screen or a lid). It is expected to be disseminated in Lafia Association.

(2) Causal relationship between the Project Outputs and Project Purpose

The causal relationship is generally considered reasonable and proper between the Project Outputs and the Project Purpose except the Output 5, which does not directly contribute to the achievement of the Project Purpose, rather, contributes to the Overall Goal.

Under Output 4, the Project supports beneficiaries for credit access for investment in new equipment through introduction of suitable loan products. However, according to the study by the Project, there are few accessible loan products available for small-sale processors due to strict loan terms for them. Installation of destoner is indispensable condition to achieve the Project Purpose, and credit access by beneficiaries has to be secured for the investment in destoner. Other than utilization of banks, some countermeasures, such as establishment of destoner revolving fund, utilization of Government equipment supply program, are considered by the Project.

4.3. Efficiency

The efficiency of the Project is evaluated as low based on the following reasons.

(1) Incubation Plant in Nasarawa state

Degree of the Inputs

As a specification of incubation plant in Nasarawa was scaled up comparing the planned one, the procurement cost of the plant became more than 4 times higher than the plan. Cost of maintaining security of experts is additional cost, which was not anticipated.

Degree of the achievement of the Outputs

Delay of activity for operation and maintenance training for NADP CP and APM CP is noted.

(2) Other Outputs

The achievement in Output 1 and Output 2 as well as Output 3 except incubation plant related activities are regarded as satisfactory, and the level of technology transfer to NADP is considered to be high with the functioning trainers. As of the achievement in Output 4, a series of beneficiary trainings in Lafia were completed, and the innovator support started with application of improved parboiling equipment. As the innovator support has different nature from the training-centered activities, sufficient guidance of the experts is expected to be significant. On the other, ToT followed by beneficiary trainings will be started in the other Project site, Bida, Niger state. Under this circumstance, the efficient operation of the Project

activities and share of responsibilities among APM, ADP, AMDA and JICA experts are necessary, and especially, roles of APM should be highlighted even more than current status.

(3) Target Group

Activities with Asakio Millers Association, which is one of target groups in Nasarawa state was discontinued, and the planned output with them are no longer expected.

Focusing rice traders-cum-processors, who are the price sensitive stakeholder as well as the quality control action taker, in the target groups contributed to a significant improvement in efficiency of the project implementation. They are key stakeholders to affect other stakeholders in rice value chain in terms of improvement of rice quality.

(4) Adequacy of inputs

Experts

It was observed that the dispatch of the experts has been made on-time with sufficient number with necessary expertise. However, due to the security concerns, activities may have been negatively affected by limitation of access to the target areas.

Machinery and Equipment

The machinery and equipment are utilized in the training and testing for collecting data for technical improvement. The time and work consumed for the procurement and site preparation of the incubation plant was considered the negative factor affecting the efficient operation of the Project despite the significance. Specification of the incubation plant in Lafia is more than planned one. This caused the project cost increment, time and work consuming, and delay of related activities.

Nigerian CP

The appropriate allocation of CP by NADP can be evaluated as a contributing factor for the progress in the activities in Nasarawa. APM CP provided sufficient contribution to the activities under the Output 3 as lecturers of the trainings. APM CP are expected to fully organize the training program, such as planning, preparation, communication, implementation, monitoring and evaluation.

Other Inputs from Nigerian Side

Generally, the inputs from Nigerian side are sufficient. Especially, the financial contribution as well as other facilitation provided by NADP and NAMDA should be commended, which provides the expenses for the operational costs covering such expenses as training and business trip of staff members. APM had also availed the office space as well as covering significant expenses such as import duties and taxes for machinery and equipment imported for the Project. However, since the counterpart fund for the Project has not assured, travel allowance could not

be paid or paid delay. It often makes difficulty for APM CP to work with experts in the field, and affects capacity building of APM CP, which is conducted through On-the Job-Training.

Training of the CP in Japan and the Third Countries

CP, who participated in training course in Japan, brought a batch-type dryer, and it is under practical test using chaff as a heat source. If it were applicable, parboiled paddy drying in wet season would be faster. CP, who attended to Third Country training in Uganda, transfers the techniques in the field level. If quality seed provision program by the Government can work with extension activity, more effective results would be seen for increase of rice production.

(5) Possibility in achievement of Outputs through planned activities

The achievement of the Output 3 likely to be secured assuming APM provides necessary guidance and technical support with the assistance of experts, especially in Niger state. The capacity building for APM has been encompassed in the activities may be addressed in Output 3.

4.4. Impact

The impact of the Project is unknown at this time. Based on the observation, followings were analyzed.

(1) Prospect for achievement of Overall Goal

The difficulty in projecting the possibility of achieving the Overall Goal is found based on the same problem as the Project Purpose with difficulty of access to loan products for installation of equipment such as destoners.

In case of Lafia, however, it was found that the results of trial use of improved parboiling equipment by innovators encouraged the adoptation of the technology by other members of the association. In addition to the similar beneficiaries' commitment, if activities by NADP CP with strong commitment of NADP are expanded to the other two zones of the state, contribution to the Overall Goal can be prospected.

The same type of the commitment from key stakeholders may also be a crucial factor for the achievement of the Overall Goal in the Niger state.

(2) Technical improvement in other areas of the rice value chain

While the Project touches limited areas of the harvesting and post-harvest operations of farmers, it has been noted that the quality improvement starts from farmer's field in the rice value chain. However, the incentives for producing better quality rice arises from downstream of the value chain, like traders and processors, who are targeted and influenced by the Project. Once the incentives and its feasibility are properly perceived by farmers through traders or processors, better cultivation practices may be accepted by farmers.

(3) Prospect of impact on promoting domestic rice market

Change of handling volume of traders can indicate impact to the rice market. Figures from traders in target groups of the Project can be referred for rough impact estimation.

4.5. Sustainability

The sustainability of the Project is evaluated as moderate based on the following reasons.

(1) Policy, legislation and institutional arrangement for sustainability

NRDS covers the period until 2018, therefore, the policy on rice promotion will be maintained until 2018. Apart from the efforts in the federal level, the linkages and support from the State Government may be sought in order to explore the budgetary support from state Government.

(2) Organizational capacity of the CP organizations for sustainability

APM is the governmental institution, which implement various supports on rice processing, distribution and marketing. They will continue to prioritize capacity building of stakeholders in rice value chain. In terms replication of the Project outputs to other areas or other states, it is vital to establish adequate mechanism as a government program securing budget allocation and exercising strong initiative by APM. To that end, RIPMAPP activity should be properly acknowledged in the Federal Ministry of Agriculture and Rural Development, especially Rice Transformation Agenda office, as a project contributing quality improvement of domestic rice.

(3) Financial resource allocation

As mentioned above, once the adequate mechanism which supports APM to promote rice quality improvement activities is established, it will be the effective measures for financial sustainability.

(4) Possibility in acceptance and sustainable utilization of transferred technology

Although the incubation plant was constructed and installed in Lafia, training on operation and maintenance skills for a rice mill plant, which is rather complicated and new for CP, are yet to be started. Subsequently, the incubation plant in Bida will be installed in 2014, and it will need the same skills for continuous utilization of the plant. The available time for the training on the operation and maintenance skill in Bida is very limited. Since APM is supposed to take full-scale initiative in Bida as an organizer of the project activities, it is expected APM CP will be trained together with the incubation plant in Lafia with NADP CP. And NADP CP is expected to support APM CP to train NAMDA CP in operation and maintenance training.

NADP considers that the incubation plant would be utilized for a series of training of NADP staff and beneficiaries in other two zones in the state after the Project termination. After the utilization for these trainings, NADP plans to consign operation of the plant to private sector whoever has a capability to manage.

Improvement process of processing equipment, especially parboiling equipment, by trial-and-error method is applicable in other areas, where different processing practice is applied.

Once the rice market acknowledges pricing by quality, trice grading standard can be introduced into the market. So, it is reasonable to introduce it in the target areas confirming acknowledge of quality differentiation, then it should be expand to the other areas. In order to expand the standard, APM should take an initiative through authorizing the standard in APM and using it in quality improvement activity.

According to the study by RIPMAPP, loan terms are strict for stakeholders of rice value chain, and there is not suitable credit source. RIPMAPP can only introduce the bank and loan products, which have relatively easier terms.

Organizational and Financial Aspect

APM CP can work as a lecturer of the training, but are not capable enough to plan, organize, monitor and evaluate the training.
Equipment has been used for adaptation test, analysis of fabrication, and introduction in the training. CP will learn maintenance in the remaining project period.

Technical Aspect

Post-harvest processing technique varies from area to area, and it needs some modification for improvement. But the basic approaches, (1) improvement of parboiling technique, (2) installation of destoner, and (3) installation of friction type milling machine, which RIPMAPP uses are considered to be adapted by other areas.

5. Conclusion

Due to the delay of the installation of incubation plant in Nasarawa State, some activities supposed to take place at the incubation plant including trainings for the operation and management of the milling machine are behind schedule. In addition, activities of JICA experts have been controlled according to the revised security code of JICA the target areas which brought further delay of activities. In this context, further efforts to enhance efficiency of the Project will be closely considered. Besides these, trainings for ADP staff and beneficiaries (i.e., rice millers, parboilers, rice farmers and traders) on post-harvest have been making satisfactory progress.

From point of view of Five Evaluation Criteria, activities so far can be summarized as follows.

Relevance : High. The relevance of the Project is evaluated as high since issues in post-harvest and marketing are regarded as important issues to be tackled in NRDS, and the government of Nigeria keeps policies for promoting domestic rice going (As such, current tariff rate for rice is 100% and imports of rice are to be prohibited from 2015).

Effectiveness : Uncertain. Activities by highly motivated CP and beneficiaries so far in Nasarawa state are positive signs of achieving the Project Purpose, but theses are not enough to make a judgment of prospect of achieving Project purpose.

Efficiency : Low. It is due to considerable increase in inputs in incubation plant and increased expenses necessary for higher security measures, and due to delayed installation of the incubation plant.

Impact : Expected to appear at a certain level. Scope of target groups which covers the whole stakeholders of rice value chain including traders, and high performance of ADP, contributes to further expansion of outputs in the target states.

Sustainability : Moderate. It is too early to judge at this time because an organization that manages the incubation plant in Lafia after the termination of the Project has not been selected. Prospect of financial sustainability is evaluated as insufficient to expand outcome of the Project to other states taking into account current budgetary circumstance of APM which has not ensured sufficient CP fund for the Project after its reorganization from NFRA.

6. Recommendations

6.1. Appointments and Budgetary Measures for APM staff

It is noted APM CP is knowledgeable on post-harvest and is highly capable of delivering lectures at trainings. On the other hand, it is reported that administrative tasks in preparatory stage and evaluation stage of the training are mostly led by JICA experts. In order for APM staff to take an initiative on training in each state, it is necessary for APM, as an organization, to build an efficient structure to implement the whole stages of the training. Precisely, the following actions are recommended to be taken by APM.

(1) Appointment of a full-time training program coordinator from APM staff in Abuja as CP to realize smooth communication in reporting line for the training.
(2) Appointment of a budgetary officer from FMARD staff as a JCC member
(3) Secure budget for APM staff for operations and carrying out relevant activities under RIPMAPP project in Nasarawa and Niger states.

6.2. Building for Incubation Plant in Bida, Niger State

It is agreed on Record of Discussions in Annex 2 that land and building for rice milling and storage of equipment (i.e. Incubation plant) are the measures to be taken by the government of Nigeria. It is observed that 1) the Nigerian side acquired land for an incubation plant but the land is sandy which needs land preparation and that 2) the building has not been prepared in time due to budget constraints. In this context, it is advisable to request the Japanese side to bear construction cost of the building for the incubation plant in order to prevent delay of activities taken place at the incubation plant. From a viewpoint of enhancing ownership of the government of Nigeria, following conditions should be met.

(1) The land clearing and foundation preparation will be implemented for the construction of the incubation plant by Niger state government.
(2) Japanese side offers a shelter for the incubation plant in Niger state. Other facilities including power supply, training hall, drying yard are to be prepared by Niger state government as specified in Annex 9.
(3) After the completion of the construction of the building and the defect inspection, the building and its responsibilities of maintenance are transferred to Niger state government.

6.3. Appropriate Size of the Incubation Plant in Bida, Niger State

It is observed that rice farmers, parboilers, millers, and traders in Niger state are scattered and small in scale. It is strongly recommended that the machineries and equipment procured for the incubation plant in Bida, Niger State should meet the current condition of those beneficiaries as specified in Annex 9.

6.4. Recommendation on Revision of Current PDM

It is recommended to revise current PDM as shown on the table below.

Item	Version 2	Proposed revision (Version 3)	Reason for change
Indicators of Project purpose	-At least 2.5% of rice traders of the target groups in the target areas handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project.	- At least 2.5% of rice traders of the target groups in the target areas handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project. - At least 2.5% of amount of Grade A level quality domestic rice is handled by the traders in the target groups.	It is expected not only numbers of rice traders but also the amount of domestic quality rice is actually increased in target areas. In this context, current indicator is not sufficient to measure the achievement level of Project purpose.
Output3	Capacity of ADP staff regarding training implementation on marketing, post-harvest and business management is enhanced.	Capacity of APM and ADP staff regarding training implementation on marketing, post-harvest and business management is enhanced.	✓ The Overall goal is "Quality of domestic rice is improved in the target States." Therefore, it is not logical to include an output in non-targeted states on PDM. ✓ On the other hand, expansion of the training programs under the initiative of Nigerian side is highly recommended. In this context, it is more appropriate to regard that "training programs for non-targeted ADP staff regarding post-harvest, marketing and business management" is included as Output 3. It is suggested capacity development of APM staff is implemented through On the Job Training (OJT) at the time of training to ADP. Knowledge and experience are supposed to be shared with other states appropriately by APM who attended this OJT.
Output 5	Training programs for non-targeted ADP staff regarding post-harvest, marketing and business management are commeneed.	---(delete)	

6.5. Utilization of Rice Transformation Program

In 2014, destoners and threshers will be sold to stakeholders with government subsidy under "Rice Transformation Program" of APM. Since removal of stones is essential to meet Grade A level of Rice Grade Standard, collaborating with the program, distribution of destoners will greatly contribute to outcome of the Project. It is recommended that distribution of destoners and threshers takes place in the target areas of the Project, i.e. Lafia and Bida.

Annex 1: Schedule for Joint Mid-term Review

Day	Date/ Month		Activities	Stay in
1	11/Nov	Mon.	Mr. Kudo arrive in Abuja	Abuja
2	12/Nov	Tue.	Preliminary meeting w/ JICA, project experts Courtesy call to APM, Meeting w/ Nigerian review team	
3	13/Nov	Wed.	Move to Nasarawa Visit incubation plant	Lafia
4	14/Nov	Thu.	Interviews to target groups	
5	15 /Nov	Fri.	Interviews to C/P, move to Abuja	
6	16/Nov	Sat.	Report preparation	Abuja
7	17/Nov	Sun.	Ms. Sasabe arrive in Abuja	
8	18/Nov	Mon.	Dr. Tokida arrive in Abuja Meeting at JICA office, Courtesy call to APM Meeting w/ Nigerian review team	
9	19/Nov	Tue.	Move to Bida, Visit AMDA zonal office and target village, Move to Minna	Minna
10	20/Nov	Wed.	Courtesy call in Niger, move to Abuja	Abuja
11	21/Nov	Thu.	Move to Nasarawa, meeting w/ Nasarawa ADP	
12	22/Nov	Fri.	Interview to Japanese Experts	
13	23/Nov	Sat.	Drafting Joint-Evaluation report	
15	24/Nov	Sun.	Drafting Joint-Evaluation report	
16	25/Nov	Mon.	Discussing Joint-evaluation report and M/M	
17	26/Nov	Tue.	Signing on the report, discussion of M/M	
18	27/Nov	Wed.	JCC meeting (signing on M/M)	
19	28/Nov	Thu.	Report to Japanese Embassy	
20	29/Nov	Fri.	Visit RTA, Leave Abuja	

Annex 2 Project Design Matrix

Project Design Matrix (PDM)

Project Title: Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States — **Ver.2(Draft)**
Target Areas: Lafia, Nasarawa State and Bida, Niger State — **Target Group:** Small-scale Rice millers, Parboilers and Rice — **Date:** 02 July 2013
Project Period: 4 years from September 2011 to August 2015

Narrative Summary	Objectively Verifiable Indicator	Mean of Verification	Important Assumption
< Overall Goals >			
Quality of domestic rice is improved in the target States.	At least 2.5% of rice traders in the target States handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project.	Sampling survey of milled rice	
< Project Purpose >			
Quality of domestic rice is improved in the target areas.	At least 2.5% of rice traders of the target groups in the target areas handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project.	Sampling survey of milled rice	ADPs conduct post-harvest processing and marketing training given by the Project.
< Outputs >			
1 Measures to promote distribution of high quality domestic rice are identified.	1-1 Problems, causes and solutions are specified and reported. 1-2 Specifications for machinery and equipment to be introduced are produced.	Project Report Project Report	Price of imported rice does not drop drastically.
2 Rice grading standards for domestic rice is developed and improved.	2-1 Proposed grading standard for parboiled milled rice is accepted at the JCC meeting.	JCC minutes	Natural disasters and economic shocks that significantly affect rice distribution in and around target areas do not occur.
3 Capacity of ADP staff regarding training implementation on marketing, post-harvest and business management is enhanced.	3-1 Average score of capacity level of ADP staff of the both target ADPs evaluated by use of evaluation sheet is more than 3.	Results of capacity assessment by use of evaluation sheet	
4 Capacity of small-scale rice millers, parboilers, rice farmers and traders on post-harvest, marketing and business management is enhanced.	4-1 Each average score of post-test of small-scale millers, parboilers, rice farmers and traders after training is more than target score which is set for the each beneficiary group. 4-2 10% of the participants take actions to adopt introduced technologies. 4-3 2.5% of the participants adopt introduced technologies.	Results of pre-test and post-test Monitoring Monitoring	
5 Training programs for non-targeted ADP staff regarding post-harvest, marketing and business management are commenced.	5-1 The number of the States where the training courses are conducted is X. 5-2 The total number of the participants of the training courses is X.	Training report Training report	
< Activities >	**< Input >**		
1-1 Study distribution channels, quality and price trends of rice. 1-2 Examine market demands including potentials for high quality domestic rice. 1-3 Identify challenges of small-scale rice millers, parboilers and rice farmers. 1-4 Design collection, processing and marketing measures to distribute high quality domestic rice and reduce post-harvest loss. 1-5 Collect information on financial institutions and service. 2-1 Study grading standards used by large-scale rice millers. 2-2 Study rice consumers' taste and quality standards of rice retailers. 2-3 Develop and test grading standards for parboiled milled rice suitable for small-scale rice milling. 3-1 Develop training plan for ADP staff.	**Japan side** 1) Experts i) Chief Advisor ii) Post-harvest technology/Parboiling technology iii) Rice marketing iv) Farmer organization/Training v) Coordinator/Training assistant 2) Equipment i) Machinery and equipment for training ii) Office equipment	**Nigeria side** 1) Personnel i) Project Director (Coordinating Director, NFRA) ii) Project Manager (Director, Agro-processing and Marketing, NFRA) iii) State Coordinators (Programme Managers, ADP Nasarawa and Niger States) iv) Counterparts - NFRA staff (Post-harvest Technology, Rice Value Chain and Marketing, International Relations and Collaboration) - ADP staff (Planning, Post-harvest Technology, Rice Value Chain and Marketing, Farmer Organization) 2) Buildings and facilities	Sufficient quantity of quality rice seeds are provided to farmers. Natural disasters such as droughts and floods, diseases, animal attacks, and insect attacks which substantially affect rice production do not occur in target areas. Prices of rice in domestic market do not drop drastically. No major political disorder that

Annex 2 Project Design Matrix

3-2	Prepare the curriculums and materials for AOP staff.		i) Office space and necessary facilities in NFRA and in the target sites ii) Training venues in the target sites iii) Land and buildings for rice milling and storage of equipment	affects economic activities and security of target areas occurs.
3-3	Set up an incubation plant with machinery and equipment in Nasarawa State.	3) Counterpart Training i) Training in Japan and/or in the third country for a few persons		
3-4	Conduct training on post-harvest technology, rice value chain, marketing and institutional development for ADP Staff of Nasarawa State.			
3-5	Identify the outcome of training for ADP staff of Nasarawa State and modify training plan for the subsequent training.	4) Local costs		
3-6	Set up an incubation plant with machinery and equipment in Niger State.	i) Local project support staff ii) Hiring of project vehicles iii) Office supplies and other minor expenses	3) Local costs and recurring costs i) Domestic transportation, operation and maintenance of provided machinery and any other equipment. ii) Travel fee of Nigerian counterparts iii) Assignment of supporting staffs iv) Running expenses for training of small-scale rice millers, parboilers, and rice farmers.	
3-7	Conduct training on post-harvest technology, rice value chain, marketing and institutional development for AOP Staff of Niger State.			
3-8	Identify the outcome of training for ADP staff of Niger State and modify training plan for the subsequent training.			
4-1	Develop training plan for small-scale rice millers, parboilers, rice farmer and traders.			**< Pre-condition >** No major political disorder that affects economic activities and security of target areas occurs.
4-2	Prepare the curriculums and materials on the training programms.			
4-3	Conduct training for small-scale rice millers, parboilers, rice farmers and traders of Lafia.			
4-4	Support innovators in terms of technology, information on financial service and business management in Lafia.			
4-5	Conduct training for small-scale rice millers, parboilers, rice farmers and traders of Bida.			
4-6	Support innovators in terms of technology, information on financial service and business management in Bida.			
5-1	Develop training plan for staff of non-targeted ADPs.			
5-2	Prepare the curriculums and materials for non-targeted ADPs.			
5-3	Conduct training for staff of non-targeted ADPs.			

Note: Indicator 3-1: The evaluation sheet lists up category of capacity which is composed of some sub categories which are to be evaluated by the given ranking according to the five (5) grade evaluation system from 1 to 5, in order to measure capacity of ADP for Output 3.

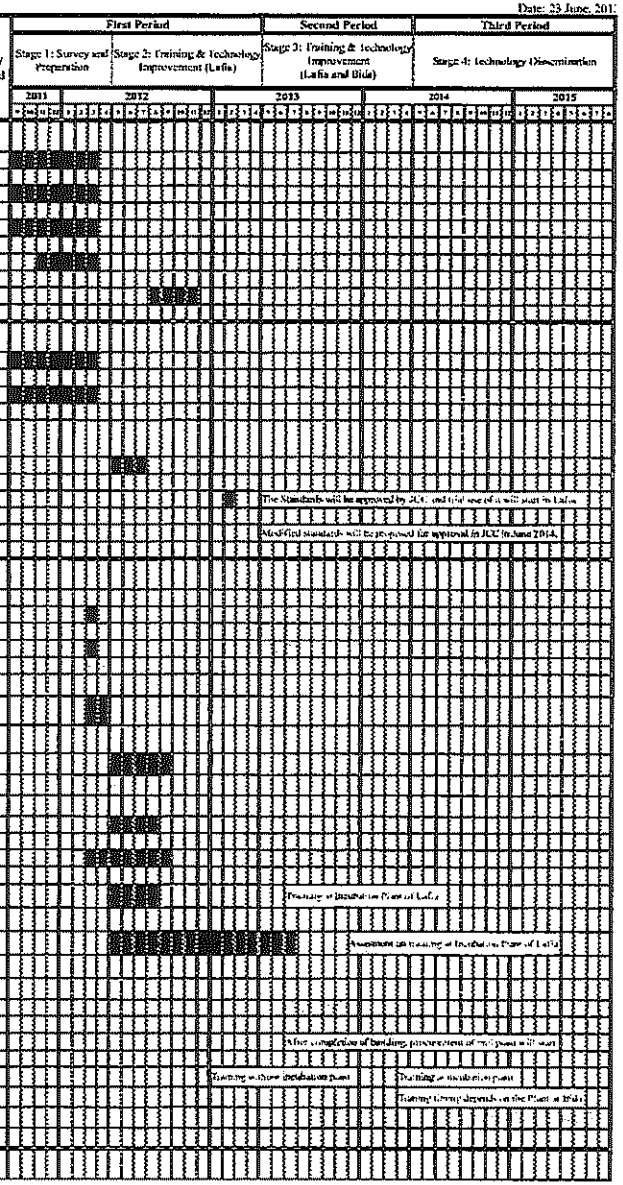
Annex 2: Plan of Operations

Plan of Operation (Draft of Version 2)

Project Title: Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States

Date: 23 June, 201

Activity of the Project/ Term of Cooperation		Products	Responsibility		Plan / Actual
			Japanese Expert	Nigerian Counterpart	
Output 1	**Measures to promote distribution of high quality domestic rice are identified.**				
1-1	Study distribution channels, quality and price trends of rice.	Study report	Koyama	PMD Div.	Plan / Actual
1-2	Examine market demands including potentials for high quality domestic rice.	Study report	Koyama	PMD Div.	Plan / Actual
1-3	Identify challenges of small-scale rice millers, parboilers and rice farmers.	Summary table Study report	Furuichi/Koyama	APM PMD & CI Div	Plan / Actual
1-4	Design collection, processing and marketing measures to distribute high quality domestic rice and reduce post-harvest loss.	Summary table	Furuichi/Koyama	APM CI & PMD Div	Plan / Actual
1-5	Collect information on financial institutions and service.	Study report	Wakisaka	APM PMD Div.	Plan / Actual
Output 2	**Rice grading standards for domestic rice is developed and improved.**				
2-1	Study grading standards used by large-scale rice millers.	Study report	Koyama/ Furuichi	APM QC & PMD Div	Plan / Actual
2-2	Study rice consumers' taste and quality standards of rice retailers.	Study report	Furuichi/ Koyama	APM QC & PMD Div	Plan / Actual
2-3	Develop and test grading standards for parboiled milled rice suitable for small-scale rice milling.	Grading standards			
2-3-1	Prepare of draft grading standards for domestic rice.		Furuichi/ Koyama	APM QC & PMD Div	Plan / Actual
2-3-2	Review the grading standards for domestic rice.		Furuichi/ Koyama	APM QC & PMD Div	Plan / Actual
2-3-3	Review the grading standards for domestic rice.		Furuichi/ Koyama	APM QC & PMD Div	Plan / Actual
Output 3	**Capacity of ADP staff regarding training implementation on marketing, post-harvest and business management is enhanced.**				
3-1	Develop training plan for ADP staff.	Training Plan for ADP staff			
3-1-1	Discuss the framework of training for ADP staff.		Ku/ Inada	APM	Plan / Actual
3-1-2	Prepare training plan (draft) for ADP staff.		Ku/ Inada	APM	Plan / Actual
3-2	Prepare the curriculums and materials for ADP staff.				
3-2-1	Create training implementation manual for APM staff.	ADP staff training implementation manual for APM	Ku/ Inada	APM	Plan / Actual
3-2-2	Prepare curriculums on post harvest technology, rice value chain, marketing and institutional development for ADP staff.	ADP staff training curriculums	Furuichi/Koyama /Inada	APM PMD Div.	Plan / Actual
3-3	Set up an incubation plant with machinery and equipment in Nasarawa State.				
3-3-1	Construct a building for Incubation plant in Lafia.	Building	Furuichi	APM ADP	Plan / Actual
3-3-2	Procure machinery and equipment, and install them.	Machinery and equipment	Furuichi/Ku	APM ADP	Plan / Actual
3-4	Conduct training on post-harvest technology, rice value chain, marketing and institutional development for ADP Staff of Nasarawa State.		Furuichi/Koyama /Inada/Ku	AMP	Plan / Actual
3-5	Identify the outcome of training for ADP staff of Nasarawa State and modify training plan for the subsequent training.		Each	Each	Plan / Actual
3-6	Set up an incubation plant with machinery and equipment in Niger State.				
3-6-1	Construct a building for Incubation plant in Bida.	Building	Furuichi	APM PM-ADP	Plan / Actual
3-6-2	Procure machinery and equipment, and install them.	Machinery and equipment	Furuichi/ Ku/Takayama	APM PM-ADP	Plan / Actual
3-7	Conduct training on post-harvest technology, rice value chain, marketing and institutional development for ADP Staff of Niger State.		Furuichi/Koyama /Inada/Ku	APM	Plan / Actual
3-8	Identify the outcome of training for ADP staff of Niger State and modify training plan for the subsequent training.		Each	Each	Plan / Actual
Output 4	**Capacity of small-scale rice millers, parboilers, rice farmers and traders on post-harvest, marketing and business management is enhanced.**				



Annex 2: Plan of Operations

First Period		Second Period	Third Period
Stage 1: Survey and Preparation	Stage 2: Training & Technology Improvement (Lafia)	Stage 3: Training & Technology Improvement (Lafia and Bida)	Stage 4: Technology Dissemination

Schedule: 2011 (9–12), 2012 (1–12), 2013 (1–12), 2014 (1–12), 2015 (1–8)

No.	Activity of the Project/ Term of Cooperation	Products	Responsibility: Japanese Expert	Responsibility: Nigerian Counterpart	Plan / Actual	Schedule notes
4-1	Develop training plan for small-scale rice millers, parboilers, rice farmer and traders.					
4-1-1	Discuss of the framework of training for direct beneficiaries.		Ku/ Inada	APM ADP HR.	Plan / Actual	Training for beneficiaries at Bida, Niger State
4-1-2	Prepare of training plan (draft) for millers, parboilers, and rice farmers		Ku/ Inada	APM ADP HR.	Plan / Actual	
4-2	Prepare the curriculums and materials on the training programms.					
4-2-1	Create training implementation manual for ADP staff.	Direct beneficiary training implementation manual for ADP staff	Ku/ Inada	APM ADP HR.	Plan / Actual	Training for beneficiaries at Bida, Niger State
4-2-2	Prepare curriculums on marketing for small-scale rice millers, parboilers, rice farmers and traders.	Direct beneficiary training curriculums	Furuichi/Koyama	APM, ADP RI Suleiman(NaHQ), PME Ishaq(B)	Plan / Actual	
4-3	Conduct training for small-scale rice millers, parboilers, rice farmers and traders of Lafia.					
4-3-1	Conduct Training for small-scale millers, parboilers, rice farmers and rdaers of Lafia			APM ADP Dir HR	Plan / Actual	Training at Incubation Place at Lafia
4-3-2	Evaluate the training of Lafia		Takayama/ Ku	APM ADP Dir HR	Plan / Actual	
4-3-3	Identify the outcome of training for millers, parboilers, and rice farmers and modify training plan for the following period of Lafia		Takayama/ Ku	APM ADP Dir HR	Plan / Actual	
4-4	Support innovators in terms of technology, information on financial service and business management in Lafia.		Each	Each	Plan / Actual	
4-5	Conduct training for small-scale rice millers, parboilers, rice farmers and traders of Bida.					
4-5-1	Conduct Training for small-scale millers, parboilers, rice farmers and rdaers of Lafia		Takayama/ Ku	APM ADP HR.	Plan / Actual	Training at Incubation Place; Training at Incubation Place
4-5-2	Evaluate the training of Bida.		Takayama/ Ku	APM ADP HR.	Plan / Actual	
4-5-3	Identify the outcome of training for millers, parboilers, and rice farmers and modify training plan for the following period of Bida.		Takayama/ Ku	APM ADP HR.	Plan / Actual	
4-6	Support innovators in terms of technology, information on financial service and business management in Bida.		Each	Each	Plan / Actual	
Output 5	**Training programs for non-targeted ADP staff regarding post-harvest, marketing and business management are commenced.**					
5-1	Develop training plan for staff of non-targeted ADPs.		Ku/ Inada	APM	Plan / Actual	
5-2	Prepare the curriculums and materials for non-targeted ADPs.		Each	Each	Plan / Actual	
5-3	Conduct training for staff of non-targeted ADPs.		Each	Each	Plan / Actual	
	Operational activities					
O-1	Preparation and consultation of the Draft Work Plan for the First Period (JCC)					
O-2	Agreement on the Work Plan for the First Period (JCC)					
O-3	Mid-term review of the project (JCC)					Mid-term review
O-4	Preparation of project progress report					
O-5	Agreement on the Work Plan for the Second Period (JCC)					JCC; JCC for mid-term review
O-6	Preparation of project progress report					
O-7	Agreement on the Work Plan for the Third Period (JCC)					
O-8	Terminal evaluation of the project (JCC)					
O-9	Preparation of project completion report					

Annex 3 The List of Machinery and Equipment

No.	Purpose of Use	Arrival Date	Name of Machinery	Product No.	Manufacturer	Price	Nigerian Naira	Installation Place	Condition
1	Rice Quality Test	21 October, 2011	Moisture Meter	SS-7	Satake	JPY25,200	NGN52,392.6	ADP Office, Lafia	Working
2	Rice Quality Test	28 October, 2011	Grain Counter	KY-130	Satake	JPY3,400	NGN6,667.21	ADP Office, Lafia	Working
3	Rice Quality Test	28 October, 2011	Magnifier	ES-30	Satake	JPY5,700	NGN11,194.1	ADP Office, Lafia	Working
4	Rice Quality Test	28 October, 2011	Sample Pan (20pcs)	TS-180	Satake	JPY8,000	NGN15,711.1	ADP Office, Lafia	Working
5	Rice Quality Test	28 October, 2011	Grain Shape Tester	RT-10	Satake	JPY48,000	NGN94266.5	ADP Office, Lafia	Working
6	Rice Quality Test	28 October, 2011	Rice Husker	TR-130	KETT	JPY6,000	NGN11,634.2	ADP Office, Lafia	Working
7	Rice Quality Test	28 October, 2011	Grainscope	TX-200	KETT	JPY20,000	NGN38780.6	ADP Office, Lafia	Working
8	Rice Quality Test	18 November, 2011	Hardness Tester	043019-C	FUJIWARA	JPY178,500	NGN342,500.0	APM Office, Abuja	Working
9	PC for Local Staff and C/Ps	16 December, 2011	Desktop PC	PRO 3120 MT	HP	NGN112,000	NGN112,000	APM Office, Abuja	Working
10	PC for Local Staff and C/Ps	16 December, 2011	Desktop PC	PRO 3120 MT	HP	NGN112,000	NGN112,000	ADP Office, Lafia	Working
11	Presentation	16 December, 2011	Projector	2300 LUMENS	Sony	NGN90,000	NGN90,000	ADP Office, Lafia	Working
12	Rice Quality Test	17 February, 2012	Testing Grader	TRG05B	Satake	JPY386,000	NGN771,607	ADP Office, Lafia	Working
13	Rice Quality Test	17 February, 2012	Testing Mill	TM05C	Satake	JPY974,000	NGN1,947,010	ADP Office, Lafia	Working
14	Rice Quality Test	17 February, 2012	Testing Husker	THU35B	Satake	JPY651,000	NGN1,301,340	ADP Office, Lafia	Working
15	Rice Quality Test	17 February, 2012	Octagonal Cylinder	S5.2	Satake	JPY77,100	NGN154,122	ADP Office, Lafia	Working
16	Rice Quality Test	17 February, 2012	Octagonal Cylinder	S5.7	Satake	JPY77,100	NGN154,122	ADP Office, Lafia	Working
17	Rice Quality Test	17 February, 2012	SATAKE Sample Divider	TS-L	Satake	JPY175,000	NGN349,822	ADP Office, Lafia	Working
18	Rice Quality Test	1 March, 2012	150kg Scale	N/A	N/A	NGN115,000	NGN115,000	ADP Office, Lafia	Working
19	Training	12 March, 2012	Small Destoner	N/A	Dae Sung	USD3,000	NGN471,300	Mr Usman's Mill (Tentative)	Working
20	Training	12 March, 2012	House-use Destoner	N/A	Dae Sung	USD2,000	NGN314,200	Mr Usman's Mill (Tentative)	Working
21	Training	12 April, 2012	Parboiling Tank	N/A	NCRI	NGN350,000	NGN350,000	ADP Office, Bida	Working
22	Color Photocopying	14 March, 2012	Photocopying Machine	MX2301N	Sharp	NGN1,390,000	NGN1,390,000	ADP Office, Lafia	Working
23	Power Generation	16 March, 2012	Generator	SV12000EV	Suzuki	NGN240,000	NGN240,000	APM Office, Abuja	Working

	for Lecture								
24	Lecturing	16 April, 2012	Laptop PC	Satelite	Toshiba	NGN153,000	NGN153,000	ADP Office, Lafia	Working
25	Training	10 July, 2012	Winnowing Machine	TS	Hokuetsu	JPY28,400	NGN56,973.0	ADP Office, Lafia	Working
26	Training	10 July, 2012	Foot Pedal Thresher	FT371	Hokuetsu	JPY37,200	NGN74,626.6	ADP Office, Lafia	Working
27	Training	7 September, 2012	Paddy Thresher	DB100	YANMAR	JPY330,000	NGN657,333	ADP Office, Lafia	Working
28	Training	5 October, 2012	Impulse Sealer	N/A	DAE SUNG	USD800	NGN124,758	Mr Usman's Mill (Tentative)	Working
29	Training	5 October, 2012	Stand-alone Rice Miller	LH101	Dae Sung	USD4,500	NGN701,766	Mr Usman's Mill (Tentative)	Working
30	Training	12 November, 2012	Reaper	TR-1200C	Dae Sung	USD8,500	NGN1,317,360	ADP Office, Lafia	Working
31	Transportation	11 March, 2013	Project Car	Prado TX 7-S AT FS	Toyota	NGN 11,450,940	NGN 11,450,940	APM Office	Working
32	Training	13 March, 2013	Stand-alone Rice Miller	LH101	Dae Sung	USD4,500	NGN701,766	ADP Office, (Tentative)	Working
33	Training	13 March, 2013	Small Destoner	N/A	Dae Sung	USD3,000	NGN471,300	ADP Office (Tentative)	Working
34	Training	15 March, 2013	Parboilling Tank	N/A	Desfabeng Company Ltd.	NGN1,200,000	NGN1,200,000	ADP Office, Lafia	Working
35	Training	15 March, 2013	Winnowing Machine	N/A	Desfabeng Company Ltd.	NGN70,000	NGN70,000	ADP Office, Lafia	Working
36	Training	15 March, 2013	Foot Pedal Thresher	N/A	Desfabeng Company Ltd.	NGN80,000	NGN80,000	ADP Office, Lafia	Working
37	Training	15 March, 2013	Paddy Thresher	N/A	Desfabeng Company Ltd.	NGN800,000	NGN800,000	ADP Office, Lafia	Working
38	Color Photocopying	17 August, 2013	Photocopying Machine	Pro 200	HP	NGN80,000	NGN80,000	APM Office	Working
39	Black and White Photocopying	17 August, 2013	Photocopying Machine	P2035	HP	NGN40,000	NGN40,000	Niger AMDA Office, Minna	Working
40	Training	26 August, 2013	Whiteness Tester	C-600	Kett	JPY357,210	NGN574,271	APM Office	Working

Annex 4: CP Participated in Training Courses in Japan and in Uganda

Training Course in Japan

Name	Period of Participation	Field/Name of the Course	Content	Implementing Institution	Position at that time	Current Position, Date of turnover
Jatto Ohiare Badams	22 October,2012 – 2 November,2012	High Level Counterparts Training for Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States (RIPMAPP), Nigeria	Observation and discussion of post-harvest technology and small and medium scale processing firms in Japan	JICA	Acting Director, Agro-Processing & Marketing	Acting Director, Agro-Processing & Marketing
Dachor Naphtali Jarumi	22 October,2012 – 2 November,2012	High Level Counterparts Training for Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States (RIPMAPP), Nigeria	Observation and discussion of post-harvest technology and small and medium scale processing firms in Japan	JICA	Programme Manager, Nasarawa ADP	Programme Manager, Nasarawa ADP
Balarabe Abubakar Sadeeq	22 October,2012 – 2 November,2012	High Level Counterparts Training for Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States (RIPMAPP), Nigeria	Observation and discussion of post-harvest technology and small and medium scale processing firms in Japan	JICA	Acting Programme Manager, Niger state Agricultural Mechanization Development Agency	Director, Engineering Services, Niger state Agricultural Mechanization Development Agency
Suleiman Hussani Kpange	December 2012 - February 2014	Development Farm Machinery for Small-Scale Farmers	To upgrade the ability of participants on basic knowledge and technology needed for manufacturing farm machinery	JICA	Higher Technical Officer Agro Processing, Niger state Agricultural Mechanization Development Agency	Higher Technical Officer Agro Processing, Niger state Agricultural Mechanization Development Agency
B. Usman	14 August 2013 - 28 September 2013	Rice-post harvest processing for English Speaking African Countries at Yamagata University	To Provide field agricultural extension officers with practical knowledge and techniques to determine the optimum days to harvest rice and carry out post-harvest rice processing.	JICA	Senior Agric Engineer, Quality Control, Agro-Processing & Marketing	Senior Agric Engineer, Quality Control, Agro-Processing & Marketing
Awal Umar A.	14 August 2013 - 28 September 2013	Rice-post harvest processing for English Speaking African	To Provide field agricultural extension officers with practical	JICA	Agro-Processing Officer, Technical Service, Nasarawa	Agro-Processing Officer, Technical Service,

		Countries at Yamagata University	knowledge and techniques to determine the optimum days to harvest rice and carry out post-harvest rice processing.		ADP	Nasarawa ADP

Rice Production Course of PRiDe in Uganda

	Name	Position	State	Location of work	Zone
1	Abdurahman Owusowose	Subject Matter Supervisor (Crops)	Nasarawa	Obi Zonal Office	South Zone
2	Alanana Manasseh Emmanuel	Assistant Director of Extension Department	Nasarawa	HQ	-
3	David Adamu Mama	Zonal Extension Officer	Nasarawa	Akwanga Zonal Office	Central Zone
4	Elamoshi Stella Sabo	Block Extension Agent	Nasarawa	Assakio Block Office	South Zone
5	James S. Egwa	Zonal Extension Officer	Nasarawa	Obi Zonal Office	South Zone
6	Keziah James Waziri	Block Extension Agent	Nasarawa	Doma Block Office	South Zone
7	Paul Alogala	Block Extension Supervisor	Nasarawa	Assakio Block Office	South Zone
8	Salome Sabo	Block Extension Supervisor	Nasarawa	Adogi Block Office	South Zone
9	Yakubu Mohammed	Area Extension Officer	Nasarawa	Doma	South Zone
10	Zakari Daibu Usman	Block Extension Supervisor	Nasarawa	Lafia Block Office	South Zone
11	Audu Mamman	Area Extension Agent	Niger	Kataeregi	Zone 1
12	Baba Ibrahim Saluchi	Block Extension Supervisor	Niger	Lemu Block Office	Zone 1
13	Comfort F. Ahmed	Block Extension Agent	Niger	Doko Block Office	Zone 1
14	Haruna M. Jiya	Area Extension Agent	Niger	Tafyan	Zone 1
15	Mohammed Kudu Darata	Block Extension Supervisor	Niger	Katcha Block Office	Zone 1
16	Nathaniel Gana Yisa	Zonal Extension Agent	Niger	Bida Zonal Office	Zone 1

17	Ndajiya Muhammed	Area Extension Agent	Niger	Mambe	Zone 1
18	Peter Santali	Block Extension Supervisor	Niger	Badeggi Block Office	Zone 1
19	Theophilus B. Mamman	Area Extension Agent	Niger	Edozhigi	Zone 1
20	Zubairu Alhaji Ahmed	Block Extension Supervisor	Niger	Doko Block Office	Zone 1

Rice Research Course of PRiDe in Uganda

	Name	Position	State	Location of work	Zone	Block/Area
1	Hashiya A.Osoga	Subject Matter Specialist (Crops)	Nasarawa	HQ		
2	Bulus A. Dazhila	Subject Matter Specialist (Crops)	Nasarawa	Lafia	Obi	South Zonal
3	Veronica Ma'aji	Subject Matter Specialist Women on Agriculture (SMS WIA)	Nasarawa	Lafia	Obi	South Zonal
4	Joshua Jonathan	Chief Research Officer	Nasarawa	HQ		
5	John Azige Sunday	Assistant Chief Research Supervisor	Nasarawa	HQ		
6	Abubakar Mohammed Kwatachi	Chief Evaluation Officer/ Coordinator Agriculture survey	Niger	HQ		
7	Ibrahim Usman Isah	Subject Matter Specialist (Crops)	Niger	Bida	1	Bida
8	Zubairu Isa Ketta	Deputy Director Extension (DDE)/Subject matter specialist	Niger	Minna	State	Minna
9	Ruth Saba	Deputy Head women in Agric. (Subject Matter Specialist)	Niger	Minna	State	Minna
10	Ibrahim A. Abdulraheem	Zonal Extension Officer	Niger	Bida	1	Bida

Annex 5: Project Running Cost Covered by JICA (as of the end of September 2013)

Item	Cost Details (JPY)		
1st Year	1st Year	2nd Year	Total
Local Staff	1,231,734	393,427	1,625,161
Facility Management	92,809	463,759	650,188
Building Maintenance	93,620		
Consumable Goods	2,733,621	356,670	3,090,291
Travel fee and Transportation	20,000	720,903	740,903
Communication	1,665,088	749,198	2,414,286
Documentation	27,054	148,195	175,249
Rental Car Charge	7,928,949	4,481,511	12,410,460
Conference, Workshop	3,106,693	366,924	3,473,617
Miscellaneous	646,749	759,548	1,406,297
Insurance	1,675,000	1,161,370	2,836,370
Report (with bookbinding)	0	0	0
Local Consultant	11,261,000	0	11,261,000
Training by Country in Japan	382,000	0	382,000
Other Expense	1,607,961	820,994	2,428,955
TOTAL	32,472,278	10,422,499	42,894,777

1st Year: September, 2011-April, 2013
2nd Year: June, 2013-September, 2013

Annex 6: The List of Counterpart Personnel

Institution	Name, Position	Area of Specialty	Assigned Period
APM	Engr. M.A.A. Adewuyi, Director		Sep 2011 -2012/6/1
APM	Engr. O.B. Jatto, Acting Director	Quality Control	Sep 2011 - present
APM	Engr. I.U. Nwanko	Cottage Industries	Sep 2011 - present
APM	Engr. Gagare N.	Cottage Industries	Sep 2011 - present
APM	Dr. O.A. Adebiyi	Quality Control	Sep 2011 - present
APM	Mr. B. Usman	Quality Control	Sep 2011 - present
APM	Mrs. K.I. Babangida	Product & Market Development	Sep 2011 - June 2012
APM	Mr. J.M. Dadet	Product & Market Development	Sep 2011 - present
APM	Mr. Igoji G. I.	Product & Market	Sep 2011 - present
APM	Mrs. Sugra T. Mahmood	Product & Market Development	Sep 2011 - June 2012
APM	Mr. Shuaibu I.	Product & Market Development	Sep 2011 - present
APM	Mr. Odeyemi O.	Product & Market Development	Sep 2011 - present
APM	Mr. Suleiman S. Aliyu	Export Conditioning Centres	Sep 2011 - present
APM	Engr. O.M. Ogunbiyi	Cottage industries	Sep 2011 - present
APM	Mr. Suleiman Majeed Ovijima	Quality Control	Sep 2012 - present
APM	Mr. Aliyu M. M.	Export Conditioning Centres	Sep 2011 - present
APM	Engr. Isah Mohammed	Agro-Industrial Parks	Sep 2011 - present
APM	Engr. Ajenifuja Maruf Olalekan	Principal Agricultural Engineer	Dec 2012 - present
NADP	Mr. Naphtali J. Dachor	Project Coordinator	Sep 2011 - present
NADP	Mr. Stephen G. Kpama	Planning	Sep 2011 - present
NADP	Mr. Yunusa Muhammed	Post-Harvest Technology	Aug 2012 - present
NADP	Mr. Ahmed Tanko	Post-Harvest Technology	Sep 2011 - present
NADP	Mr. Awal Umar A.	Post-Harvest Technology	Sept2012 - present
NADP	Ms. Salome Sabo	Block Extension Supervisor	Oct 2012 - present
NADP	Ms. Maimunat T. Tijjani Usman	Block Extension Agent	Oct 2012 - present
NADP	Ms. Patricia A. W.Jika	Evaluation Statistical Officer, Planning, Monitoring & Evaluation	Oct 2012 - present
NADP	Mr. Paul Alogala	Block Extension Supervisor	Oct 2012 - present
NADP	Mr. Yakubu I. Mohammed	Area Extension Officer	Oct 2012 - present
NADP	Mr. Zakari D. Usman	Block Extension Supervisor	Oct 2012 - present
NADP	Mr. James S. Egwa	Zonal Extension Officer	Oct 2012 - present
NADP	Mr. Suleiman Anyu	Rice Value Chain and Marketing	Sep 2011 - present
NADP	Mr. Emmanuel M. Alanana	Farmer Organization	Sep 2011 - present
NADP	Mr. Benjamin Awajoh Yusuf	Rice Production	Sep 2011 - present
NAMDA	Mr. Zakari Sidi Yahaya	Project Coordinator	Sep 2011 – Aug 2012
NAMDA	Mr. Baba Kutigi Madugu	Project Coordinator	Feb 2013 - present
NAMDA	Mr. Abubakar Balarabe Sedeeq	Engineering	Aug 2012 - present
NAMDA	Mr. Mohammed Isah Musa	Planning	Feb 2013 - present

NAMDA	Mr. Sulaiman A. Rijau	Extension	Feb 2013 - present
NAMDA	Mr. Adamu Bala Idris	Rural Enterprise Development	Feb 2013 - present
NAMDA	Mr. Idris Bala Ango	Marketing	Sep 2011 - present
NAMDA	Mr. M.A. Kwatachi	Planning	Sep 2011 - present
NAMDA	Engr. Suleiman Hussaini Kpange	Agro-processing	Sep 2011 - present
NAMDA	Mr. Zubairu I. Ketta	Extension	Sep 2011 - present
NAMDA	Mr. Mustapha Ahmed	Engineering	Feb 2013 - present
NAMDA	Mr. Abubakar Abdullahi	Engineering	Feb 2013 - present
NAMDA	Mr. Silas Keta Yisa		Sep 2011 - present
NAMDA	Mr. Matthew Ahmed	Zonal Programme Manager	Feb 2013 - present
NAMDA	Mr. Ibrahin A Abdurrahim		Sep 2011 - present
NAMDA	Mr. Nathaniel Gana Yisa	Zonal Extension Officer	Sep 2011 - present
NAMDA	Mr. Ibrahim U. Isah		Sep 2011 - present
NAMDA	Mrs. Confort Ahmed	Women in Agriculture	Sep 2011 - present
NAMDA	Mr. Raimi Alao	Engineering	Sep 2011 - present
NAMDA	Mr. Ishaq Alh. Muhammad	Monitoring & Evaluation	Sep 2011 - present
NAMDA	Mr. Mohammed Suleiman Ahmed	Rural Enterprise Development	Sep 2011 - present

Department of Agro-Processing & Marketing (APM)

Nasarawa Agricultural Development Programme (NADP)

Niger state Agricultural Mechanization Development Agency (NAMDA)

Annex 7: Project Running Cost Covered by JICA (as of the end of September 2013)

1) Agro-Processing and Marketing Department, FMARD

Input	Description / Expenses
Land, Buildings and Facilities	
Rent of the project office (For 2 years)	N8,640,000.00
Running cost of the project office	N180,000.00
Expenses necessary for transportation within Nigeria of the equipment provided by JICA and the operation and maintenance fee	
Transportation	N210,000.00
Customs duties, Internal taxes and any other charges imposed in Nigeria on equipment provided by JICA	
Customs duties	N40,459.00
Internal taxes	N655,615.00
Expenses necessary for the implementation of the Project	
Travel fee of the CP	N2,500,000.00
GRAND TOTAL	**N12,226,074.00**

2) Nasarawa Agricultural Development Programme (NADP)

Input	Description / Expenses
Land, Buildings and Facilities	
Repairing cost of the project office	N470,000.00
Supply of the necessary equipment for the project office	N360,000.00
Running cost of the project office	N342,750.00
Expenses necessary for the implementation of the Project	
Travel fee of the CP	N349,000.00
Expenses for implementation of training for small-scale rice millers, parboilers, and rice farmers	N3,196,200.00
Incubation Plant	
Machine and plant Hall	N17,103,240.00
Storage for paddy, generator house, parboiling shed and dry slab	N7,922,386.50
Fence, flower bay, gate and gate house	N10,806,253.50
External work including Generator, Borehole, access road and parking lots	N13,500,000.00
Preliminaries	N500,000.00
VAT	N2,491,594.00
Additional budget for construction	N12,676,527.00
Movement of Machineries from Supplier Store to the incubation Plant	N400,000
Any Other Miscellaneous expenses	
Monthly Technology Review Meeting, Quarterly Reports, etc	N1,525,450.00
GRAND TOTAL	**N71,643,401.00**

ANNEX 8: The List of Reports and Manuals Produced by the Project

A. Study Report

1) Household Socio-Economic Survey in Nasarawa and Niger State, Nigeria
2) Rice Distribution System in Kana, Kaduna, Nigel', Nasarawa, Benne and Ebonyi States in Nigeria
3) Report on Creating Rice Grading Standards in Nigeria
4) Work Completion Report on Rural Finance

B. Manuals

I) Training Implementation Manual for NFRA on RIPMAPP
2) Marketing & Business Management Textbook (for ADP)
3) Post Harvest Technology Textbook (for ADP)
4) Extension Textbook (for ADP)
5) Training Cycle Management Textbook (for ADP)

Annex 9: Amended List of Machinery and Equipment for Incubation Plant in Bida, Niger state

1. Cost borne by the Japanese side

JICA shall provide machinery, equipment and other materials necessary for the implementation of the project within budgetary limitations. After the completion of the construction, Both Nigerian and Japanese sides swiftly conducts the defect inspection of the building. After this inspection, responsibilities of maintenance are to belong to Nigerian side.

	Name of equipment	Specification	No of units	Remarks
1	Feeding hopper		1	
2	Elevator		3	
3	Paddy cleaner		1	
4	Rice-mill	750kg(paddy)/h	1	
5	Destoner		1	
6	Product tank		1	
7	Packing machine		1	For 1-10kg package
8	Weighing scale	100kg	1	
9	Hand sewing machine		1	
10	Generator		1	
11	Minimum spare parts are attached to the equipment above.			

*1: The size and number of the equipment are subject to change due to available size of equipment based on the capacity of the rice mill size, 750kg(paddy)/h

*2: Installation cost of the equipment above and building for construction of the incubation plant will be borne by the Japanese side.

2. Cost borne by the Nigerian side

	Name of equipment	Specification	No of units	Remarks
1	Drying yard	20m x 20m	1	
2	Deep well		1	With deep well pump
3	Water tower		1	With plumbing

*3: Site acquisition for the incubation plant has already completed by Nigerian side. The land preparation will be conducted and be borne by the Nigerian side.

付属資料2 PDM (Ver.3)

Project Design Matrix (PDM)

Project Title: Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger States
Target Areas: Lafia, Nasarawa State and Bida, Niger State
Target Group: Small-scale Rice millers, Parboilers and Rice
Project Period: 4 years from September 2011 to August 2015

Ver.3
Date: 27 November 2013

Narrative Summary	Objectively Verifiable Indicator	Mean of Verification	Important Assumption
< Overall Goals > Quality of domestic rice is improved in the target States.	At least 2.5% of rice traders in the target States handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project.	Sampling survey of milled rice	
< Project Purpose > Quality of domestic rice is improved in the target areas.	- At least 2.5% of rice traders of the target groups in the target areas handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project. - At least 2.5% of amount of Grade A level quality domestic rice is handled by the traders in the target groups.	Sampling survey of milled rice	ADPs conduct post-harvest processing and marketing training given by the Project.
< Outputs >			
1 Measures to promote distribution of high quality domestic rice are identified.	1-1 Problems, causes and solutions are specified and reported. 1-2 Specifications for machinery and equipment to be introduced are produced.	Project Report Project Report	Price of imported rice does not drop drastically.
2 Rice grading standards for domestic rice is developed and improved.	2-1 Proposed grading standard for parboiled milled rice is accepted at the JCC meeting.	JCC minutes	Natural disasters and economic shocks that significantly affect rice distribution in and around target areas do not occur.
3 Capacity of ADP staff regarding training implementation on marketing, post-harvest and business management is enhanced.	3-1 Average score of capacity level of APM and ADP staff of the both target ADPs evaluated by use of evaluation sheet is more than 3.	Results of capacity assessment by use of evaluation sheet	
4 Capacity of small-scale rice millers, parboilers, rice farmers and traders on post-harvest, marketing and business management is enhanced.	4-1 Each average score of post-test of small-scale millers, parboilers, rice farmers and traders after training is more than target score which is set for the each beneficiary group. 4-2 10% of the participants take actions to adopt introduced technologies. 4-3 2.5% of the participants adopt introduced technologies.	Results of pre-test and post-test Monitoring Monitoring	
< Activities > 1-1 Study distribution channels, quality and price trends of rice. 1-2 Examine market demands including potentials for high quality domestic rice. 1-3 Identify challenges of small-scale rice millers, parboilers and rice farmers. 1-4 Design collection, processing and marketing measures to distribute high quality domestic rice and reduce post-harvest loss. 1-5 Collect information on financial institutions and service. 2-1 Study grading standards used by large-scale rice millers. 2-2 Study rice consumers' taste and quality standards of rice retailers. 2-3 Develop and test grading standards for parboiled milled rice suitable for small-scale rice milling.	**< Input >** **Japan side** 1) Experts i) Chief Advisor ii) Post-harvest technology/Parboiling technology iii) Rice marketing iv) Farmer organization/Training v) Coordinator/Training assistant 2) Equipment i) Machinery and equipment for training ii) Office equipment	**Nigeria side** 1) Personnel i) Project Director (Coordinating Director, NFRA) ii) Project Manager (Director, Agro-processing and Marketing, NFRA) iii) State Coordinators (Programme Managers, ADP Nasarawa and Niger States) iv) Counterparts - NFRA staff (Post-harvest Technology, Rice Value Chain and Marketing, International Relations and Collaboration) - ADP staff (Planning, Post-harvest Technology, Rice Value Chain and Marketing, Farmer Organization)	Sufficient quantity of quality rice seeds are provided to farmers. Natural disasters such as droughts and floods, diseases, animal attacks, and insect attacks which substantially affect rice production do not occur in target areas. Prices of rice in domestic market do not drop drastically.

3-1 Develop training plan for ADP staff. 3-2 Prepare the curriculums and materials for ADP staff. 3-3 Set up an incubation plant with machinery and equipment in Nasarawa State. 3-4 Conduct training on post-harvest technology, rice value chain, marketing and institutional development for ADP Staff of Nasarawa State. 3-5 Identify the outcome of training for ADP staff of Nasarawa State and modify training plan for the subsequent training. 3-6 Set up an incubation plant with machinery and equipment in Niger State. 3-7 Conduct training on post-harvest technology, rice value chain, marketing and institutional development for ADP Staff of Niger State. 3-8 Identify the outcome of training for ADP staff of Niger State and modify training plan for the subsequent training. 4-1 Develop training plan for small-scale rice millers, parboilers, rice farmer and traders. 4-2 Prepare the curriculums and materials on the training programms. 4-3 Conduct training for small-scale rice millers, parboilers, rice farmers and traders of Lafia. 4-4 Support innovators in terms of technology, information on financial service and business management in Lafia. 4-5 Conduct training for small-scale rice millers, parboilers, rice farmers and traders of Bida. 4-6 Support innovators in terms of technology, information on financial service and business management in Bida. 5-1 Develop training plan for staff of non-targeted ADPs. 5-2 Prepare the curriculums and materials for non-targeted ADPs. 5-3 Conduct training for staff of non-targeted ADPs.	3) Counterpart Training i) Training in Japan and/or in the third country for a few persons 4) Local costs i) Local project support staff ii) Hiring of project vehicles iii) Office supplies and other minor expenses	2) Buildings and facilities i) Office space and necessary facilities in NFRA and in the target sites ii) Training venues in the target sites iii) Land and buildings for rice milling and storage of equipment 3) Local costs and recurring costs i) Domestic transportation, operation and maintenance of provided machinery and any other equipment. ii) Travel fee of Nigerian counterparts iii) Assignment of supporting staffs iv) Running expenses for training of small-scale rice millers, parboilers, and rice farmers.	No major political disorder that affects economic activities and security of target areas occurs. < Pre-condition > No major political disorder that affects economic activities and security of target areas occurs.

Note: Indicator 3-1: The evaluation sheet lists up category of capacity which is composed of some sub categories which are to be evaluated by the given ranking according to the five (5) grade evaluation system from 1 to 5, in order to measure capacity of ADP for Output 3.

Target groups used for Objectively Verifiable Indicators are defined as the direct beneficaries who received training and/or assistance from the Project

付属資料3　評価グリッド

	Necessary information and data			Findings
	Evaluation items		Evaluation items	
1. Achievement of the project	1-1. Achievement of Overall goal	Quality of domestic rice is improved in the target States.	At least 2.5% of rice traders in the target States handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project.	It is difficult to judge the achievement level of Overall goal, because monitoring activity has not been conducted. In Nasarawa, since capability of ADP CP to conduct a series of training by themselves, there is possibility to expand their knowledge and skill on postharvest technology, management, and marketing, to ADP staff in other zones.
	1-2. Achievement of project purpose	Quality of domestic rice is improved in the target areas.	At least 2.5% of rice traders of the target groups in the target areas handle quality domestic rice satisfying Grade A level of Rice Grade Standard developed by the Project.	It is difficult to judge the achievement level of Project Purpose, because monitoring activity has not been conducted. Increase of selling price by better whiteness, decrease of broken rice ratio, and reduction of fuel wood and increase of processing volume by shortening of processing time are resulted by trial processing with improved parboil tank. Some members in Lafia association, who are not participant of the training, adopted techniques introduced by the project by themselves. It indicates technical impact is expanding among the target group. In order to achieve targeted Grade A, which further requires removal of stones and colored grain, additional investment for de stoner at processing stage and use of quality rice seed at production stage. Availability of suitable loan for stakeholders may be a key for achievement of Project Purpose.
	1-3. Achievement of outputs	1) Measures to promote distribution of high quality domestic rice are identified.	1-1) Problems, causes and solutions are specified and reported.	Through a series of study, problems, causes and solutions were specified and reported. Based on the results, the project commenced trial and error activities for improvement of rice quality, business management and marketing.
			1-2) Specifications for machinery and equipment to be introduced are produced.	- Specification for machinery and equipment was prepared considering processing capacity of commonly used mills in the target area, and procurement had been carried out. - Specification of the incubation plant in Nasarawa state is higher than the prepared one.
		2) Rice grading standards for domestic rice is developed and improved.	2-1) Proposed grading standard for parboiled milled rice is accepted at the JCC meeting.	- Whiteness of kernel, broken rice ratio and stone mixture were considered as factors of quality rice, which affect the price of rice. - 3 grades, A, B and C were determined from combination of 8 levels of whiteness and 2 levels (less than 10% and 30%) of broken rice ratio. - Stone mixture level has to be attained almost zero at all grades. Standard was developed and it will be utilized in quality improvement activity.

	Necessary information and data			Findings
	Evaluation items		Evaluation items	
		3) Capacity of ADP staff regarding training implementation on marketing, post-harvest and business management is enhanced.	3-1) Average score of capacity level of ADP staff of the both target ADPs evaluated by use of evaluation sheet is more than 3.	In the period from October 2012 to Feb 2013, evaluation of capability of ADP CPs was improved in the area of (1) Capacity of Training Management, (2) Capacity of Post Harvest Technology, (3) Capacity of Marketing and Business Management, and (4) Capacity of Teaching Method, and the evaluation points in all areas scored more than 3.
		4) Capacity of small-scale rice millers, parboilers, rice farmers and traders on post-harvest, marketing and business management is enhanced.	4-1) Each average score of post-test of small-scale millers, parboilers, rice farmers and traders	77% of parboiler, 79% of miller and 91% of farmer achieved target score in post-test in Nasarawa state.
			4-2) 10% of the participants take actions to adopt introduced technologies.	Activities are being conducted. The project will promote action taking through innovator support.
			4-3) 2.5% of the participants adopt introduced technologies.	The project will promote action taking through innovator support. Some parboiler already adopted a lid or a false bottom of improved parboil tank.
	1-4. Inputs provided	Japanese side: 1. Dispatch of the Japanese expert 2. Training of CP in Uganda and Japan 3. Provision of machinery and equipment 4. Expenses for the project implementation	Are the quality (specialty, capacity, and dispatch timing of experts, contents of training, kinds of equipment) and quantity (assignment period, number of trainees, number of equipment, budget allocation) of inputs provided as planned?	(I) Dispatch of Japanese Experts Eight (8) experts in total have been dispatched to the Project. The total duration of the assignment of experts is 57.40 Man Months with 1.40 Man Months of the home-based work as of 30 September 2013. (2) Provision of machinery and equipment The machinery and equipment (4WD car, post-harvest equipment, labo equipment, sealer, reaper, air conditioner, copy machine, computer, projector, generator, etc.) were provided with total value equivalent to 26,999,800 Nigerian Naira. Apart from these machinery and equipment, the establishment of the incubation plant in Lafia will soon start operation. (3) Training of the Counterpart Personnel in Japan and the Third Countries. Three (3) of the counterpart personnel were trained in Japan by attending "the High Level Counterpart Training for Rice Post-Harvest Processing and Marketing Pilot Project in Nasarawa and Niger State (RIPMAPP) Nigeria". In addition, thirty (30) attended the third-country training "Promotion of Rice Development Project" in Uganda. (4) Local cost As of 30 September, 2013, the local cost bone by the Japanese side is (under calculation) Japanese Yen in total (under calculation) Nigerian Naira equivalent).

	Necessary information and data			Findings
	Evaluation items		Evaluation items	
		Nigerian side: 1. Assignment of CP personals 2. Office space and facilities 3. Expenses for the project implementation	Are the quality (specialty, capacity, and dispatch timing of CP, kinds of equipment) and quantity (assignment period, number of equipment, budget allocation) of inputs provided as planned?	(1) Appointment of the Counterpart Personnel The Nigerian side appointed the Project Director and the Project Manager from the Federal Ministry of Agriculture and Rural Development and the State Coordinators from both the Nasarawa and Niger States. In addition, the officers from the relevant offices in charge in three entities have been allocated and undertaken the tasks under the Project. As the Activities have been focusing on the establishment and implementation in Nasarawa State, the state-level counterpart personnel have been provided mainly from Nasarawa State. (2) Building and facilities The office space, training room and storage space for the Project are provided by APM and ADP and AMDA within their premises with other facilities with the supply of utilities. (3) Local cost The local cost borne by APM have been 12,226,000 Nigerian Naira including transportation costs and the taxes and excises paid for the importation of the machinery and equipment, and travel allowances and costs of the counterpart personnel. ADP also bears the travel allowances, and costs of the state-level counterpart personnel, expense of implementation of training to small-scale rice millers, parboilers and rice farmers, the construction of the building of the incubation plant. The total amount provided is 71,643,401 Nigerian Naira.
2. Process of the project implementation	2-1. Progress of activity	Are the project activities conducted as planned?	Record of implemented activities.	Comparing with PO of the project, activities related to the incubation plant has been delayed in Nasarawa state.
	2-2. Project management structure	Is the project executing structure appropriate?	Are number, allocation and capacity of CPs appropriate?	Number, allocation and capacity of CPs are appropriate. Since activities are still remained, present level of capability to implement all activities cannot be judged at this stage for CPs in APM, ADP and AMDA.
			Have the monitoring activity been conducted adequately? (frequency and method)	After each training, simple test was conducted to evaluate participants knowledge.
			Have the JCC been organized appropriate timing, and discussed for key issues?	Joint Coordinating Committee (JCC) have been curried out almost periodically, and key issues, such as change of PDM and PO, roles of APM, ADP and JICA, were agreed. But some agreed issues has not been executed.

	Necessary information and data			Findings
	Evaluation items		Evaluation items	
		Relationship between Japanese expert and CP.	Is communication between Japanese experts and CPs well enough for smooth implementation of the project?	– Japanese Expert and Nigerian CPs are frequently sharing information and exchanging ideas through meeting, telephone, SMS and e-mail. This timely and effective communication has facilitated the implementation process of the Project. – The result of interviews show that most of the Nigerian CPs have good relationship with the Japanese expert. And Japanese experts emphasized improvement of communication between APM CPs and Japanese experts. – Communication status in AMDA will be confirmed later.
	2-3. Ownership of executing organizations	Engagement level of CP with the project, understanding of the project, assignment of CP, budget allocation	Do CPs understand the project contents?	– CPs in Nasarawa State well understand their role and function in the project, as well as project purpose.
			Do CPs actively participate in the project activity?	Both ADP and AMDA CPs actively have participated in the project activities, but APM CPs are not active enough.
			Do federal government and state government allocate budget for the project activity?	– Budget for travel allowance for APM CPs is not allocated. – It is worthy that Nasarawa state allocated more than 50mil. NGN for the building construction for the incubation plant. But, delay of disbursement caused 1year behind of planned schedule. – Construction of building for the incubation plant in Niger state is being delayed due to delay of budget allocation."
3. Relevance	3-1. Necessity	Does the project correspond with the needs of Nigerian Government, target areas and societies)?	Does the assistance for capacity building of ADP and AMDA by APM correspond with needs of Nigerian agriculture sector?	Project is relevant in relation to the policy outlined in the National Rice Development Strategy (NRDS). The goal of NRDS is to increase rice production in Nigeria from 3.4 million tons paddy in 2007 to 12.85 million tons by the year 2018. One of the prioritized target areas of intervention of NRDS is Post-harvest Handling and Processing.
			Does the assistance for capacity building of stakeholders in rice sector by ADP and AMDA correspond with needs of state agriculture sector?	Since proposed actions in NRDS for post-harvest processing in short term are as follows; 1) To establish 2,360 nos. small mills of 1,000 tons/yr capacity, and 2) To increase farmers' appreciation of strict quality control through extension services and training, and Midterm proposed actions are 1) To establish 916 nos. small mills of 1,000 tons/yr capacity and 2) Capacity building for processors and farmers on post-harvest handling and processing, capacity building of ADP, AMDA, and stakeholders in rice value chain corresponds with needs of agriculture sector.
			Does the capacity building of stakeholders in rice sector correspond with needs of local	Income increase by rice quality improvement correspond with needs of stakeholders in rice value chain.

	Necessary information and data			Findings
	Evaluation items		Evaluation items	
	3-2. Priority	Consistency of overall goal and project purpose with the national development policy of Nigeria.	Does quality improvement of domestic rice have priority in the development policy of the Government of Nigeria?	Project is relevant in relation to the policy outlined in the National Rice Development Strategy (NRDS). The goal of NRDS is to increase rice production in Nigeria from 3.4 million tons paddy in 2007 to 12.85 million tons by the year 2018. One of the prioritized target areas of intervention of NRDS is Post-harvest Handling and Processing.
		Consistency with the cooperation policy of Japan and JICA country program.	Is there any important change concerning the cooperation policy of Japan and the JICA country program after the project started?	Agriculture and rural development is prioritized in cooperation policy of Japan, which explores assistance on improvement of rice productivity, quality, and marketing, strengthening of farmer organization, assistance corresponding with needs like capacity development of engineer and farmer.
	3-3. Relevance as the means	Is the project approach appropriate?	Does the project adopt an appropriate approach for assisting capacity building of APM, ADP, AMDA and stakeholder of rice supply chain in two target states?	- In the target groups, the project put priority on trader-cum- processor, who are the most quality and price sensitive, and also can control quality by themselves, in order to enhance motivation on quality improvement among stakeholders in the rice value chain. - Japanese style improvement *"Kaizen"* through co-working with stakeholders is adopted for sustainable improvement activity. - The project attempts capacity building of CPs from APM, ADP, and AMDA through understanding above approaches.
			Was the selection of target areas appropriate?	Scatter level of stakeholders and processing equipment of parboiling are varied in Nasarawa state and Niger state. Selection of target areas was appropriate for covering varied characteristics of area.
		Does Japan have advantage in technical cooperation in this field?	Have the experience from similar projects been utilized in the project?	- Japanese style improvement "Kaizen" through co-working with stakeholders is adopted for sustainable improvement activity. - Training and technical transfer is one of strength of Japanese ODA and technical cooperation.
		Cooperation with other donors and NGOS.	Any synergy from cooperation with other donors and NGOs?	None
	3-4. Others	Any change of policy and socio-economic condition after the last monitoring mission?	Any change of policy and socio-economic condition, which affect project implementation after the last monitoring mission?	- Limitation of access to target areas due to security reason causes delay of achievement of outputs. - Ethnic conflict in Asakio caused discontinuation of monitoring and further support. - A ban of import of rice from 2015 causes promoting construction of large-scale rice mill, which may complete with target groups.
4. Effectiveness	4-1. he Prospect of the Project Purpose	Progress of attainment of project purpose	Prospect of attainment of project purpose	Confirm with "1. Achievement of overall goal".

	Necessary information and data			Findings
	Evaluation items		Evaluation items	
	Achievement		Are indicator and its target level appropriate?	Need discussion.
	4-2. Cause and Effect Relations	Do outputs contribute to attainment of project purpose?	Do outputs contribute to attainment of project purpose "Quality of domestic rice is improved in the target areas"?	Contribute.
	4-3. Hindering/ contributing factor	Are there hindering/ contributing factor for attaining project purpose?	Important assumption; Any natural disasters and economic shocks that significantly affect rice distribution in and around target areas.	None
			Important assumption; Any major political disorder that affects economic activities and security of target areas.	Access of Japanese experts to target areas is restricted due to security reason, and it causes delay of activity progress.
			Important assumption; Any price change of imported rice.	There is no big changes affect to achievement of Project Purpose.
			Important assumption; Sufficient quantity of quality rice seeds are provided to farmers. A result of provision of quality seeds to rice farmers.	It is still an important assumption. Quality seed supply program was conducted for prove and demonstrate importance of quality seed, which affect quality (reduction of colored kernel) of final product.
	4-4. Others		Any other hindering/ contributing factors for attaining project purpose?	[Hindering factor] Small-capacity milling machine and destoner, which are run by electric motor, need additional investment for diesel generator under the condition of unstable power supply. Credit access for processors are very difficult due to strict loan terms. [Contributing factor] Import tariff for agriculture machinery was abolished (need confirmation). Import of rice through road transportation has been prohibited. It may cause increase of domestic rice demand. Many CPs are allocated at state level, and their commitment level is very high. Level of wages in public sector is relatively high, and they can focus on their service.
5. Efficiency	5-1. Prospect of outputs achievement	Are outputs achieved as planned?	Are outputs achieved as planned?	Confirm with "1. Achievement of overall goal".
			Is the level of indicators for each output appropriate?	Confirm with "8. Others".

	Necessary information and data			Findings
	Evaluation items		Evaluation items	
	5-2. Cause and Effect Relations	Are effective activities planned and conducted for generating outputs?		In order to take the shortest course to Project Purpose, the project has modified and added activities analyzing situation surrounding the project.
		Are quality, quantity, and timing of inputs suitable for generating outputs?	Are the number, specialties and dispatch timing of experts appropriate?	It was suitable. Since activities of Japanese expert at target areas are restricted due to security reason, planned activities may not implemented on schedule.
			Are the specification, quantity, and installation timing of equipment appropriate?	Yes for most of equipment, but processing capacity of incubation plant in Nasarawa state is too big considering processing capacity of local processors, who will be participants in planned training using this plan.
			Are the field, contents and timing of training in Japan appropriate?	It was regrettable that main CP on postharvest technology could not participate in the training in Japan due to age limit.
			Is the local activity budget of both Japanese side and Nigerian side appropriate?	- Allowance for APM CPs is - It is worthy that Nasarawa state allocated more than 50mil. NGN for the building construction for the incubation plant. But, delay of disbursement caused 1year behind of planned schedule. - Construction of building for the incubation plant in Niger state is being delayed due to delay of budget allocation.
		Cooperation with other JICA scheme, donors, NGOs	Any results from cooperation with others?	- JICA Project in Uganda (PRiDe) received training courses for reseachers and extension agent on rice cultivation and reseach. The results have not been evaluated. - NADP counterparts participated in JICA training course, C50+K50"Rice-post harvest processing for English Speaking African Countries at Yamagata University" and "Development Farm Machinery for Small-Scale Farmers"
	5-3. Hindering/ contributing factor	Any hindering/ contributing factors for obtaining output?		[Hindering factor] Ethnic conflict in Asakio caused discontinuation of innovator support. Delay of construction of incubation plant in Nasarawa state may cause delay of following activity, such as trainings. [Contributing factor] High level of commitment of the program coordinator in Nasarawa state affect higher CPs' morale and budget allocation.
6. Impact	6-1. Prospect of overall goal achievement	Is achievement of overall goal expected considering results of input, outputs, and activities?		Confirm with "1. Achievement of overall goal".
		Is the level of indicators for project purpose appropriate?		Confirm with "8. Others".

	Necessary information and data			Findings
	Evaluation items	Evaluation items		
		Are any impacts on development policy of Nigeria expected by achieving overall goal?		It can be expected at certain level.
		Any hindering/ contributing factor for achievement of overall goal?		Credit access for millers to invest destoner may be a hampering factor. Investment for diesel generator due to unstable power supply, which needs additional investment for processors, may be a hampering factor.
	6-2. Cause and Effect Relations	Is overall goal appropriate in terms of relation with project purpose and period after project completion?		Need discussion.
		Is important assumption for overall goal still remained? Is possibility of important assumption very likely to remain?		Removal of stone from the material by using destoner is indispensable for attainment of Grade A quality rice. Difficulty of credit access of millers to invest for destoner installation is key for achieve Project Purpose. The project attempts to study possibility of traditional mutual funding system.
	6-3. Impact	Any effects or impacts other than overall goal can be expected? Especially for a negative impact, are there any mitigation measures considered?		None
7. Sustainability	7-1. Policy aspect	Continuation of policy support.	Will capacity building of stakeholder in rice supply chain by APM、ADP、AMDA continuously be prioritized in agriculture sector policy?	APM is the public organization, which implement supports on rice processing, distribution and marketing. They will continue to prioritize capacity building of stakeholders in rice value chain. Original target group of ADP and AMDA was farmers, but since they participated in RIPMAPP, they acknowledge importance of supports to processors and traders. Especially, ADP expressed that they attempt to continue project activities in other zones in the state. Need confirmation in AMDA.
			Can rice grading standard be adopted by rice market?	Once the rice market acknowledge pricing by quality, rice grading standard can be introduced into the market. So, it is reasonable to introduce it in the target areas confirming acknowledge of quality differentiation, then it should be expand to the other areas. n order to expand the standard, APM should take an initiative through authorizing the standard in APM and using it in quality improvement activity.
			Any actions assisting extension of the project activity considered in other states or areas?	The project currently concentrates of outputs in the target area, and actions for extension to other areas will be considered latter period of the project.
	7-2. Organization and financial aspects	Will executing organizations involving to the project continuously exist after the project termination?	Will roles of APM, ADP、AMDA be continued after the project termination?	Need confirmation to APM.

	Necessary information and data			Findings
	Evaluation items		Evaluation items	
		Prospect of budget allocation after the project termination.	Is budget allocation for training expected after the project termination?	Need confirmation to APM, ADP, and AMDA.
		Prospect of budget allocation after the project termination.	Is ownership of the executing authority kept high enough to continue activities after the project termination?	Ownership of ADP and AMDA is high enough to implement the project. It of APM is not enough level from a view point of budget allocation (travel allowance).
			Is budget for improvement of financial access by stakeholder of rice supply chain expected?	According to the study by RIPMAPP, load terms are strict for stakeholders of rice value chain, and there is not suitable credit source. RIPMAPP can only introduce the bank and loan products, which have relatively easier terms.
			Current budget allocation status. Any possibility of increase of budget allocation by the performance of the project? Any measure for allocation of enough budget.	Need confirmation to APM.
	7-3. Technical aspect	Are Nigerian CPs capable enough to continuously provide technical assistance to other states.	Are CPs from APM capable enough to continuously provide trainings in terms of knowledge and administration?	APM CPs can work as a lecturer of the training, but are not capable enough to plan, organize, monitor and evaluate the training.
			Are CP organizations technically capable to maintain equipment provided by RIPMAPP.	Equipment has been used for suitability test, analysis of fabrication, and introduction in the training. CPs will learn maintenance in the following project period.
		Will knowledge and technique continuously be adopted in the country?	Can knowledge and technique adopted by the project be compatibly disseminated to other states in the country?	Processing technique may varied from area to area, and it needs some modification for improvement. But the basic approaches, (1) improvement of parboiling technique, (2) installation of destoner, and (3) installation of friction type milling machine, which RIPMAPP uses are considered to be adopted by other areas.
	7-4. Social, culture and environmental aspect	Any less consideration for gender issue, poverty group and vulnerable group, and environment? Any factors hindering sustainability?		None
8. Others	8-1. Necessity of adjustment in PDM	Are indicators in PDM set properly?	Is numerical target of each indicator in PDM appropriate?	As of indicators for Project Purpose, it is expected not only numbers of rice traders but also the amount of domestic quality rice is actually increased in target areas. In this context, current indicator is not sufficient to measure the achievement level of Project purpose. So, an indicator monitoring volume of quality rice traded was added.

	Necessary information and data		Findings
	Evaluation items	Evaluation items	
	Is project purpose expected to be achieved going on as done?		Removal of stone from the material by using destoner is indispensable for attainment of Grade A quality rice. Difficulty of credit access of millers to invest for destoner installation is key for achieve Project Purpose.
	Is adjustment of inputs, outputs, and activity necessary?		Output 5 was deleted, because; · The Overall goal is "Quality of domestic rice is improved in the target States." Therefore, it is not logical to include an output in non-targeted states on PDM. · On the other hand, expansion of the training programs under the initiative of Nigerian side is highly recommended. In this context, it is more appropriate to regard that "training programs for non-targeted ADP staff regarding post-harvest, marketing and business management" is included as Output 3. It is suggested capacity development of APM staff is implemented through On the Job Training (OJT) at the time of training to ADP. Knowledge and experience are supposed to be shared with other states appropriately by APM who attended this OJT.
	Any new important assumption, which affects project implementation?		Removal of stone from the material by using destoner is indispensable for attainment of Grade A quality rice. Difficulty of credit access of millers to invest for destoner installation may become a condition of achievement of Project Purpose. Or, any measures can be included to the project activities.
	Any changes on problems, issues and risks pointed out by preparatory study?		None.
	Any other issues, which need adjustment?		Definition of "Target Groups" are noted in PDM as "target groups used for Objectively Verifiable Indicators are defined as the direct beneficaries who received training and/or assistance from the Project".
	Any issues necessary to pay attention?		– Limited access of Japanese expert to target areas. – Operation and maintenance of the incubation plant in Nasarawa state – Construction and installation of the incubation plant in Niger state

RECORD OF DISCUSSIONS
BETWEEN
JAPAN INTERNATIONAL COOPERATION AGENCY
AND
AUTHORITIES CONCERNED OF THE GOVERNMENT OF
THE FEDERAL GOVERNMENT OF THE REPUBLIC OF NIGERIA
ON JAPANESE TECHNICAL COOPERATION
FOR RICE POST-HARVEST AND MARKETING PILOT PROJECT
IN NASARAWA AND NIGER STATES

With regard to the Minutes of Meetings between the Japanese Detailed Planning Study Team and the Republic of Nigeria signed on 13th October, 2010, the Japan International Cooperation Agency (hereinafter referred to as "JICA") had a series of discussions with the Nigerian authorities concerned on measures to be taken by JICA and the Government of the Republic of Nigeria for the successful implementation of the above mentioned Technical Cooperation.

As a result of the discussions, both sides agreed on the matters referred to in the document attached hereto.

Abuja, 18 March, 2011

Yoshitaka SUMI
Chief Representative
Japan International Cooperation Agency
Nigeria Office

Mrs. Fatima B. Bamidele
Permanent Secretary
Federal Ministry of Agriculture and Rural Development
Federal Republic of Nigeria

Witness by

Mr. B. O. Akpanyung
Acting Director
Department of International Cooperation
National Planning Commission
Federal Republic of Nigeria

Dr. M. I. Lawal
Coordinating Director
National Food Reserve Agency
Federal Ministry of Agriculture and Rural Development
Federal Republic of Nigeria

THE ATTACHED DOCUMENT

I. COOPERATION BETWEEN JICA AND NIGERIAN GOVERMENT

1. The Government of the Republic of Nigeria (hereinafter refereed to as "the Government of Nigeria") will implement Rice Post-harvest and Marketing Pilot Project in Nasarawa and Niger States(hereinafter referred to as "the Project") in cooperation with JICA

2. The Project will be implemented in accordance with Master Plan which is given in ANNEX I.

II. MEASURES TO BE TAKEN BY JICA

In accordance with the laws and regulations in force in Japan, JICA will take, at its own expense, the following measures according to the normal procedures under the Technical Cooperation Scheme of Japan.

1. DISPATCH OF JAPANESE EXPERTS
JICA will provide the services of the Japanese experts as listed in ANNEX II.

2. PROVISION OF MACHINERY AND EQUIPMENT
JICA will provide such machinery, equipment and other materials (hereinafter referred to as "the Equipment") necessary for the implementation of the Project as listed in ANNEX III. The Equipment will become the property of the Government of Nigeria upon being delivered C.I.F. (cost, insurance and freight) to the Nigerian authorities concerned at the ports and/or airports of disembarkation.

3. TRAINING OF NIGERIAN PERSONNEL IN JAPAN AND/OR IN THE THIRD COUNTRY
JICA will receive the Nigerian personnel connected with the Project for

technical training in Japan and/or in the third country.

III. MEASURES TO BE TAKEN BY THE GOVERNMENT OF NIGERIA

1. The Government of Nigeria will take necessary measures to ensure that the self-reliant operation of the Project will be sustained during and after the period of Japanese technical cooperation, through full and active involvement in the Project by all related authorities, beneficiary groups and institutions.

2. The Government of Nigeria will ensure that the technologies and knowledge acquired by the Nigerian nationals as a result of Japanese technical cooperation will contribute to the economic and social development of Nigeria.

3. The Government of Nigeria will grant to Japanese experts and their families in Nigeria, privileges, exemptions and benefits as listed in Annex IV and will grant privileges, exemptions and benefits no less favorable than those granted to experts of third countries or international organizations performing similar missions to the Japanese experts referred to in II-1 above and their families.

4. The Government of Nigeria will ensure that the Equipment referred to in II-2 above will be utilized effectively for the implementation of the Project in consultation with the Japanese experts referred to in ANNEX II.

5. The Government of Nigeria will take necessary measures to ensure that the knowledge and experience acquired by the Nigerian personnel from technical training in Japan will be utilized effectively in the implementation of the Project.

6. In accordance with the laws and regulations in force in Nigeria, the Government of Nigeria will take necessary measures to provide at its own expense:

   a. Services of the Nigerian counterpart personnel and administrative personnel as listed in ANNEX V;

b. Land, buildings and facilities as listed in ANNEX VI;

c. Supply or replacement of machinery, equipment, instruments, tools, spare parts and any other materials necessary for the implementation of the Project other than the Equipment provided by JICA under II-2 above ;

7. In accordance with the laws and regulations in force in Nigeria, the Government of Nigeria will take necessary measures to meet:

a. Expenses necessary for transportation within Nigeria of the Equipment referred to in II-2 above as well as for the operation and maintenance thereof;

b. Customs duties, internal taxes and any other charges, imposed in Nigeria on the Equipment referred to in II-2 above; and

c. Expenses necessary for the implementation of the Project as follows;
-Providing travel fee of Nigerian counterparts for the implementation of the Project
-Assignment of supporting staffs for the implementation of the Project
-Bearing the running expenses necessary for the implementation of the Project such as expenses for post-harvest training for small-scale rice millers, parboilers, and rice farmers etc.

IV. ADMINISTRATION OF THE PROJECT

1. Responsible agency and implementing agency
   a. The Federal Ministry of Agriculture and Rural Development (FMARD) will be responsible for the Project.
   b. The National Food Reserve Agency (NFRA) will be in charge of implementing the Project.

2. Responsible persons for implementation

a. The Coordinating Director, NFRA will be appointed as the Project Director, who will bear overall responsibilities for the administration and implementation of the Project.

b. The Director, Agro-processing and Marketing Department, NFRA will be appointed as the Project Manager, who will be responsible for managerial and technical issues of the Project.

c. The Programme Managers of the targeted Agricultural Development Programmes (ADPs) will be appointed as State Coordinators, who will be responsible for managerial and technical coordination of the Project activities in the target areas.

3. Responsibility of the Japanese Chief Advisor

The Chief Advisor will provide necessary recommendations and advice to the Project Director and the Project Manager on any matters pertaining to the implementation of the Project.

4. Joint Coordinating Committee (JCC)

For the effective and successful implementation of technical cooperation for the Project, a Joint Coordinating Committee will be established and organized at least once a year and whenever the necessity arises. The functions and composition of the JCC are attached in Annex VII.

V. JOINT EVALUATION

Evaluation of the Project will be conducted jointly by JICA and the Nigerian authorities concerned, during the last six months of the term of the cooperation in order to examine the level of achievement.

VI. CLAIMS AGAINST JAPANESE EXPERTS

The Government of Nigeria undertakes to bear claims, if any arises, against the Japanese experts engaged in technical cooperation for the Project resulting from,

occurring in the course of, or otherwise connected with the discharge of their official functions in Nigeria except for those arising from the willful misconduct or gross negligence of the Japanese experts.

VII. MUTUAL CONSULTATION

There will be mutual consultation between JICA and the Government of Nigeria on any major issues arising from, or in connection with this Attached Document.

VIII. MEASURES TO PROMOTE UNDERSTANDING OF AND SUPPORT FOR THE PROJECT

For the purpose of promoting support for the Project among the people of Nigeria, the Government of Nigeria will take appropriate measures to make the Project widely known to the people of Nigeria.

IX. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document will be four (4) years with effect from the date of arrival of the first Japanese expert and/or consultant on the Project

ANNEX I	MASTER PLAN
ANNEX II	LIST OF JAPANESE EXPERTS
ANNEX III	LIST OF MACHINERY AND EQUIPMENT
ANNEX IV	PRIVILEGES, EXEMPTIONS AND BENEFITS FOR JAPANESE EXPERTS
ANNEX V	LIST OF NIGERIAIAN COUNTERPART AND ADMINISTRATIVE PERSONNEL
ANNEX VI	LIST OF LAND, BUILDINGS AND FACILITIES
ANNEX VII	JOINT COORDINATING COMMITTEE

ANNEX I

MASTER PLAN

1. Overall Goal

Quality of domestic rice is improved, and the post-harvest loss rate is decreased in the target states.

2. Project Purpose

Quality of domestic rice is improved, and the post-harvest loss rate is decreased in the target areas.

3. Outputs of the Project

(1)Measures to promote distribution of high quality domestic rice are identified.

(2)Rice grading standards for domestic rice is improved.

(3)Capacity of ADP staff regarding training implementation on marketing, post -harvest, and business management is enhanced.

(4)Capacity of small-scale rice millers, parboilers, and rice farmers on post-harvest and business management is enhanced.

4. Activities of the Project

1-1 Study distribution channels, quantity, and price trends of rice.

1-2 Examine market demands including potentials for high quality domestic rice.

1-3 Identify challenges of small-scale rice millers, parboilers, and rice farmers.

1-4 Design collection, processing, and marketing measures to distribute high quality domestic rice and reduce post-harvest loss.

1-5 Select technology and machinery to introduce, and agricultural cooperatives and places to install machinery.

2-1 Study grading standards used by large-scale rice millers.

2-2 Study rice consumers' taste and quality standards of rice retailers.

2-3 Develop and test grading standards for paddy and cleaned rice suitable for small-scale rice milling.

2-4 Improve grading standards.

3-1 Develop training plan for Nasarawa ADP staff.

3-2 Prepare the curriculums and materials for Nasarawa ADP staff.

3-3 Conduct training on post-harvest techniques, rice value chain, marketing, agricultural cooperatives.

3-4 ADP staffs conduct training for small-scale rice millers, parboilers, and rice farmers and review the contents of the training.

3-5 Implement activities 3-1 to 3-4 for Niger ADP staff.

3-6 Develop training plan for staff of non-targeted ADPs.

3-7 Prepare the curriculums and materials for non-targeted ADPs.

3-8 Conduct training for staff of non-targeted ADPs.

4-1 Develop training plan for small-scale rice millers, parboilers and rice farmers in Lafia.

4-2 Prepare the curriculums and materials on the activity 4-1.

4-3 Introduce machinery for training.

4-4 Conduct training for small-scale rice millers, parboilers, and rice farmers in Lafia.

4-5 Implement activities 4-1 to 4-4 for small-scale rice millers, parboilers, and rice farmers in Bida.

4-6 Disseminate achievements of training to non-targeted small-scale rice millers, parboilers, and rice farmers.

ANNEX II

LIST OF JAPANESE EXPERTS

Long-term Experts

Total of four Japanese Long-term Experts will be dispatched in the following fields.

I. Post-harvest technology

II. Rice marketing

III. Farmer organization/Training

IIII. Coordinator/Training planning

* TOR of long-term Experts will be considered according to the recruitment status.

Short-term Experts

Short-term experts such as parboiling technology will be dispatched, if necessary.

ANNEX III

LIST OF MACHINERY AND EQUIPMENT

JICA shall provide machinery, equipment and other materials necessary for the implementation of the project within budgetary limitations.

	Name of equipment	Specifications	No. of units	Remarks
1	Reaper	4-row	4	
2	Thresher	1t/h	4	motorized
3	Parboiling equipment	500kg/batch	8	
4	Solar dryer	Plastic cover type	4	
5	Batch dryer	500kg/batch	2	
6	Rice mill (One-pass)	4" rubber roll, 500kg/h -	4	With spare screen & polisher And 4" rubber rolls
7	De-stoner	300kg/h	8	
8	Paddy cleaner	300kg/h	4	
9	Winnower	Mechanical	4	
10	Grader	400kg/h	4	
11	Packing machine	Tank capacity 500kg	4	
12	Sewing machine	By string	4	For large sack
13	Sealing machine	By heater	4	For small plastic package
14	Weighing scale	100kg	4	
15	Weighing scale	10kg	4	
16	Moisture meter		4	
17	Minimum spare parts are attached to the equipments above.			

*1. The size and number of equipment are subject to change due to available size of equipment based on the capacity of the rice mill size, 500 kg/h.

*2. The type of equipment is reviewed to meet the demand of cooperating agricultural cooperative in the baseline study.

*3. The above equipment is for the two target areas i.e. Lafia, Nasarawa state and Bida, Niger state, and the equipment for Bida will be procured at a later stage of the Project.

*4. Installation cost will be borne by the Japanese side.

*5. Necessity of repairing buildings for rice milling machine and other equipments will be considered after the Project starts.

ANNEX IV

PRIVILEGES, EXEMPTIONS AND BENEFITS FOR JAPANESE EXPERTS AND THEIR FAMILIES

1. Exemption from income tax and other charges of any kind imposed on or in connection with the living allowances remitted from abroad.

2. Exemption from import tax, export duties and any other charges in respect of personal and household effects of the Japanese experts and their families, including one motor vehicle per expert.

3. To issue, upon application, entry and exit visas for the Japanese experts and their families free of charge.

4. To issue an identification card to the Japanese experts and their families to secure the cooperation of all governmental organizations necessary for the performance of the duties of the experts.

5. Exemption from customs duties for import and export of professional equipment by the Japanese experts in connection with the activities of the Project.

ANNEX V

LIST OF NIGERIAN COUNTERPART AND ADMINISTRATIVE PERSONNEL

For the successful conduct of the project, the Government of Nigeria will assign the following members to the project;

[Counterpart Personnel] (minimum number of persons)

I. Project Director	(1)
II. Project Manager	(1)
III. State Coordinators	(2)
IV. NFRA staff on Post-harvest Technology	(2)
V. NFRA staff on Rice Value Chain and Marketing	(2)
VI. NFRA staff on International Relations and Collaboration	(1)
VII. ADP staff on Planning	(2)
VIII. ADP staff on Post-harvest Technology	(2)
IX. ADP staff on Rice Value Chain and Marketing	(2)
X. ADP staff on Farmer Organization	(2)

[Administrative personnel]

I. Administrative staff(s)

II. Other supporting staff necessary for the project implementation (e.g. driver)

ANNEX VI

LIST OF BUILDINGS AND FACILITIES

Buildings and facilities necessary for implementation of the Project

I. Office space and necessary facilities in NFRA and in the target sites

II. Training venues in the target sites

III. Land and buildings for rice milling and storage of equipment

* Necessity of repairing buildings for rice milling machine and other equipments will be considered after the Project starts.

ANNEX VII

Joint Coordinating Committee (JCC)

1. Functions

For the effective and successful implementation of technical cooperation for the Project, a Joint Coordinating Committee will be established and will meet at least once a year and whenever the necessity arises. Specific functions are given below:

(1) Examine and approve annual plans of operations prepared by the Project in accordance with this framework and the Record of Discussions.

(2) Monitor and review overall progress of the technical cooperation program in accordance with this framework and the Record of Discussions.

(3) Review and exchange views on major issues arising from or in concerning the Project and recommend corrective measures, and

(4) Facilitate coordination with other relevant authorities.

2. Composition

(1) Chairperson:

Permanent Secretary, Federal Ministry of Agriculture and Rural Development

(2) Members

1) Nigerian Side:

-Representative, National Planning Commission (NPC)

-Permanent Secretary, Ministry of Agriculture and Natural Resources, Nasarawa State

-Permanent Secretary, Ministry of Agriculture and Rural Development, Niger State

-Project Director

-Project Manager

-State Coordinators

2) Japanese side:

-Chief Adviser

-Japanese Experts assigned to the Project

-Representative, JICA Nigeria Office

(3) Observers who may attend the JCC as and when required:

-Official(s) of the Embassy of Japan

-Persons who are nominated by the chairperson

５．面談議事録

面談記録及び主要面談者リスト

１．ナサラワ州ADP

日　時	11月13日（水）	場所	ADP 局長室
面談者	ADP局長、カウンターパート（別途面談者リストあり）		

ADP局長への聞き取り結果

- RIPMAPPが始まってからカウンターパート（C/P）の能力は、非常に良くなった。専門家からの指導や本邦研修、OJTなどを通して個々の能力（収穫後処理、マーケティング、ビジネスディベロップメント）が高まったのに加え、チームで協力して仕事ができる体制ができたと思う。

- 対象グループについて、プロジェクト開始当初は、調査ばかりで支援がなかったので不満もあったようだが、今は品質が良くて価格もいい製品づくりのためのモチベーションも上がってきているとみている。習得した知識や技術の採用はゆっくりだが、少しずつ品質改善が進んでいる。

- RIPMAPPにおけるAPMのパフォーマンスはすばらしいと思う。プロジェクト終了後も他州で同様の活動を続けるためには、中央レベルでのC/Pは必要である。特に、州職員に対するTOTは彼らの仕事になる。ただし、予算の確保は必須である。

- インキュベーション・プラントは、プロジェクト終了後の活用方法、維持管理費用の捻出方法については、個人的意見だが、しばらくは州内の他地域の職員やステークホルダーの研修用に使いたい。ひととおり研修で使ったあとは、民間に貸し出して維持管理を行っていきたい。

- 専門家をはじめ日本側関係者とのコミュニケーションについては、非常によくとれており、問題はない。

２．ナサラワ州対象グループ（コメ農家）

日　時	11月14日（木）	場所	ADP 会議室
面談者	コメ農家（別途面談者リストあり）		

- RIPAMAPPの研修の内容は、コメ生産全体（耕起、播種、農薬・肥料の使い方、収穫）、機械の使い方（各種脱穀機、とうみ）、マーケティングであった。

- 研修で教えてもらった技術について、高品質種子を使うことで収量が2倍違うこともある。しかし、品質の良い種子は価格も300ナイラ/kgと高い。周りの農家も興味があって見に来ていた。耕起後に土壌を消毒することで、病気を減らしたり、雑草を抑えたりできる。脱穀や選別に機械を使えば、選別がよく品質が上がる。また、作業も早いし楽にもなる。

- コメ生産の問題として、機械類がナサラワでは売っていないか、売っていても価格が高く買えない。また、スペアパーツが入手できなければ困る。中国製のエンジンは地方でも普及しており、どこに行ってもスペアパーツは売っている。

- RIPMAPPが行った種子と投入剤の支援を有償でもいいので続けてほしい。または、種子や投入材購入のためのクレジットへのアクセスを改善してほしい。

３．ナサラワ州対象グループ（加工業者、流通業者）

日　時	11月14日（木）	場所	ラフィア協会会議室
面談者	ラフィア協会の流通業者、パーボイル加工業者、精米業者（別途面談者リストあり）		

・ RIPMAPPの研修で習得したのは、
改良パーボイルタンク：どのような仕様のタンクが良いのか。
品質：今まではあまり品質を意識して加工や流通をしていなかったが、いろいろな知識や技術を学んで、いい精品を作るということを意識するようになった。
記録：原料や精品の入出荷記録やお金の入出金の記録をつけるのが大切であること。
単位：バッグの容量ではなく、重量が重要であること。
計測：品質の良いコメを作るために、パーボイル各工程の時間を測りながら加工すること。これで以前は1t/日だった処理量が、3t/日になった。

・ RIPMAPPで習得した技術で、販売価格が上がった。均一な品質（色）で、砕米が少ない精品ができるようになった。コストの削減効果はまだほとんどない。

・ 協会では、研修に参加したメンバーを講師として、参加できなかったメンバーに対し研修ができるシステムを考えている。

・ パーボイルについては加工方法の改善ができるようになったが、精米工程では石の混入と砕米混入率が高いこと。石は機械を導入すれば取り除くことはできるが、価格が高く購入は容易でない。

４．APMカウンターパート

日　時	11月18日（月）14：00～15：30	場所	APM会議室
面談者	APMカウンターパート（別途面談者リストあり）		

・ APMとして、収穫後処理はナイジェリアの国産米振興においてクリティカルな問題として認識している。消費者は品質の面から輸入米を好む傾向にある。

・ プロジェクトはこの課題を解決するうえで重要な役割を果たしている。各バリューチェーンの技術的な指導にとどまらず、高品質のコメはより高く売れるということを示してきている。

・ ナイジャ州の活動は、ナサラワ州で日本人専門家がAPM職員とともにADP職員に行った技術移転を、今度はAPM職員が主体となりナイジャ州AMDA職員に研修する、というプロジェクトの設計は理解している。さらに、APMとしては他州への普及（スケールアップ）もしたいと考えている。しかし、NFRAは組織改革によって農業農村開発省に統合されたが、それに伴って予算権限も移ったため、連邦政府からプロジェクトカウンターパートファンドとしての旅費等が配分されておらず、技術移転活動にも制限されている。したがって、このような状況では全国展開の実施は難しい状況。農業農村開発省大臣は在ナイジェリア日本大使と面談の機会もあり、プロジェクトの重要性については認識をしている。是非ＪCCで予算確保のための提言をしてほしい。

・ “Agriculture Transformation Agenda (ATA)のrice value chain”に係るプロジェトとして認識されるようにするため、ATAのRice Transformation Agenda (RTA)オフィスの本省担当者にJCCの常任メンバーになってもらうべき（今回JCCには出席予定）。

・ 集積型の精米業者の集まるナサラワ州ラフィアと分散型のナイジャ州ビダの状況が異なることは理解しており、ビダのインキュベーションセンターの機材調達はナサラワ州のそれと同じではなく、現状に沿った規模にすべき点は理解をしている。

・ コメの等級基準については、ナサラワ州だけでなくナイジャ州でも活用を実際に行い、それらの成功事例があれば国としての基準・規格化を検討したい。

・ 現在、国産米による自給をめざすため、陸路でのコメの輸入は禁止されている。海路での輸入は100%の関税がかかる。また、2015年にはコメの輸入が全面禁止となる予定(※ ただし、ナイジェリアはWTOの加盟国であるため、国策として関税率を上げることはできても、コメの輸入を全面禁止することは困難であると思われる)。

5．APM局長代理

日　時	11月18日（月）15：45～16：15	場所	APM会議室
面談者	ジャトー局長代理		

・ プロジェクト対象地域では、既に一部コメの品質が改善されてきており、プロジェクトの重要性は理解している。

・ 小規模流通業者がアクセスすることができる金融商品としてThe Nigeria Incentive-Based Risk-Sharing System for Agricultural Lending (NIRSAL) が有効と考える。

・ APMの予算確保ができていない状況は認識している。APMが独立した行政機関ではなく連邦政府の一部として位置づけられたため、以前に比べて決裁システムが複雑化し、スムーズに予算配分がされていない状況。

・ ナイジャ州の活動は、ナサラワ州で日本人専門家がAPM職員とともにADP職員に行った技術移転を、今度はAPM職員が主体となりナイジャ州AMDA職員に研修する、というプロジェクトの設計は理解している。さらに、APMとしては他州への普及（スケールアップ）もしたいと考えている。

6．ナイジャ州ビダAMDAカウンターパート

日　時	11月19日（火）13：00～13：30	場所	ビダ マルチパーパスセンター
面談者	AMDAカウンターパート（別途面談者リストあり）		

・ これまでの活動：NAMDA職員のTOT研修受講、受益者の選定、インキュベーション・プラント建設地の確保。受益者への研修は来週開始予定。

・ ナイジャ州での研修の難点の１つは、受益者が点在していること。今後の技術移転の方法としては①講師側が１つ１つ村の受益者を訪問すること②バスを２台購入し、受益者側に集まってもらうことの２つの選択肢を想定している。

・ NAMDA職員のTOT研修について：非常に良かった。APM職員がファシリテーターを実施。教え方や研修の際の時間配分等を学んだ。

・ 小規模精米業者、流通業者が使用できるような金融商品がない状況。ナイジャ州より“Niger State Rice Consortium Project”という、コメのバリューチェーンにかかわる農家、精米業者、流通業者が利用できる金融サービスが今年から開始されたものの、ディスバースが進んでいない状況。プロジェクト規模は500百万NGN。

・ APM職員のTOT研修における関与：出張旅費が支給されないこと理由にAPM職員がナイジャ州まで来ないことがある。しかし、出張旅費は後日と清算されることとなっており、それが認識されていないようである。

小山専門家から聞き取った内容は以下のとおり。

・ APM職員のTOT研修における関与：研修指導においては長けているが、研修の準備は日本人専門家が行っている状況。忙しいAPM職員からのレスポンスは時間がかかる状況。

・ インキュベーション・プラント建設予定地を確認した。砂地であり、石を入れるなどしっかりとした基礎工事が必要であると考えられる。

7．ナイジャ州対象グループ候補

日　時	11月19日（火）14：00～14：30	場所	ビダ LGA　ドコ地区　サーチンク村
面談者	ビダ　ドコ地区　サーチンク村パーボイル業者（受益者研修対象業者候補）		

・ パーボイル釜の容積は50リットル程度。（１度に処理をする籾の量は40kg～50kg程度。）

・ パーボイル処理後のコメには品質のばらつきがあり、ナイジャ州における規格１ムドゥ（小ぶりなボール一杯分）当たり50NGNほどの違いをもたらす。品質のばらつきは、品種や生産地の違いによるものだと考えている。

・ これまでにコメ品質向上のための投資をしたことは無い。

8．ナイジャ州ビダ　精米・流通業者組合

日　時	11月19日（火）15：00～15：30	場所	ビダ LGA　コメ精米市場
面談者	コメ精米・流通組合		

・ この1つの市場には精米業者53名、流通業者150名から成る２つの組合が存在。精米業者と流通業者は兼業していることが多い。

・ 投資等のために借金をすることはない。

・ 精米機は、エンゲルバーグ式を使用。品質の面からは必ずしも良い機械ではないが、圧力をかけず4回程度通すことで砕米を抑えることができる。メンテナンスの面では、修理が簡易にできるためエンゲルバーグ式でもある程度満足しているものと考えられる。

9．ナイジャ州　AMDA

日　時	11月20日（水）8：30～10：00	場所	ミナ　NAMDA 事務所
面談者	ナジャ州 AMDA（別途面談者リストあり）		

・ ナイジャ州のインキュベーション・プラント：ナイジャ州側から、土地の準備はできているが建屋建設にかかる予算確保のめどは立っていない状況。建屋建設について、R/D上ではナイジェリア政府側の負担事項ではあるものの、ナサラワ州において建屋建設を先方負担として待ったことにより活動が遅れている状況を教訓とし、ナイジャ州では日本側が建屋に必要な最低限の設備は整備することを確認。以上の事項は一昨日、ナイジャ州コミッショナーには口頭にて確認済み。

・ 予算確保に引き続き努め、乾燥ヤードなどの付帯施設はR/Dに基づきナイジェリア政府の負担事項とする。

・ 建屋建設完了後は、合同で瑕疵検査を行い、日本側は速やかにナイジェリア政府に引き渡す。維持管理責任はその時点からナイジェリア側に移ることとする。

・ 機材の規模について、ナイジャ州の現状を鑑みると、ナサラワ州インキュベーション・プラントに導入した規模では過大となる。小規模農家、精米業者、流通業者の規模を考慮し、日本側が提案を行う適正な規模とする。

・ 日本側としては、建屋用の土地の確保に関し、土壌が砂地であることを懸念している。ナイジャ州は、この土壌基盤は他の建物でも使われており問題にはならないことを説明するとともに、NAMDA監視の下、整地はナイジェリア側負担事項とすることを確認した。

・ RIPMAPPに係るNAMDAの予算について、2014年分の予算は申請済み(58百万NGN)。2013年分は申請額に対し50%程度が承認されている。

・ ナイジャ州の受益者は各地に分散をしていることから、研修の方法として、移動研修車を活用した現地訪問研修とバスを２台購入し受講者を集めて研修するという案がNAMDA職員C/Pからでている。しかし、調査団からは、この車両についてはプロジェクトのスコープ外であり、この案を採用する際は、ナイジャ側で車両の調達を行う必要があることを説明した。専門家によれば、移動研修車はレンタカーで代用することも可能としている。

10. ナイジャ州ADP局長

日　時	11月21日（水）14：00～14：30	場所	ラフィア　Dachor 氏執務室
面談者	ADP 局長（別途面談者リストあり）		

・ プロジェクト終了期間後のインキュベーション・プラント活用について：初めはラフィアADP職員及び精米業者・流通業者のための研修場所として活用し、その後、ADPが所有権を保持したまま精米業者組合あるいは民間の業者に有料の貸し出しを行いたいと考えている。最も重要な視点は自立発展性であり、商業ベースであること、透明な会計、継続的な操業と維持管理、などが鍵を握る。ただし、活用方法は政策的な決定事項であるので、州政府の決定には、よりハイレベルでの意思決定が必要である。知事のポストハーベスト及びプロジェクトへの関心は大きいので支援を得られると思う。

・ 日本の技術協力は独特である。時間の使い方、コミュニケーションの取り方、プロトコール等がきめ細やかである。現在の活動に大きな支障はないが、車両の供与があれば、受益者のモニタリングなど機動的に活動を進められる。制約要因としての懸念事項は不安定な電力供給である。また、C/Pへのモチベーションを高めるために手当支給があるとよい。

・ 他の地域への拡大について、既に研修参加者以外からも関心が寄せられている。また、2015年のコメ輸入全面禁止を前に、精米技術向上の需要は高まっている。

・ 以前ののBadakoshiプログラムのようなナサラワ州による支援はない。また、直接の補助金制度はないが、品質向上のための投資の促進のためにADPは精米業者に小規模金融の保証人のような役割をすることはできるし、少なくとも金融機関を紹介はできる。

11. RIPMAPP JICA専門家

日　時	11月22日（木）9：00～10：00	場所	APM 会議室
面談者	RIPMAPP 山本総括、古市副総括、小山専門家、具専門家		

１．APM の C/P の活動状況について

・ （古市副総括）個人のパフォーマンスとしては非常に高く、パーボイル処理や精米について知識をもっており、また研修での講義の仕方については才能がある。一方、組織のパフォーマンスとしては、研修運営においてその能力が十分であるかどうかが疑問である。研修の計画段階において、まずAPMのC/Pが州政府・ADPのC/Pとのコミュニケーション・調整を図ることが期待されているが、現状は日本人専門家がそのような指示を出すまで事が進まない状況。APMから出張旅費が支給されていないことがAPMCPの積極性を阻害する要因にもなっており、省内で解決することを希望する。

・ （Nwanko氏）APMは研修を今まで経験してきて、研修の運営に問題は無い。出張旅費が解決されれば研修の運営は解決される。

・ （古市）各個人の研修での講師としてのパフォーマンスは良い。自分のC/Pの3名も機械の操作も良くできるし、講義でも講師としての技量を発揮している。しかし、APM組織自体の研修運営について主体性がないと考える。

・ （Nwanko氏）研修担当者が配置されているではないか。

・ （古市）研修総括者はカドゥナの出張事務所に配置されており、こちらからの発信があってもなかなか返信が来ずコミュニケーションも取りずらい、また、それ以上にこのプロジェクトの窓口となっているC/PもAPMの事務所に来ることはめったになく、会える機会がない。

・ （Nwanko氏）出張旅費の問題を解決し、プロジェクト対象州外の地方人材ではなく、アブジャを拠点とする人材をAPMのC/Pとして任命することを組織に進言したい。

・ （古市）APMが研修運営に関して主体的に取り組むためには、いわゆるオガ＝Boss（トップマネジメント）の意識・意思（willやintention）などが極めて重要で、出張旅費が解決されるだけでは不十分である

2．プロジェクト目標の達成見込みについて

・ （工藤）プロジェクト目標の達成指標に掲げられている「グレードA」を達成するために、まずは石抜きをする必要がある。しかし、小規模精米・流通業者にとって石抜き機を今すぐに購入することは困難。また、こうした小規模業者向けの金融商品があまりないことから、購入するための資金借入は難しいが、達成の見込みは如何か？

・ （小山専門家）パーボイルの仕方をプロジェクトが推奨する方法に変えた場合、石の有無に関係なく、単価は10%程度上昇する。年間100tのコメを処理するパーボイル業者の場合は1作期（ピーク期）当たり約7,000～8,000米ドルの収入増となる。石抜き機は発電機を含め1台当たり4,500米ドルであり、購入可能。これから1年を待てばこれら業者は石抜き機の購入が可能と想定されるが、プロジェクトの活動期間を鑑み次のピーク期を待たずに進めるためには、JICAよりインカインド（現物支給）にて融資を行うことも選択肢ではないか。

・ （Nwanko氏）石抜き機を購入しなくとも、比較的安価なタウポリンを農家が使用することにより、そもそもの石の混入は防げるのではないか？

・ （小山専門家）農家にはタウポリンを購入・使用するインセンティブはない。籾の購入段階において石の有無を含む籾の品質が考慮されないため。

・ （古市）コメのバリューチャーン上で精白米のトレーダーの一番反対側にいる農家とその籾の買い手が行う籾の売買現場では、籾は嵩取引であり、かつ籾品質を確認することや鑑定（テスト）する制度もない。したがって、品質が語られることなく売買されているのが現状である。そのため、籾の品質が改善されたことで、籾価格が高くならない限り、改善する機械や技術に投資する意欲は農家にはわかない。一方、精白米のトレーダー兼パーボイル加工業者やトレーダー兼精米業者などは、品質の変化による高価格の効果を明確に得られる立場にいるため、技術改善に取り組む動機づけができる。

・ (Nwanko氏)APMには、“Rice Transformation Agenda”の下、精米業者向けの石抜き機と農家向けの脱穀機を通常価格の半値で販売する政策がある(年間100台)。2013年分は完売済みだが、2014年10月ころに実施される見込み（今後、協調するのであれば実態の確認をしていく必要ある)。

3．プロジェクト活動のスケジュールについて

・ 活動の遅れが生じているのは、インキュベーション・プラントを活用した研修のみ。インキュベーション・プラントのプロジェクト終了後の活用については、所有権をADPとしたまま民間業者への貸し出しをすることが想定されている。しかし、機材の運用・維持管理、貸し出しの運営に関するADP・民間人材の能力強化には時間を要し、これから機材調達の始まるナイジャ州については、残りのプロジェクト期間でこれらの十分な能力強化を達成できるかどうか課題。

13. IFAD

日時	11月28日（木）11：15～12：15	場所	IFAD事務所
面談者	Mr. Benjamin Odoemena, Country Programme Officer		

先方との共有資料：プロジェクト概要パンフレット、RIPMAPP中間レビュー実施要領、合同レビュー評価報告書(以上英文)

1． IFADのValue Chain Development Programme

・ (Mr. Benjamin)2010～2015年の５年間のプログラム。需要サイドdrivenのアプローチで、精米・流通業者に農機の投入が収益向上につながることを見せるとともに、銀行から融資を受け・返済するための能力を強化することが大切。①Agricultural Market Development、②Processing Improvement、③Programme Management and Administrationの３つのコンポーネントから成る。対象地域での活動については現在事務所の設置やプロジェクト口座の開設手続きを行っており、1月中にはコンサルタントや機材調達を開始する予定。ナサラワ州は対象地域（6州）に入っていないが、ナイジャ州は入っている。各州4LGAが対象となり、ビダは入っていたはず。JICAの経験は貴重であり、是非レポート等を共有してほしい(面談後共有済)。

・ (笹部)RIPMAPP中間レビューを経て、品質向上において重要となる石抜き機は4,000米ドル(※発電機を含)程。特にナイジャ州ビダのように州都の銀行から離れた所で少額融資を受けるのは難しい状況。これを解決するような金融商品はプログラムにあるか？

・ (Mr. Benjamin)IFADは連邦政府に対し融資を行い、州政府、民間銀行(CBN)、マイクロファイナンス機関(MFI)を通して受益者に融資される。貸出の対象は個人ではなくグループであり、グループが債務保証を行うことになる。返済期間は3～9カ月、貸出最低金額はCBN、MFIの審査にかかるコストにより異なる。組織化により審査のコストを削減するとともに、ナイジェリア政府が行っているNIRSAL“Nigeria Incentive-Based Risk-Sharing System for Agricultural Leuding”より、借りやすい条件がつくられている。IFADにはほかに“Rural Finance Institutions Building Programme(2010-2017)”があり、これはナイジャ州は対象ではないがナサラワ州は対象。貸し手と借り手の信頼を醸成するための仕組み作りを試みている。

2． ナイジェリアの政策について(意見交換)

・ （笹部）ナイジェリア政府のRTA(Rice Transformation Agenda)の下、石抜き機が割引価格で政府より配布されている。短期的な実施であれば農機そのものの普及に役立ち、プロジェクトの中間レビューでもこの政策の活用を提言している。一方、この政策が長期にわたると

民間の農機市場の成長を阻害し得ることも懸念。精米業者・流通業者が必要に応じて融資を受けながら自ら購入できるような出口戦略が必要と考える。

・ (Mr. Benjamin) 同感である。ナイジェリアの農業従事者人口の多さを考えれば、政府がすべての農家を支援するのは不可能であり、政府は触媒として農家を活性させるような役割でなければならない。IFADは政策提言の機会を設け、アドバイスを述べている。

主要面談者リスト

1．カウンターパート

（1）APM

Engr. O.B. Jatto	Activng Director
Mr. Shuaibu I.	Assistant Chief, Agriculture Dept.
Mr. B. Usman	Senior Agriculture Engineer
Engr. Isah Mohammed	Agriculture Engineer
Mr. J.M. Dadet	Project Coordinator
Mr. Igoji G. I.	Chief, Agriculture Dept.
Engr. Ajenifuja Maruf Olalekan	Principal Agricultural Engineer

（2）ナサラワ州 ADP

Mr. Naphtali J. Dachor	Project Coordinator
Mr. Ahmed Tanko	Post-Harvest Technology
Mr. Awal Umar A.	Agro-processing officer
Mr. Emmanuel M. Alanana	Director of Extension
Ms. Maimunat T. Tijjani Usman	Block Extension Agent
Ms. Patricia A. W.Jika	Evaluation Statistical Officer, Planning, M&E
Mr. Yakubu I. Mohammed	Area Extension Officer
Mr. Zakari D. Usman	Block Extension Supervisor
Mr. James S. Egwa	Zonal Extension Officer

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Mr. Mohammed Isah Musa	Planning, NAMDA
Mr. Abubakar Balarabe Sedeeq	Engineering, NAMDA
Dr. Mathew Ahmed	Zonal Programme Manager, Bida
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(3) 流通業者（ナサラワ州）

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Mr. SHARIF MAINA

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(4) 精米業者（ナサラワ州）

Mr. Bashir Salisu

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木花和仁	一等書記官

4. JICA ナイジェリア事務所

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下平千恵	所員

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