

ネパール連邦民主共和国
養蚕振興・普及プロジェクト
終了時評価調査報告書

平成 26 年 3 月
(2014年)

独立行政法人国際協力機構
ネパール事務所

ネパ事
JR
13-002

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序 文

独立行政法人国際協力機構（JICA）は、ネパール連邦民主共和国（以下、「ネパール」と記す）と締結した討議議事録（R/D）に基づき、技術協力プロジェクト「養蚕振興・普及プロジェクト」を2006年12月から2011年11月まで5年間実施いたしました。

このたび、JICAは協力期間中の活動実績等についてネパール側と合同で総合的な評価を行うとともに、プロジェクト終了後を見据えた提言を行うため、2011年6月19日から7月4日まで、JICAネパール事務所 次長 武 徹を団長とする終了時評価を実施しました。

本報告書は、同調査団によるネパール政府関係者との協議及び評価結果等を取りまとめたものであり、本プロジェクト並びに関連する国際協力の推進に活用され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いただいた両国の関係者に対し、心から感謝の意を表します。

平成26年3月

独立行政法人国際協力機構
ネパール事務所長 清水 勉

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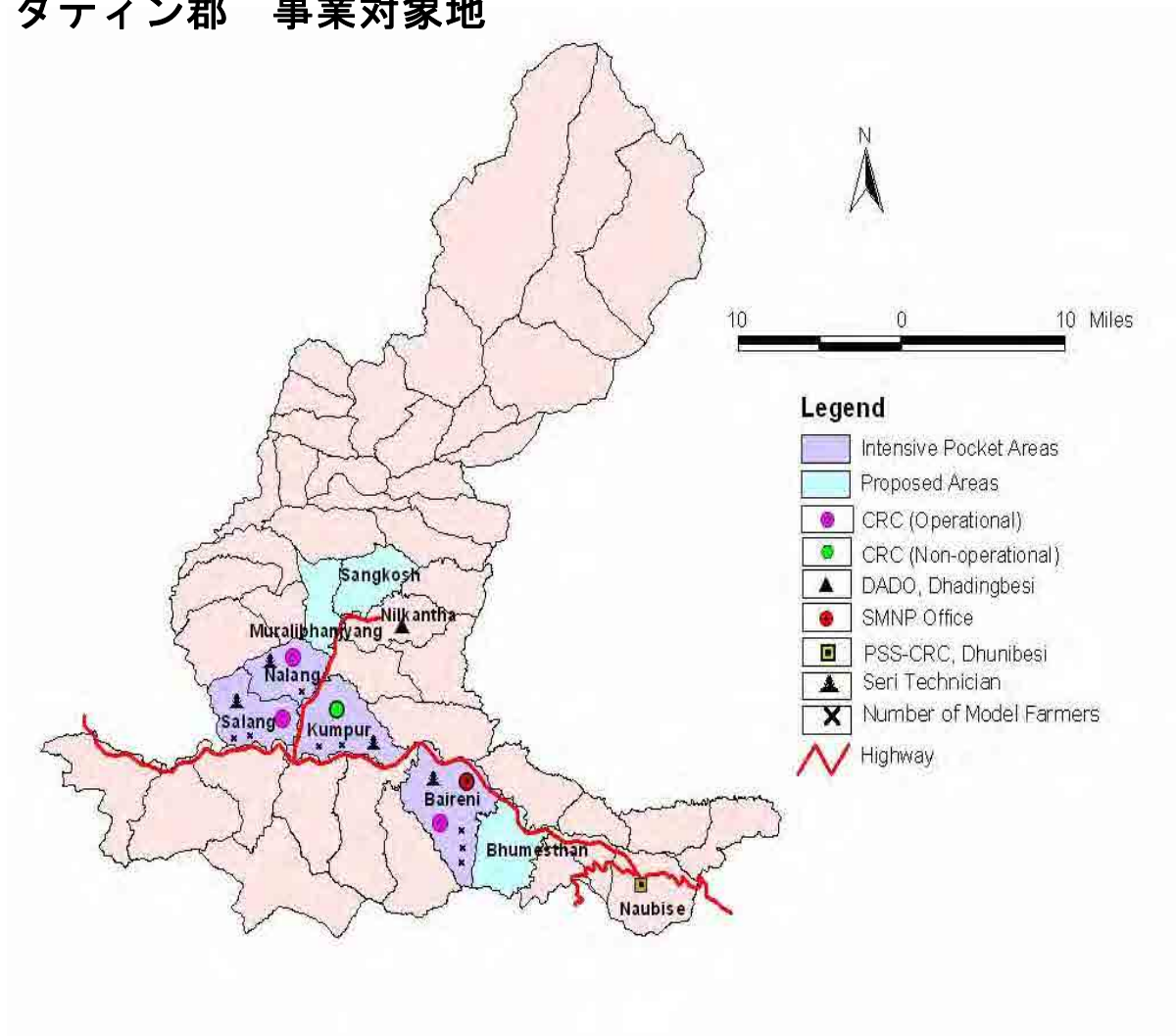
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プロジェクト位置図



ダディン郡 事業対象地



写

真



バイレニ村落開発委員会（VDC）：農家の蚕室



アディカリ製糸工場：農家から買い上げた繭を生糸に加工している。



ナラン VDC：農家の蚕室にある繭



ドニベンシ支場：桑畑と稚蚕飼育施設兼研修施設



ナラン VDC：座繰りシルクを作っている女性グループ



農業協同組合省農業局：合同調整委員会の様子

略 語 表

ACP	Association for Craft Producers	手工芸品協会（NGO）
C/P	Counterpart	カウンターパート
CRC	Community Rearing Center	村落稚蚕飼育所
DADO	District Agricultural Development Office	郡農業開発事務所
DOA	Department of Agriculture	（農業協同組合省）農業局
DOIED	Directorate of Industrial Entomology Development	（農業局）産業昆虫課
JCC	Joint Coordination Committee	合同調整委員会
JICA	Japan International Cooperation Agency	独立行政法人国際協力機構
JT	Junior Technician	普及員
JTA	Junior Technical Assistant	普及員補
M/M	Minutes of Meeting	ミニッツ、協議議事録
MOAC	Ministry of Agriculture and Cooperatives	農業協同組合省
NGO	Non-Governmental Organization	非政府組織
NPC	National Planning Commission	国家計画委員会
NPR	Nepalese Rupee	ネパール・ルピー
OJT	On-the-Job Training	実地研修
PDM	Project Design Matrix	プロジェクト・デザイン・マトリックス
PO	Plan of Operations	活動計画表
PPP	Public Private Partnership	官民連携
PQCPPP	Promotion of Quality Cocoon Production and Processing Project	養蚕振興・普及プロジェクト
PSS-CRC	Parental Stock Seed Cocoon Resource Centre, Dhunibesi	ドニベシ種繭資源センター （ドニベシ支場）
RCC	Regional Coordination Committee	地域調整会議（ダディン郡）
R/D	Record of Discussions	討議議事録
SAN	Silk Association of Nepal	ネパールシルク協会
SDD	Sericulture Development Division	養蚕試験場
SDP	Sericulture Development Program	養蚕振興計画
SM	Silk Mobilizer	シルクモビライザー
TADA	Travel Allowance & Daily Allowance	交通費・日当
VDC	Village Development Committee	村落開発委員会
WGA	Women Guidance Association	女性指導協会（民間企業）

終了時評価調査結果要約表

1. 案件の概要	
国名：ネパール連邦民主共和国	案件名：養蚕振興・普及プロジェクト
分野：農業	援助形態：技術協力プロジェクト
所轄部署：JICAネパール事務所	協力金額（評価時点）：168百万円
協力期間	2006年12月から2011年11月
	先方関係機関：農業協同組合省（MOAC） ¹ 農業局（DOA）産業昆虫課（DOIED） 日本側協力機関：農林水産省
他の関連協力：	
<p>1-1 協力の背景と概要</p> <p>ネパールは就業人口の65%が農業に従事し、国民総生産の約40%を農産物が占める農業国である。ネパールの国土は山地が多くを占め、耕作可能地はほぼ開墾されていることから、多様な地形と気候を活かし、養蚕をはじめ、果樹、茶などの付加価値の高い換金作物の生産が求められている。</p> <p>ネパールの養蚕は、開始から36年と歴史が浅く、1戸当たりの桑園面積は群馬県の約3分の1、1ha当たり繭生産量は約4分の1、1戸当たり繭生産量は約14分の1と非常に低いレベルである。また、生糸品質の面でも国際規格A格程度（インドは2A～3A、日本が4Aで、ネパール産生糸より高品質）となっており、国際市場の需要に对应されていない。繭生産性が低く繭品質が悪い直接の原因は、適切な技術を提供できる技術者・普及員がいないことや稚蚕共同飼育所などの施設がないため、温湿度管理技術、病気の防除技術、給桑（きゅうそう）技術、上簇（じょうぞく）技術、更には選繭（せんけん）技術が農家に導入されていない、という理由が挙げられる。</p> <p>ネパール政府は現在まで、農家への繭生産技術指導から繭の購入、繭乾燥・生糸生産までを一貫して担い、蚕糸業の振興に主導的な役割を果たしてきた。これまでネパール農業協同組合省はドナー・NGO等からの支援を得つつ、養蚕農家の技術リソースとなる各地の支場の整備、製糸機械の導入、日本から導入した新しい蚕種の系統保存・蚕種の安定生産・供給を軌道に乗せるなど一定の成果を上げてきた。しかし、生産された繭は低品質で、さらにその繭から政府工場で生産される生糸は低品質かつ生産コストが嵩むため、隣国の中国・インドから輸出される生糸と比較し国際競争力をもつことができていない。</p> <p>この現状を踏まえ、本案件はネパールの養蚕農家の収入向上を上位目標におき、技術協力プロジェクトを実施する。プロジェクトは、村落レベルにおける普及員・農家等への優良繭生産技術の指導と、組織化による品質向上のための実践的取り組みと政府、農家、民間企業の連携強化を通じ、収入向上の基礎となる優良繭・シルクの生産モデルを実証する。</p>	

¹ 2012年5月の省庁改編により、農業開発省（Ministry of Agriculture Development）に改称。

1-2 協力内容

(1) 上位目標

1. 優良繭及びオリジナルシルク生産のモデル²がネパール国内で展開される。
2. 改善を通じて、養蚕農家及び蚕糸業関係者の収入が向上する。

(2) プロジェクト目標

養蚕農家グループと政府普及員／民間企業の能力向上・連携強化を通じて、優良繭・シルクの生産モデルが実証される。

(3) 成果

1. 普及員の能力強化を通じて、養蚕農家グループの能力が強化される。
2. 市場開拓のための政府、民間企業、農家グループ間の協力関係が構築される。
3. 政府、農家、民間企業間の連携のための産業昆虫課の能力が強化される。

(4) 投入 [US\$ 1=NPR 98.697946 NPR 1=JPY. 1.12996 (2014年2月)]

1) 日本側

- ・ 専門家派遣：長期専門家派遣 延べ2名、短期専門家派遣 延べ25名
- ・ 研修員受入れ：第三国研修 延べ13名
- ・ 機材供与：1,717,000円 (2011年3月末時点)
- ・ ローカルコスト負担：37,322,000円 (2011年3月末時点)

2) ネパール側

- ・ カウンターパート：延べ14名
- ・ ローカルコスト：ネパール政府は、養蚕農家のみならず、座繰り生糸を生産している民間企業に対しても補助金を拠出している。また産業昆虫課 (DOIED) は普及員／普及員補 (JT/JTA) に対して、農民活動をモニターする際の交通費・日当を提供している。ネパール側によると、プロジェクト期間中、ドネベシ支場に割り当てられた予算は、約NPR 29,576,000であり、そのうち約15%はプロジェクト対象地域外であるヌワコット地域のためのものであった。

2. 評価調査団の概要

調査団	日本側
	武 徹 総括 JICAネパール事務所 次長 木内 信 養蚕振興 独立行政法人農業生物資源研究所 昆虫科学研究領域長 有馬 朋宏 計画管理 JICAネパール事務所 所員 岸並 賜 評価分析 (株)国際開発アソシエイツ
	ネパール側
	Ms. Uma Maiya SHRESTHA, Senior Agricultural Economist, Department of Agriculture, MOAC, (Team Leader of Joint Evaluation Team)

² 本プロジェクトで確立したモデルの内容は下記のとおり。

- (1) カスケード方式による研修及びそのための技術マニュアル作成
- (2) 民間企業による養蚕農家グループからの繭・座繰り生糸の直接買取り
- (3) 民間企業による座繰り生糸製品開発
- (4) チェックシートを活用したJT/JTA及びシルクモビライザー (SM) によるモニタリング
- (5) 養蚕統計・モニタリング制度の構築
- (6) 協同組合設立に向けた養蚕農家グループの強化

Mr. Bhoj Raj SAPKOTA, Agricultural Economist, Monitoring and Evaluation Division,
MOAC

調査期間：2011年6月19日～7月6日

評価種類：終了時評価

3. 評価結果の概要

3-1 実績の確認

(1) プロジェクト目標

プロジェクトの指標である対象地域における過去3年間の正常繭歩合は89.3%、繭層歩合は22.6%、孵化歩合は90%以上であった。しかしながら、箱当たり収繭量は以下の表のとおりであり、目標値には達していない（蚕期によっては、目標の20kgを上回っている村も存在する）。

2008年	2009年	2010年
14.6kg	12.7kg	14.0kg

また、プロジェクトはいくつかの民間企業に座繰り生糸を提供するとともに商品開発活動を支援した。その結果、手工芸品協会（ACP）、Mahaguthi、Kala Guthi及び女子指導協会（WGA）が、様々なスカーフやショールといった新商品を生産している。

(2) 成果

成果1：

予定通り5種類の技術マニュアルと、飼育カレンダーが作成され、JT/JTA、SM及び養蚕農家によって使用されている。また、農家によっては適用されていない技術が若干あるものの、主な養蚕技術の適用率（定着率）は、ナラン村、サラン村及びバイレニ村において、56.3%から61.6%に上昇している。一方、Cランク（一部技術は利用しているものの、改善を要する）の農家は12.6%から1.2%に大幅に減少している。加えて、JT/JTA対象の研修がオフィサーにより3回実施され、研修前後に内容の理解度を測るための試験が実施された。その結果、平均49%の向上が確認された。

成果2：

プロジェクトにより、繭質の評価に不可欠な技術マニュアルが作成され、JT/JTA及びSMを対象に研修が実施された。同時にネパール政府は、繭や生糸の価格を決定するために農業局（DOA）、DOIED、ネパールシルク協会（SAN）、民間セクター及び養蚕農家から構成される委員会を設置した。この委員会は繭生産に係る経費、繭質、国際価格などを十分に考慮したうえで、繭の価格改定を実施している。さらに、幾つかの民間企業が既に座繰り生糸製品の開発に参入するとともに、政府、民間企業、農家によるInteraction Meetingが合計18回開催され、繭取引、生産、市場システム等について議論が行われた。

成果3：

プロジェクトはナラン村及びサラン村において養蚕農家グループを対象に、座繰り生糸の生産を開始するためのファシリテーションを実施した。その結果、現在では養蚕農家グループが中心となって座繰り生糸を生産し、民間企業に販売するまでに至っている。養蚕農家グループの組織化については、すべての養蚕農家がいずれかのグループに属し、多くのグループはマイクロクレジットによるローンを提供し、適切な資金の管理を行っている。政府の農家グループ・民間企業に対する積極的関与（農家訪問12回/年、民間訪問3回/

年)については、サラン村でのみ目標の12回を上回った。また、DOIEDによる民間企業訪問の回数は年間で18回を数え、目標を大きく上回った。加えて、データ収集のためのフォーマットを作成し、養蚕統計を確立するためのデータを収集・取りまとめるなどして、統計、モニタリングシステムの導入を実施した。

3-2 評価結果の要約

(1) 妥当性

プロジェクトはネパールの政策及びニーズと合致している。国家3カ年計画(2010/11-2012/13)では、貧困削減を優先課題の一つとして取り上げているが、換金性の高い作物である養蚕を振興することは貧困削減に寄与することから、同計画とも合致している。また、以前の国家3カ年計画(2007/2008-2009/2010)においては、貧困を削減するための重要な産業である農業の一つとして養蚕が取り上げられていた。加えて、国家計画委員会(NPC)は貧困削減に係る養蚕の可能性を考慮し、2010/2011年度の政策優先順位においては、養蚕を「プライオリティ1」と位置づけ、高い優先順位を与えている。したがって、プロジェクトはネパールの政策との整合性は高い。

(2) 有効性

プロジェクトの指標である①正常繭歩合80%、②繭層歩合20%、③孵化歩合90%がそれぞれ達成されており、民間企業によるオリジナルシルクの生産も行われていることから、プロジェクト目標はおおむね達成されると予測される。しかしながら、箱当たり収繭量については、2010年の平均値は14.0kgであり、指標である20kgに到達していない。特に、秋第2蚕期の収繭量が極めて低い。収繭量は極めて重要な指標であるため、有効性は中程度であると判断される。しかしながら、中間評価時に満たされていないと指摘されていた蚕糸業への民間投資の推進環境の整備等の外部条件は徐々に満たされつつある。

(3) 効率性

活動が順調に実施されており、3つの成果はおおむね順調に達成されつつある。全般的に投入は質、量、タイミングともに適切であり、プロジェクトの活動を実施し、成果を産出するために十分活用されている。

しかしながら、ネパール側の投入については、カウンターパートがプロジェクト専任ではなく、また頻繁に交代した。更には、JT/JTAに対する交通費・日当の予算が十分に確保されず、養蚕農家に対する普及活動を年間計画に基づいて実施することが困難であった、と指摘されている。

以上のことから、効率性は比較的高い。

(4) インパクト

プロジェクトの対象地域はダディン郡に限定されているが、高品質の繭生産に係る技術マニュアルを使った研修は、他地域の支場に配置されているJT/JTAに対しても行われ、配布された技術マニュアルは、養蚕技術の知識・技術を普及するために活用されている。加えて、座繰り生糸生産はダディン郡以外の地域にも普及しており、また座繰り生糸を使用した商品は民間企業により開発・販売されている。また、プロジェクトの指導・助言により、DOIEDは民間企業に繭や座繰り生糸の取引を促進するための補助政策を開始し、民間企業の参入に途を拓いた。ナラン村及びサラン村のグループがそれぞれ92.5kg、160.8kgの座繰り生糸を生産し、民間企業に販売を行った。また、バイレニ村にはプロジェクト及びDOIEDによる支援を受け、これまでに1トンの座繰り生糸を生産した養蚕農家/起業家が現れた。上記のような、養蚕農家による座繰り生糸生産による収入の合計は、NPR 2,864,200

である。これら座繰り生糸生産グループで働いているのは多くが女性であり、大規模ではないものの、農村女性に就業機会と現金収入機会を提供している。

(5) 持続性

政策・制度面では、国家養蚕振興政策はいまだ承認されていないものの、プロジェクトはネパールの政策及びニーズと合致しており、今後とも支援政策の継続が期待される。さらに、2009年より養蚕農家と民間企業の直接取引の制度が導入され、その結果、民間企業による商品開発が進み、民間企業の座繰り生糸の需要が高まっている。また技術面では、カスケード方式 (Officer→JT/JTA→SM→養蚕農家) による研修システムを導入したことによって、ネパール側は今後自らが活動を継続・拡大する手法を身につけたといえる。しかしながら、財政面が脆弱であること、カウンターパートの度重なる交代はプロジェクトによるプラスの効果を低減することとなった。

3-3 貢献要因と阻害要因の検証

上記5項目評価において既に述べているが、主な貢献要因と阻害要因は以下のとおりである。

主な貢献要因としては、2009年より養蚕農家と民間企業の繭・座繰り生糸の直接取引が開始され、その結果、民間企業の座繰り生糸についての理解が深まり、座繰り生糸製品開発が進み、繭・座繰り生糸の需要が高まったことが挙げられる。

主な阻害要因としては、プロジェクト・ダイレクターを含むカウンターパートが頻繁に異動したこと、いまだ国家養蚕振興政策が承認されておらず、補助金を含む養蚕振興に対する政策的なコミットメントが弱いことなどが挙げられる。

3-4 結論

プロジェクト活動は計画通り進められており、プロジェクト終了時には一定程度プロジェクト目標を達成することが想定される。

養蚕は、桑生産、蚕の飼育、座繰り生糸の生産、生糸を用いた製品開発といった様々な側面をもつ複合的な産業であり、それぞれの側面のもつ特徴とそれらを結びつけるサプライチェーンを意識した支援を行うことが重要である。

養蚕農家が設備投資に回せる資金にも限りがあり、また前述のとおり、養蚕業が複合的な側面をもつ産業であることから、一部指標についてはいまだ達成されていない。しかしながら、かかる状況にありながら、民間企業の活力を取り込む政策が実施されたこともあり、5項目評価の観点からも、ポジティブな成果を確認することができた。

今後、プロジェクトは2011年11月に終了を迎えることになるが、残りのプロジェクト期間においても本調査団で行った提言に基づきつつプロジェクトの運営を行い、プロジェクト終了後も見据えた持続性の強化が行われることを期待したい。

3-5 提言

<プロジェクト終了後もフォローしていく事項>

(1) 養蚕振興政策の承認

2008年8月の運営指導調査団の提言を受け、農業協同組合省 (MOAC) にて国家養蚕振興政策の草案が作成されたにもかかわらず、いまだ省内での改訂プロセスを完了していない。高品質の繭生産、民間企業の参入、普及員による普及活動促進、本プロジェクトで確立したモデルの普及といった点を政策的な観点から担保・促進していくためにも同政策の迅速な承認が望まれる。

(2) 養蚕振興関連機関との連携強化

座繰り生糸生産に係るワークショップが開催されるなどの本プロジェクトでの活動を通じ、政府、民間企業及び養蚕農家グループの関係は強化され、蚕糸業に係る上流から下流までのサプライチェーンが構築されている。蚕糸業は、野菜の生育等に向かない地方部においては有望な産業の一つであり、こうした関係者の連携を強化する活動は今後とも続けられるべきである。そのためには、繭生産後の活動を担っている産業省（Ministry of Commerce and Industry）や商工会議所といったステークホルダーも巻き込んだ枠組みを構築し、更なる関係機関との連携強化を図ることが望まれる。

(3) シルク振興のためのボランティア派遣

本プロジェクトの協力・支援により、民間企業の座繰り生糸製品開発に係る意欲・需要は旺盛である。しかしながら、座繰り生糸製品開発に参入している民間企業の数はいまだ限定的であり、絹という素材に対する知識もまだ十分ではない。今後、さらに民間企業の参入を促進し、今回プロジェクトで構築したサプライチェーンを維持・発展させるためには、「シルク振興」を行うボランティアを派遣し、プロジェクトの成果のフォローアップ活動を行うことも検討の価値がある。

(4) シルクモビライザー（SM）の制度化

本プロジェクトにおいては、養蚕技術普及のため、優れた養蚕技術を持つ農家をSMとして選定し、養蚕農家への技術普及に活用してきた。養蚕技術普及においてこうしたSMの果たす役割は重要であり、今後ネパール側によって制度化され、SMの活動が維持されることが望まれる。

(5) JT/JTAのファシリテーションスキルの向上

本プロジェクトにおいては、ローカルNGOを活用し、農民組織の強化に取り組んできたが、(ネパール政府の方針もあり)同活動へのJT/JTAの関与は十分ではなかったこともあり、農民組織強化等に係るJT/JTAのファシリテーションスキルはいまだ十分なものではない。したがって、今後JT/JTAのファシリテーションスキル強化に係る取り組みが行われることが望まれる。

(6) 収繭量の改善

本プロジェクトのプロジェクト目標の指標として、「箱当たり収繭量20kg」と設定されていたものの、2008年：14.6kg、2009年：12.7kg、2010年：14.0kgと指標を達成できていない。これは、とりわけ秋第2期の収繭量が他の期に比べ少ないことによる影響が大きい。したがって、収繭量を増やすためには、技術ガイドラインに基づき、適切な消毒、十分な良品質の桑の供給、適切な飼育環境の保持及び蚕の取り扱いなどの指導が、JT/JTAにより実施されることが望まれる。

(7) ドネベシ支場における稚蚕飼育室の有効活用

本プロジェクトにおいて、ドネベシ支場に稚蚕飼育室が建設されたが、棚の構造が利用しにくい構造となっており、現在は研修施設として利用されているものの、稚蚕飼育室としては利用されていない。技術仕様に従って、DOIED及びドネベシ支場がこの施設を稚蚕飼育室として活用することが期待される。

(8) 予算措置

持続性の観点から、ネパール政府はプロジェクト活動を支援する経費（JT/JTAの普及活

動費等) に対し、十分な予算措置を行うことが求められる。

<プロジェクト期間内にフォローすべき事項>

(9) ベースラインデータの収集

上位目標の指標である「優良繭の販売による対象地域農家の現金収入向上」に関し、プロジェクト開始時のベースラインデータが収集されていなかったところ、プロジェクトで構築した養蚕統計・モニタリングシステムを通じて、同指標に係るデータ収集が行われることが望まれる。また、今後他のプロジェクトにおいても、事業開始時点でのベースラインデータの収集を行うことが望まれる。

(10) 座繰り器の活用

ネパール側の要望に基づき、座繰り器10基をドニベシ支場に供与したものの、コミュニティへの研修が一通り実施されたことと、繭の買い上げ政策が変更となったなどの理由により、現在は活用されていない。本座繰り器を有効活用すべく、民間企業及び農民に対する研修プログラムを作成し、同研修に関するアナウンスを行うことが望まれる。民間企業は座繰り生糸製品の開発を進めており、同種の研修に係るニーズは高いものと推測される。

Summary

I. Outline of the Project	
Country: Nepal	Project title : Promotion of Quality Cocoon Production and Processing Project (PQCPPP)
Issue / Sector: Agriculture	Cooperation scheme: Technical Cooperation Project
Division in charge: JICA Nepal Office	Total cost (As of July 3rd): 168 million JPY
Period of Cooperation	December 2006 to November 2011
	Partner Country's Implementing Organization : Ministry of Agriculture and Cooperatives (MOAC) Department of Agriculture (DOA) Directorate of Industrial Entomology Development (DOIED)
	Supporting Organization in Japan : Ministry of Agriculture, Forestry and Fisheries
Related Cooperation :	
1. Background of the Project	
<p>In Nepal, around 66% of the employed population is engaged in agriculture, which generates around one third of Gross Domestic Product (GDP) of the country. Nepalese land is characterized by its high ratio of mountainous area coverage and arable land is almost completely exploited. Therefore, production of high value added crops (e.g. sericulture, fruit cultivation and tea cultivation) with utilization of various geographic and climatic conditions is expected to be promising.</p> <p>Sericulture in Nepal began around 30 years ago, which is relatively recent compared to that of other countries. Compared to Gunma prefecture which is the largest cocoon production area in Japan, mulberry plantation area per household is 1/3, cocoon yield per ha is 1/4, and production per household is 1/14. These facts indicate the low productivity of sericulture in the country. Further, the quality of raw silk made in Nepal is "Grade A" in most cases, whereas Indian silk is "Grade 2A" or "Grade 4A" and Japanese one is "Grade 4A". It shows that the quality of Nepalese silk does not respond to the expectation/needs of the international market. The direct reasons of low productivity and quality come from the limited number of skilled technicians and extension workers to provide appropriate techniques (e.g. mulberry cultivation, disease prevention, rearing method, mounting method, and cocoon selection).</p> <p>The Government of Nepal played a leading role on the development of the domestic silk industry by carrying out the introduction and instruction of cocoon production, cocoon procurement, drying and production of raw silk from the procured cocoons. The Ministry of Agriculture and Cooperatives made several achievements on sericulture development (cf. establishing branch offices in several regions, introducing reeling machines, preserving new varieties of silkworm from Japan, silkworm egg production and distribution, etc.) with support from donor agencies and NGOs. The quality of the produced cocoon, however, remained at a low level and led not only to the lower quality of raw silk, but also to higher costs, compared to that of the market price. Accordingly, Nepalese raw silk could not compete against Chinese and Indian silk which are also imported to Nepal. Together with the officially fixed pricing system, the raw silk made by the Government was not likely to be sold, which indicated that the more the Government produced raw silk from low quality cocoon, the more deficits emerged.</p> <p>Under these circumstances, the Government of Nepal requested the Government of Japan for a technical cooperation project for verification of quality cocoon and silk production model. In response</p>	

to the request, JICA, together with the Government of Nepal started the Project in December 2006.

2. Project Overview

(1) Overall Goal:

- The model* for quality cocoon and silk production are replicated to other parts of Nepal.
- The income of seri-farmers and workers around serifarmers is increased through the improvement.

(2) Project Purpose:

The quality cocoon and silk production model is verified in the target area through capacity building and strengthening of the linkage among serifarmers groups, Government technicians, NGOs, Private entrepreneurs and other stakeholders.

(3) Outputs: (Revised as a result of the Joint Mid-Term Evaluation Study)

1. The technical capacity among farmers groups are strengthened through capacity development of Government technicians.
2. The cooperation among Government, Private entrepreneurs, and seri-farmers' groups for market exploration is established.
3. The capacity of DOIED to strengthen linkage among Governmental agencies, farmers and Private entrepreneurs is strengthened.

(4) Inputs (as of this Mid-Term Evaluation)

Japanese side:

Long-term Experts: 2 persons in total, Short-term Experts: 25 persons in total

Training in overseas: 13 persons in total

Equipment: 1,717,000 Japanese Yen (as of March 2011)

Local cost: 37,322,000 Japanese Yen (as of March 2011)

Nepalese side:

Counterparts: 14 persons

Local cost: The Government provides subsidy not only for seri-farmers but also for private entrepreneurs which produce Zaguri silk. DOIED also provides travel/daily allowance for JT/JTA to monitor farmers' activities. According to the Nepalese side, the allocated budget for Dhunibesi farm was approximately NRs. 29,576,000. About 15% of the budget was spent for Nuwakot area.

* A model specified in the Project Purpose mainly consists of the following components.

- Preparation of manuals and implementation of training courses in a cascade manner (Officers→JT/JTA→SM→seri-farmers)
- Establishment of a system in which private entrepreneurs directly buy Zaguri silk from seri-farmers
- Development of Zaguri silk products by private entrepreneurs
- Establishment of a monitoring system by JT/JTA and SM by using an inspection sheet
- Establishment of collection system of statistics regarding sericulture
- Strengthening of seri-farmers groups to the direction of establishment of cooperatives

II. Evaluation Team											
Members of Evaluation Team	Japanese Side										
	<table border="1"> <thead> <tr> <th>Name</th> <th>Designation & Organization</th> </tr> </thead> <tbody> <tr> <td>Mr. Toru TAKE Team Leader</td> <td>Senior Representative, JICA Nepal Office</td> </tr> <tr> <td>Dr. Makoto KIUCHI</td> <td>Director, Division of Insect Sciences, National Institute of Agrobiological Sciences</td> </tr> <tr> <td>Mr. Tomohiro ARIMA</td> <td>Representative, JICA Nepal Office</td> </tr> <tr> <td>Mr. Atau KISHINAMI</td> <td>Consultant, International Development Associates, Ltd.</td> </tr> </tbody> </table>	Name	Designation & Organization	Mr. Toru TAKE Team Leader	Senior Representative, JICA Nepal Office	Dr. Makoto KIUCHI	Director, Division of Insect Sciences, National Institute of Agrobiological Sciences	Mr. Tomohiro ARIMA	Representative, JICA Nepal Office	Mr. Atau KISHINAMI	Consultant, International Development Associates, Ltd.
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Mr. Bhoj Raj SAPKOTA	Agricultural Economist, Monitoring and Evaluation Division, MOAC										
Period of Evaluation: 19 th June, 2011~6 th July, 2011	Type of Evaluation: Terminal Evaluation										
III. Results of Evaluation											
1. Achievements											
(1) Project Purposes											
<p>Looking at the record of past three years, the normal cocoon ratio at the Project site was more than 89.3%, while the shell ratio was more than 22.6% and hatching percentage was more than 90%.</p> <p>Annual average yield per box, however, was below the target rate as shown in the below table.</p>											
<table border="1"> <thead> <tr> <th>2008</th> <th>2009</th> <th>2010</th> </tr> </thead> <tbody> <tr> <td>14.6kg</td> <td>12.7kg</td> <td>14.0kg</td> </tr> </tbody> </table>		2008	2009	2010	14.6kg	12.7kg	14.0kg				
2008	2009	2010									
14.6kg	12.7kg	14.0kg									
(The yield of the following season of some areas was beyond the target of 20kg)											
<p>The Project provided Zaguri silk for several private companies and supported product development activities. As a result, Association of Craft Producers (ACP), Mahaguthi, Kala Guthi and Women Guidance Association (WGA) have produced new products (e.g. scarves and shawls) and started their sales.</p>											
(2) Outputs											
Output 1:											
<p>Five technical manuals and a rearing calendar were published as planned and utilized by JT/JTAs, silk mobilizers and sericulture farmers. The rate of adoption of major sericulture techniques slightly increased from 56.3% to 61.6% in three villages, Nalang, Salang and Baireni, while the ratio of “C” rank farmers who partially utilize technique and require improvement decreased from 12.6% to 1.2%. In addition, JT/JTA trainings were implemented three times by officers. Pre-test and post-test were conducted at the trainings to survey on JT/JTAs’ understanding</p>											

of the training contents. In average, 49% improvement was observed.

Output 2:

The Project published a technical manual which is inevitable for fair cocoon quality assessment, and implemented training for JT/JTA and silk mobilizers. At the same time, the government set up a committee, which consists of DOA, DOIED, SAN, private sector and sericulture farmers, to determine prices of cocoon and silk. The committee has already revised prices, carefully considering cocoon production cost, quality, international price, etc. In addition, Interaction meetings were held 18 times and government, private sector and sericulture farmers discussed such issues as cocoon transaction, production, market system, etc.

Output 3:

The Project facilitated sericulture groups in Nalang and Salang to start Zaguri production and as a result, they have already started to sell Zaguri silk to the private sector. In terms of institutional development of sericulture groups, all sericulture farmers belong to some group and the majority of them use micro credit loans and manage their saving and fund in a proper way. Regarding involvement of Government in activities of farmer groups and Private entrepreneurs (12 visits/yr to farmer groups, 3 visits/yr to private sector), the case of Salang only exceeded the target. The visit to the private sector significantly exceeded the target (18 times). In addition, various formats for data collection were produced and new monitoring system and statistics are introduced.

2. Summary of Evaluation Results

(1) Relevance

The Project is in harmony with the Nepalese policies and relevant to the needs of the government. Three-Year National Plan states the poverty alleviation as one of the priority issues and sericulture development, which generates cash, is considered to contribute to alleviate poverty. The previous Three-Year Plan (2007/2008-2009/2010) also pointed out that sericulture is one of the agricultural industries that alleviate poverty. In addition, considering potentiality of the sericulture program, NPC prioritized it as “Priority 1”. Furthermore, The Project is in line with the needs of beneficiaries Government, and ODA policy of Japan since Japan’s past experience in the field of sericulture can be utilized.

(2) Effectiveness

The Project Purpose will generally be achieved by the Project completion as indicated by: i) the normal cocoon ratio at the Project site, the shell ratio and hatching percentage and ii) production of original silk products by private entrepreneurs. The average yield per box, however, was 14.0kg in 2010, which fell short of the target figure of 20kg, because rearing result of autumn 2nd season was unexpectedly low. The average yield is a quite important index and therefore, Effectiveness is considered moderate. Important assumptions to achieve the Project Purpose such as creation of environment for Private entrepreneurs to invest on original silk products have been realized.

(3) Efficiency

Most indicators at the Outputs level have already shown progression towards their fulfilment by the general achievement of Activities. In general, inputs were appropriate in terms of quality, quantity and timing and have sufficiently been utilized for conducting activities and producing

Outputs. Regarding the Nepalese inputs, counterpart personnel are not full-time and quite often transferred. It was pointed out that daily/travel allowance for JT/JTA are not adequate to sufficiently monitor farmers' activities as proposed in the Annual Program. Efficiency is considered relatively high.

(4) Impact

Though the Project area is confined to Dhading District (Dhunibesi Farm), technical manuals concerning production of quality cocoon were distributed to JT/JTAs in other farms and utilized for extending sericulture technical know-hows. In addition, Zaguri production has expanded to other areas besides Dhading. Product development by using Zaguri silk has been promoted by private sector and some products have already been on sale. In addition, DOIED has started direct cocoon transaction between sericulture farmers and private sector from 2009. To promote this trend, DOIED introduced new subsidies to promote production and transaction of cocoon and Zaguri silk. So far, Nalang Zaguri group and Salang group have produced 92.5kg and 160.8kg of Zaguri silk respectively for the private sector. A sericulture farmer/entrepreneur produced one ton of Zaguri silk so far with the support of DOIED. The total income out of Zaguri was about Nrs.2864,200. These activities have contributed to the enhancement of female employment in rural areas.

(5) Sustainability

Regarding policy and institutional aspects, support might be expected since the Project is in harmony with the Nepalese policies and relevant to the needs of the government, although "National Sericulture Policy" has not yet been approved. In addition, the Project established a system in which private entrepreneurs directly buy Zaguri silk from seri-farmers and as a consequence, those entrepreneurs now develop products, which has led to the enhancement of Zaguri silk demand. Regarding technological aspects, by introducing training system in a cascade manner (DOIED Officers→JT/JTA→Silk Mobilizers→seri-farmers), the Nepalese side has obtained a method to continue or develop the activities. However, financial aspects are still weak and frequent transfer of counterpart personnel hinders positive effects produced by the Project. Sustainability is considered moderate.

3. Factors that promoted realization of effects

- DOIED has started direct cocoon transaction between sericulture farmers and private sector from 2009. To promote this trend, DOIED introduced new subsidies to promote production and transaction of cocoon and Zaguri silk.
- The Project established a system in which private entrepreneurs directly buy Zaguri silk from seri-farmers and develop products. It significantly reduced the stock of cocoon and enhanced the domestic demand of Zaguri silk. Involvement of the private sector should be considered in the planning stage.

4. Factors that impeded realization of effects

- Frequent transfer of counterpart personnel hinders positive effects produced by the Project.
- The National Sericulture Policy was drafted in accordance with the recommendation made by the Consultation Study Team in August 2008, the Policy is still in the process of revision by MOAC and has not been approved yet.

5. Conclusion

In conclusion, the Project activities have been conducted as planned and it is expected that the Project Purpose would be achieved at a certain satisfactory level by the end of the Project period. There are some unfulfilled indicators (indicator 1 at the Project Purpose level) since the Project has been challenging a difficult issue in the context of complicated process of producing Zaguri silk products (mulberry production, cocoon rearing, Zaguri silk production, product development) as well as establishment of supply chain. In addition, limited resources especially at the seri-farmers' level is crucial. Evaluation based on five criteria (Relevance, Effectiveness, Efficiency, Impact and Sustainability) shows some positive results and graded moderate or above despite this time-consuming process and limited resources. The Project, therefore, will be completed in November 2011. Sustainability would be further strengthened when the recommendations are met.

6. Recommendations

Items to be addressed in the medium- and long-term

(1) Approval of the National Sericulture Policy

Although the National Sericulture Policy was drafted in accordance with the recommendation made by the Consultation Study Team in August 2008, the Policy is still in the process of revision by MOAC and has not been approved yet. The process should be accelerated in order to promote every aspect of sericulture industry, including i) quality cocoon production, ii) encouragement of private entrepreneurs involvement, and iii) promotion of monitoring farmers' activities by technicians. Furthermore, the model developed through the project should be extended into other areas with allocation of budget according to the proposed National Sericulture Policy.

(2) Strengthening Collaboration with Relevant Authorities

Through the project activities such as a workshop on Promotion of Zaguri silk, relationship between the government, private entrepreneurs and seri-farmers' group was strengthened, and supply chain of sericulture industry from upstream to downstream was established. Sericulture industry is one of the potential industries for rural area, thus these efforts should be retained and developed. To that end, the framework to encourage the participation of relevant authorities, such as FNCCI and the Ministry of Commerce and Industry, in order to promote post cocoon activities as well.

(3) Dispatch of Volunteer for "Silk Promotion"

Since the Project cooperate to Zaguri silk promotion, private companies keep on a strong will and demand to develop Zaguri silk production. However, the number of the private companies entering Zaguri silk production is still limited, and their knowledge on "Silk" as material is still not sufficient to expand silk production market. Therefore, dispatch of volunteer for "Silk Promotion" is expected as follow-up activity of the Project in order to promote entry of private companies into silk production market and to encourage the supply-chain established by the Project.

(4) Institutionalization of SM

Realizing the important role of SM in bridging and transferring sericulture technology from resource centre to farmers, the local governments should institutionalize and retain SM even after termination of the Project.

(5) Upgrading of JT/JTA's Facilitation Capacity

Government's involvement concerning strengthening of farmers' organization is not strong. In

order to smoothly carry out joint activities among seri-farmers, it is essential to organize farmers' organization, such as a cooperative. The Team, therefore, recommends upgrading JT/JTA's facilitation capacity.

(6) Improvement of Cocoon Yield

Yield of cocoons is still low and remains less than 20kg/box in average. In particular, in Autumn 2nd season is usually quite low compared to other three seasons. In order to increase the yield, necessary measures, such as adequate disinfection, satisfactory mulberry cultivation, and proper treatment of silkworm, should be taken by seri-farmers under technical guidance and instructions of technicians.

(7) Utilization of CRC at PSSCRC, Dhunibesi

CRC of Dhunibesi which was newly constructed by the Project is not currently utilized for rearing purpose due to defect in rearing racks. It is strongly recommended that DOIED and Dhunibesi should utilized CRC as per technical requirements.

(8) Ensuring of the Supporting Budget

For the sustainability of the Project, the counterpart personnel from the Government of Nepal should ensure the supporting budget (e.g. travel/daily allowance), so that it can not hinder to achieve the project output.

Items to be addressed until the end of the Project

(9) Collection of Baseline Data

In order to provide data/statistics corresponding to indicators for overall goal, relevant data should be collected through the monitoring system and statistics introduced by the project. Moreover, baseline data should be collected at the early stage of a project.

(10) Utilization of Zaguri Machines for Training Purpose

Based on the request, the Project provided 10 sets of Zaguri machines for PSSCRC. PSSCRC should notify the availability of training courses by using the machines to the public and train farmers and relevant personnel of the private entrepreneurs, which also contribute to the effective use of its personnel.

第1章 終了時評価の概要

1-1 終了時評価の背景・目的

ネパールは就業人口の65%が農業に従事し、国民総生産の約40%を農産物が占める農業国である。ネパールの国土は山地が多くを占め、耕作可能地はほぼ開墾されていることから、多様な地形と気候を活かし、養蚕をはじめ、果樹、茶などの付加価値の高い換金作物の生産が求められている。ネパール政府は、暫定3カ年計画（2007-2010）において「貧困撲滅」に資する農業商業化推進策の一つとして養蚕振興を挙げている。

わが国は1995年2月～5月に短期専門家を派遣し、養蚕開発の可能性について調査を行い、その後、長期専門家の派遣（1995年12月～1997年）、短期専門家（1998年）、ミニプロジェクトの実施（1999年12月～2002年）、フォローアップ専門家の派遣（2003年2月～2005年）と、継続的な協力を行ってきた。一連の協力の結果、蚕種製造管理技術については定着するなど一定の成果が見られるが、国際競争に耐え得る優良繭の生産までには結びついてはいない。市場性のある繭を生産するためには蚕飼育管理技術の向上、普及サービスの質の向上、繭品質管理の徹底など、さまざまな課題を抱えている。

ネパール政府はこれまでの協力を土台として、蚕種の安定供給及び普及活動の強化による繭増産を図るとともに、プライベートセクターを主体としたシルク産業の発展を推進することを目的とし、日本政府に技術協力の実施を要請した。

本案件はネパールの養蚕農家の収入向上を上位目標におき、村落レベルにおける普及員・農家等への優良繭生産技術の指導と、組織化による品質向上のための実践的取り組みと政府、農家、民間企業の連携強化を通じ、収入向上の基礎となる優良繭・シルクの生産モデルを実証することを目標としている。

プロジェクトの初期においては、活動に進展が見られた一方で、カウンターパート機関である農業協同組合省農業局産業昆虫課の養蚕政策が明確になっていないことなどが課題として挙げられており、2008年度に本件国内支援委員会を設置した。その後、2008年8月、11月に運営指導調査団、2009年6月には中間レビュー調査団、2010年3月には運営指導調査団を派遣して双方の今後の取り組みについて継続的な協議を行ってきた。中間レビュー調査においては、ネパール政府とも合意のうえ、現実に即したプロジェクト・デザイン・マトリックス（PDM）及び活動計画の変更を行った。

今回実施の終了時評価調査では、2011年11月にプロジェクト期間（5年間）終了を迎えるにあたり、これまでのPDM及び活動計画に基づき、ネパール政府と合同で本プロジェクトの実績及び実施プロセスを確認・検証するとともに、評価5項目（妥当性、有効性、効率性、インパクト、持続性）に基づきプロジェクトの評価を行った。また、評価結果を踏まえ、プロジェクト目標・上位目標の達成に向けた提言や他案件への教訓を導き出すとともに、結果を合同評価レポートに取りまとめた。

1-2 プロジェクト概要

(1) 上位目標

1. 優良繭生産及びオリジナルシルク生産のモデル¹がネパール国内で展開される。
2. 改善を通じて、養蚕農家及び蚕糸業関係者の収入が向上する。

(2) プロジェクト目標

養蚕農家グループと政府普及員／民間企業の能力向上・連携強化を通じて、優良繭・シルクの生産モデルが実証される。

(3) 成果

1. 普及員の能力強化を通じて、養蚕農家グループの能力が強化される。
2. 市場開拓のための政府、民間企業、農家グループ間の協力関係が構築される。
3. 政府、農家、民間企業間の連携のための産業昆虫課の能力が強化される。

1-3 合同評価調査団の構成

(1) 日本側調査団

No.	氏名	分野	所属	期間
1	武 徹	総括	JICAネパール事務所次長	2011年6月27日-7月6日
2	木内 信	養蚕振興	独立行政法人農業生物資源研究所 昆虫科学研究領域長	6月26日-7月6日
3	有馬 朋宏	計画管理	JICAネパール事務所 所員	6月19日-7月6日
4	岸並 賜	評価分析	(株) 国際開発アソシエイツ	6月19日-7月6日

(2) ネパール側調査団

1	Ms. Uma Maiya SHRESTHA	Team Leader	Senior Agricultural Economist, Department of Agriculture, MOAC
2	Mr. Bhoj Raj SAPKOTA	Team Member	Agricultural Economist, Monitoring and Evaluation Division, MOAC

¹ 本プロジェクトで確立したモデルの内容は下記のとおり。

- (1) カスケード方式による研修のための技術マニュアル作成
- (2) 民間企業による養蚕農家グループからの繭・座繰り生糸の直接買取り
- (3) 民間企業による座繰り生糸製品開発
- (4) チェックシートを活用した普及員／普及員補 (JT/JTA) 及びシルクモビライザー (SM) によるモニタリング
- (5) 養蚕統計・モニタリング制度の構築
- (6) 協同組合設立に向けた養蚕農家グループの強化

1-4 調査日程

日		訪問先・用務
6/19	日	【岸並団員】カトマンズ到着
6/20 ～ 6/25	月 土	岸並団員による先行調査、インタビュー
6/26	日	【木内団員】カトマンズ到着
6/27	月	10:30 団内打ち合わせ 13:00 コパシ支場視察
6/28	火	10:30 第一回合同評価委員会 ・ 評価目的、方法の確認 ・ 岸並団員による先行調査結果の共有 15:00 団内打ち合わせ 16:30 民間企業視察
6/29	水	07:00 サイト視察（合同） ・ ドニベシ支場 ・ バイレニ村落開発委員会（VDC） ・ ナランVDC ※岸並団員は民間企業等へのインタビューを実施
6/30	木	11:00 第二回合同評価委員会 ・ 評価5項目、成果達成状況のレビュー ・ 調査結果、提言についての協議 ・ 合同評価レポート案、ミニッツ案の確認
7/1	金	終日 合同評価レポート案、ミニッツ案作成
7/2	土	終日 合同評価レポート案、ミニッツ案作成
7/3	日	14:00 第三回合同評価委員会 ・ 合同評価レポート案、ミニッツ案の確認
7/4	月	11:00 合同調整委員会 ・ 合同評価レポート発表 ・ ミニッツ署名 14:00 JICAネパール事務所報告 16:30 大使館報告
7/5	火	【木内団員、岸並団員】 カトマンズ発

1-5 主要面談者²

(1) ネパール側

1) 農業協同組合省 (MOAC) 農業局 (DOA)

Mr. Vijoy Kumar Mallick 局長
Dr. Bishnu Dalta Awasthi 副局長

2) DOA産業昆虫課 (DOIED)

Mr. Jagadish Bhakta Shrestha 課長 (プロジェクトダイレクター)
Mr. Durga Prasad Dawadi 職員 (プロジェクトマネージャー)
Mr. Madhu Sudan Ghimire 職員
Mr. Raj Narayan Singh ドニベシ支場長
Mr. Bhakta Raj Palikhe コパシ養蚕試験場長

(2) 日本側

1) プロジェクト関係者

柳川 弘明 チーフアドバイザー／養蚕振興政策 専門家
渋谷 優子 業務調整／農民組織化 専門家
川口 えり子 商品開発 専門家
山口 明雄 養蚕普及 専門家
Mr. Raghu Shrestha プロジェクトスタッフ

2) 在ネパール日本国大使館

大野 菊夫 二等書記官

² 加えて、サイト調査における訪問先で、各支場スタッフ、SM、養蚕農家、民間企業関係者にも面談している。

第2章 プロジェクトの実績

2-1 投入実績

2-1-1 日本側投入

(1) 専門家の派遣

2名の長期専門家が、①チーフアドバイザー、②業務調整／農民組織の分野で、延べ25名の短期専門家が、①商品開発、②チーフアドバイザー、③養蚕普及の分野で派遣された。詳細については、付属資料1の合同評価報告書のANNEX7参照。

(2) 機材供与

座繰り器、コピー機、プリンター、コンピューターなどが提供された。詳細については、合同評価報告書のANNEX9参照。

(3) ローカルコスト

プロジェクト開始時から2011年3月末までに、合計NPR 30,944,301のローカルコストが投入された。詳細については、合同評価報告書のANNEX8参照。

(4) 海外研修

合計13名のオフィサー及びJT/JTAがインドにおいて、①二化性養蚕技術、②養蚕行政に係る研修コースを受講、合計10名のオフィサーがラオス、タイ、インドにおいて、視察プログラムに参加した。

2-1-2 ネパール側投入

(1) カウンターパートの配置

合計14名（DOIED：7名、SDD：1名、PSSCRC：6名）のカウンターパートが配置されている。詳細については、合同評価報告書のANNEX10参照。

(2) 事務所

日本人専門家のための執務室や必要な設備が提供された。

(3) ローカルコスト

ネパール政府は、養蚕農家のみならず、座繰り生糸を生産している民間企業に対しても補助金を拠出している。またDOIEDはJT/JTAに対して、養蚕農家へ普及活動・モニタリングを行う際の交通費・日当を支給している。ネパール側によると、プロジェクト期間中、ドネベンシ支場に割り当てられた予算は、約NPR 29,576,000であり、そのうち約15%はプロジェクト対象地域外であるヌワコット郡のためのものであった。

2-2 活動実績

プロジェクト活動は、活動計画表（PO）や年間活動計画に基づき、ほぼ予定通りに実施されている。しかしながら、PDMの活動3-1「NGOとの農民組織化を通じて、ファシリテーション能力を

強化する」については、期待通りの進捗を見せていない。原因としては、農家に対する普及活動を行う際にJT/JTAに支払われることになっている交通費・日当に配賦されている予算が少なく、JT/JTAがNGOの実施する農民組織強化の活動に十分に参加できていないことが挙げられる。プロジェクトは今後も可能な限りJT/JTAをこの活動に参画させるよう、DOIEDに働きかけていく予定である。

2-3 成果の達成状況

2-3-1 成果1

成果1「普及員の能力強化を通じて、養蚕農家グループの能力が強化される」の達成状況は、表2-1のとおりである。プロジェクト活動はほぼPOに沿って実施され、成果1は発現されつつある。

表2-1 成果1の達成状況

指標	達成状況																														
1-1 技術マニュアルの配布（5種類）	<p>以下の5つの技術マニュアルと、1つの飼育カレンダーが作成され、JT/JTA、SM及び養蚕農家によって使用されている。</p> <ul style="list-style-type: none"> ① Silkworm rearing calendar ② Illustrated technical manual on silkworm rearing technology ③ Illustrated technical manual on mulberry cultivation technology ④ Illustrated technical manual on cocoon assessment ⑤ Technical manual on silkworm disease management ⑥ Silk production <p>したがって、指標は達成されている。</p>																														
1-2 養蚕農家への技術の定着度（モニタリング採点20%向上）	<ul style="list-style-type: none"> ➤ 2009年の初旬及び2011年初旬に調査を実施し、アンケートの結果を比較した。 ➤ 主な養蚕技術の適用率（定着率）³ は、ナラン村70.4%、サラン村70.0%、バイレニ村は44.8%であり、平均値は56.3%から61.6%に上昇している。一方、Cランク（一部技術は利用しているものの、改善を要する）の農家は12.6%から1.2%に大幅に減少している。 <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>村</th> <th>ランク⁴</th> <th>2009年</th> <th>2011年</th> </tr> </thead> <tbody> <tr> <td rowspan="4">ナラン</td> <td>A</td> <td>42.86%</td> <td>70.4%</td> </tr> <tr> <td>B</td> <td>42.86%</td> <td>29.6%</td> </tr> <tr> <td>C</td> <td>14.28%</td> <td>0%</td> </tr> <tr> <td>D</td> <td>0%</td> <td>0%</td> </tr> <tr> <td rowspan="4">サラン</td> <td>A</td> <td>75.0%</td> <td>70%</td> </tr> <tr> <td>B</td> <td>15.62%</td> <td>30%</td> </tr> <tr> <td>C</td> <td>9.38%</td> <td>0%</td> </tr> <tr> <td>D</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	村	ランク ⁴	2009年	2011年	ナラン	A	42.86%	70.4%	B	42.86%	29.6%	C	14.28%	0%	D	0%	0%	サラン	A	75.0%	70%	B	15.62%	30%	C	9.38%	0%	D	0%	0%
村	ランク ⁴	2009年	2011年																												
ナラン	A	42.86%	70.4%																												
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	D	0%	0%																												
サラン	A	75.0%	70%																												
	B	15.62%	30%																												
	C	9.38%	0%																												
	D	0%	0%																												

³ 「利用された技術の数」を25点満点で点数化し、Aランクの農家の割合を定着率として集計している。

⁴ 21～25：Aランク（技術が理解され、大部分が理解されている）、16～20：Bランク（多くの技術が利用されている）、11～15：Cランク（一部技術は利用されているが、更なる改善が必要）、0～10：Dランク（技術が利用されていない）

	バイレニ	A	67.56%	44.8%
		B	27.04%	51.7%
		C	5.4%	3.5%
		D	0%	0%
	合計	A	56.3%	61.6%
		B	31.1%	37.2%
		C	12.6%	1.2%
		D	0%	0%
<p>➤ 消毒の実施や堆肥の使用はそれぞれ100%、98.9%に達している。しかしながら、コンクリート床の割合は12.9%、化学肥料の施肥は10.3%で依然として低い。</p> <p>➤ 指標は一部達成されている。</p>				
1-3 普及員への技術の定着度（研修時テスト30%向上）	JT/JTA対象の研修がオフィサーにより3回実施された。研修前後に内容の理解度を測るための試験が実施され、その結果、平均49%の向上が確認された。したがって、指標は達成されている。			

出典：プロジェクト報告書及びインタビュー

2-3-2 成果2

成果2「市場開拓のための政府、民間企業、農家グループ間の協力が構築される」の達成状況は、表3-2のとおりである。プロジェクト活動はほぼPOに沿って実施され、成果2は発現されつつある。

表2-2 成果2の達成状況

指標	達成状況
2-1 繭品質評価法の改善	プロジェクトにより、繭質の評価に不可欠な技術マニュアルが作成され、JT/JTA及びSMを対象に研修が実施された。同時にネパール政府は、繭や生糸の価格を決定するためにDOA、DOIED、ネパールシルク協会（SAN）、民間セクター及び養蚕農家から構成される委員会を設置した。委員会は繭生産に係る経費、繭質、国際価格などを十分に考慮したうえで、繭の価格改定を実施している。したがって、指標は達成されている。
2-2 座繰り糸製品の開発に参入した民間企業（3社）	民間企業であるACP、Mahaguthi、Kala Guthi及びWGAの4社が既に座繰り生糸製品の開発に参入している。したがって、指標は達成されている。
2-3 農家、政府、民間企業の連携強度（会議・活動4回／最終年度）	政府、民間企業、農家によるInteraction Meetingがバイレニ村、サラン村、ナラン村及びドニベシ村において合計18回開催され、繭取引、生産、市場システム等について議論が行われた。また座繰り生糸の振興に係るワークショップが開催され、三者それぞれの役割について共通の認識が確立された。したがって、指標は達成されている。

出典：プロジェクト報告書及びインタビュー

2-3-3 成果3

成果3「政府、農家、民間企業間の連携のための産業昆虫課の能力が強化される」の達成状況は、表3-3のとおりである。プロジェクト活動はほぼPOに沿って実施され、成果3は発現されつつある。指標3-1は達成されているものの、活動3-1はNGOによる活動を中心に実施されている。

表2-3 成果3の達成状況

指標	達成状況
3-1 養蚕農家グループの活動改善	<p>プロジェクトはナラン村及びサラン村において養蚕農家グループを対象に、座繰り生糸の生産を開始するためのファシリテーションを実施した。その結果、現在では養蚕農家グループが中心となって座繰り生糸を生産し、民間企業に対して座繰り生糸を販売するまでに至っている。養蚕農家グループの組織化については、すべての養蚕農家がいずれかのグループに属し、多くのグループはマイクロクレジットによるローンを提供し、適切な資金の管理を行っている。したがって、指標は達成されている。</p>
3-2 政府の農家グループ・民間企業に対する積極的関与 (農家訪問12回/年/民間訪問3回/年)	<ul style="list-style-type: none"> ▶ JT/JTAが養蚕農家を訪問した年平均回数は、ナラン村で5.6回、サラン村で14.4回、バイレニ村で5.6回であり、サラン村でのみ目標の12回を上回っていた。しかしながら、JT/JTAによると年間約8回(2回/蚕期)は定期的に村を訪問しており、その他、農家からの要請に基づいて訪問を実施している。加えて、ドニベシ支場長も日本人専門家とともに年間に数回これらの村を訪問している。 ▶ SMによる上記3村の年平均訪問回数は、それぞれ9.6回、34回、13.6回であった。 ▶ DOEIDによる民間企業訪問の回数は年間で18回を数え、目標を大きく上回った。 ▶ 指標は一部達成されている。
3-3 統計、モニタリングシステムの導入	<ul style="list-style-type: none"> ▶ DOEIDは統計に含めるべきデータを明確化し、収集方法について検討を行った。また、データ収集のためのフォーマットを作成し、養蚕統計を確立するためにデータを収集した。 ▶ DOIEDは養蚕に係る統計データを処理する担当者を配置した。 ▶ プロジェクトは、以下の調査を実施し、データを取りまとめた。 <ul style="list-style-type: none"> ① ダディン郡における養蚕の動向調査 ② 養蚕農家による技術の適用・定着度に関するアンケート調査 ③ 養蚕農家による座繰り生糸生産及び養蚕グループの組織度に関するアンケート調査

	④ フォーマットの使用による養蚕農家での蚕の生育状況調査 ⑤ フォーマットの使用による村落稚蚕飼育所（CRC）での蚕の生育状況調査 ▶ 指標は達成されている。
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出典：プロジェクト報告書及びインタビュー

2-4 プロジェクト目標の達成度

プロジェクト目標「養蚕農家グループと政府普及員／民間企業の能力向上・連携強化を通じて、優良繭・シルクの生産モデルが実証される」の達成度を測るための2つの指標が設定されており、一部を除きプロジェクトの進捗にしたがって徐々に指標は満たされつつある。表3-4にプロジェクト目標の達成状況を示す。

表2-4 プロジェクト目標の達成状況

指標	達成状況						
1 農家の繭品質向上 (正常繭歩合80%、繭層歩合20%、孵化歩合90%、箱当たり収繭量20kg)	▶ プロジェクト対象地域における過去3年間の正常繭歩合は89.3%、繭層歩合は22.6%、孵化歩合は90%以上であった。したがって、目標値は達成されている。 ▶ 各村の蚕種1箱（20,000粒）当たり収繭量は以下のとおりであり、目標値には達していない。						
	年	蚕期	バイレニ村	*クンプル村	サラン村	ナラン村	平均
	2008	春1	22.7kg	18.3kg	8.6kg	21.0kg	18.1kg
		春2	15.0kg	16.5kg	18.4kg	17.0kg	16.8kg
		秋1	13.5kg	11.7kg	11.4kg	11.7kg	12.0kg
		秋2	9.1kg	7.8kg	4.2kg	12.2kg	8.5kg
		年平均	16.6 kg	14.0kg	11.6 kg	15.9 kg	14.6 kg
	2009	春1	13.4kg	11.3kg	8.9kg	19.0kg	13.8kg
		春2	11.3kg	9.4kg	21.8kg	11.7kg	14.1kg
		秋1	14.8kg	15.2kg	15.6kg	9.4kg	13.5kg
		秋2	9.9kg	3.2kg	3.7kg	5.2kg	6.5kg
		年平均	12.6 kg	9.6 kg	14.5 kg	12.0 kg	12.7 kg
	2010	春1	18.8kg	14.8kg	15.5kg	17.7kg	17.6kg
		春2	10.6kg	n/a	17.7kg	13.5kg	13.8kg
		秋1	15.0kg	n/a	13.3kg	10.2kg	13.2kg
		秋2	8.3kg	n/a	8.3kg	12.9kg	9.7kg
		年平均	14.0 kg	14.8 kg	14.6 kg	13.6 kg	14.0 kg
	2011	春1	17.3kg	n/a	23.6kg	13.0kg	17.4kg
		春2	10.1kg	n/a	16.9kg	10.7kg	12.4kg
		平均	14.0kg	n/a	19.6kg	11.8kg	14.8kg
*クンプル村は2010年の春1期をもって養蚕から撤退した。							

	<p>サララン村以外の村では、2009年の収繭量が悪い傾向を示し、蚕期別でみると春1蚕期が最も良い飼育成績を示した。サララン村は、年々良くなる傾向を示し、蚕期別では外温が低い時期の春1蚕期及び秋2蚕期が悪い傾向を示した。</p> <p>ただし、上記のとおり蚕期によっては、指標の箱当たり収繭量20kgを上回っている村もある。具体的には、2008年春1蚕期のバイレニ村及びナラン村、2009年春2蚕期のサララン村、2011年春1蚕期のサララン村であるが、これは桑の生育、外気の温湿度、適切な消毒、適切な稚蚕・壮蚕飼育等の好条件が揃ったためと推測される。</p>
<p>2 民間企業によるオリジナルシルクの生産（3種類/3社）</p>	<p>プロジェクトは幾つかの民間企業に座繰り生糸を提供するとともに商品開発活動を支援した。その結果、ACP、Mahaguthi、Kala Guthi及びWGAが、様々なスカーフやショールといった新商品を生産している。加えて、Everest Art Paperがバイレニ村のAdhikari Zaguri Centerで生産された座繰り生糸を使用し、インテリア商品を生産・輸出している。したがって、指標は達成されている。</p>

出典：プロジェクト報告書およびインタビュー

2-5 実施プロセス

PDMの改訂、モニタリング活動、各種会議の観点から実施プロセスを検証し、おおむね順調であることが確認された。

(1) PDMの改訂

2009年6月の中間レビューの際、活動の再整理と指標の明確化・定量化を図ることを目的として、PDMを改訂した。この改訂により、プロジェクトの活動が明確になるとともに、繭質の改善のみならず、民間企業との連携を強化するというプロジェクトの方針も転換され、プロジェクトの運営が改善された。

(2) モニタリング活動

プロジェクトは毎年末にモニタリング計画を策定し、DOIEDはその計画に基づいて、モニタリングを実施した。プロジェクト・ダイレクターやプロジェクト・マネージャーによるモニタリングは頻繁には行われてはいないものの、フィールド・コーディネーター（ドニベシ支場長）が責任をもってモニタリングを実施している。したがって、モニタリング活動は適切であるといえる。

(3) 合同調整委員会（Joint Coordination Committee：JCC）

JCCは2011年7月までに8回実施されている。出席者は、カウンターパート、日本人専門家、JICAネパール事務所、日本大使館、MOACの関連職員であり、①プロジェクトの進捗状況、②PDMやPOの改訂・承認、③プロジェクトの関連活動などが報告、協議されている。

(4) 定例会議

毎月1度開かれる定例会議は、2011年6月現在までに25回開催されている。会議では直近のプロジェクト活動（研修の日時等）の確認などを行っている。出席者は、DOIED職員、SM、

養蚕農家、NGO職員及び日本人専門家である。

(5) Interaction Meeting

Interaction Meetingは、2011年6月現在までに18回開催されている。出席者は、政府、民間企業、養蚕農家であり、繭取引、繭生産、市場システム等について協議をしている。

第3章 評価結果

3-1 評価5項目による評価

3-1-1 妥当性

妥当性は以下の理由から高い。

(1) ネパールの政策との整合性

プロジェクトはネパールの政策及びニーズと合致している。国家3カ年計画（2010/11-2012/13）では、貧困削減を優先課題の一つとして取り上げているが、換金性の高い作物である養蚕を振興することは貧困削減に寄与することから、同計画とも合致している。また、国家3カ年計画（2007/2008-2009/2010）においては、貧困を削減するための重要な産業である農業の一つとして養蚕が取り上げられていた。加えて、国家計画委員会（NPC）は貧困削減に係る養蚕の可能性を考慮し、2010/2011年度の政策優先順位においては、養蚕を「プライオリティ1」と位置づけ、高い優先順位を与えている。したがって、プロジェクトはネパールの政策との整合性は高い。

(2) 日本政府の支援の方向性との整合性

日本の農業・農村開発プログラムは、優先課題である「地方の貧困削減」のもと、「食料安全保障」、「農業収入機会の向上」、「行政・農民組織強化」を3つの柱としている。本プロジェクトは、「農業収入機会の向上」及び「行政・農民組織強化」に資するものであり、日本の対ネパール経済協力方針と合致している。

(3) 対象グループ/地域のニーズとの整合性

本プロジェクトはダディン郡が対象地域に選定されている。本プロジェクトの開始時、ダディン郡は過去のJICAの技術協力や他ドナー機関⁵の協力の蓄積が活かせることから、適切であると判断された。なお、当時の不安定な治安状況からも、養蚕振興の可能性のある地域の中でも比較的治安が安定しており、カトマンズに近いダディン郡は対象地域として妥当であった。

3-1-2 有効性

有効性は以下の理由から、中程度である。

(1) プロジェクト目標の達成度合い

プロジェクトの指標である①正常繭歩合80%、②繭層歩合20%、③孵化歩合90%がそれぞれ達成されており、民間企業によるオリジナルシルクの生産も行われていることから、プロジェクト目標はおおむね達成されると予測される。しかしながら、箱当たり収繭量については、2010年の平均値は14.0kgであり、指標である20kgに到達していない。特に、秋第

⁵ 1997年7月～2001年12月までダディン郡を含めた4郡で、養蚕振興委員会（Sericulture for Rural Development Programme : NDP）を実施し、養蚕振興を図ってきた。

2蚕期の収繭量が極めて低く、その主な理由としては、①秋第1蚕期と秋第2蚕期の間隔が他のシーズン間と比較して短い、②第3蚕期後のため、土壌がやせ、病原菌が蓄積している、③前述2つの理由のため、桑の生育が十分ではないなどが挙げられる。また、PDMの外部条件としては記載されていないが、高温・高湿度といった気候条件が収繭量に負の影響を与えていることは明白である。

(2) プロジェクト目標と成果の因果関係

PDMに記載されている3つの成果は、本プロジェクトを達成するための成果が過不足なく設定されており、必要十分条件となっている。したがって、プロジェクト目標と成果の因果関係は適正・論理的であるといえる。

(3) 外部条件の達成度

プロジェクト目標を十分に達成するためには、成果レベルに設定された以下の3つの外部条件を満たす必要がある。

- ① 政府が公平公正な繭取引のための仕組みを整理する。
- ② 政府がオリジナルシルク製品生産に関する民間資本投資を推進する環境を整える。
- ③ DOIEDがプロジェクトの提案を受け入れ、実施する。

外部条件①に関しては、DOIEDは既に繭や生糸の価格を決定するためにDOA、DOIED、SAN、民間セクター及び養蚕農家からなる委員会を設置し、繭生産に係る経費、繭質、国際価格などを十分に考慮したうえで、価格の改定を実施している。加えて、プロジェクトは繭品質に基づいた評価法を確立するために技術マニュアル「Illustrated Technical Manual on Cocoon Assessment」を作成した。外部条件②について、ネパール政府は、養蚕農家のみならず、座繰り生糸を生産している民間企業に対しても補助金を拠出するなどの施策を通じて、民間企業による養蚕農家からの繭購入を奨励している。外部条件③については、前述の補助金施策等はDOIEDがプロジェクトの提案を受け入れ、実施したものである。したがって、外部条件は、満たされているといえる。

3-1-3 効率性

効率性は以下の理由から、比較的高い。

(1) 成果の達成度合い

活動が順調に実施されており、3つの成果はおおむね順調に達成されつつある。しかしながら、成果1の指標である「養蚕農家への技術の定着度」に関し、コンクリート床の割合は12.9%、化学肥料の施肥は10.3%で依然として低く、目標を達成できていない。主な理由として、養蚕農家は既存の施設を使用し養蚕を行っており、コンクリート床及び化学肥料の導入等設備投資のための資金確保が困難であることなどが挙げられる。

(2) 投入の活用度合い

全般的に投入は質、量、タイミングともに適切であり、プロジェクトの活動を実施し、成果を出すために十分活用されている。

日本側の投入に関しては、養蚕分野において経験が豊富な日本人専門家が、計画通り派遣された。これら専門家の経験に基づき、前述の優良繭生産及びオリジナルシルク生産のモデルが確立された。技術マニュアルを作成するにあたっては、DOIED職員やJT/JTAの意見も取り入れたが、彼らはインドでの第三国研修参加の経験を活かして、技術マニュアル作成に大きく貢献した。ネパールでは初の養蚕技術に関する技術マニュアル作成であったものの円滑に作成することができたことは、第三国研修への派遣が寄与したものと思われる。また、DOIED職員がインド研修で養蚕業における民間の活力を目の当たりにしたことで、その後、ネパールでも民間企業の活力を導入するという新たな養蚕政策の転換に踏み切ることとなった。供与機材は全般的に適切に使用・管理されているが、ナラン村に設置された繭乾燥機は、各農家の収繭量が少なく、必ずしも繭乾燥機を使用する必要がないことから、定期的には使用されていない。また、ドニベシの支場に供与された座繰り器も養蚕農家に対する一通りの座繰り研修を終えたことから現在は使用されておらず、プロジェクトによって建設されたドニベシの稚蚕飼育室も研修施設としては活用されているが、本来の目的である稚蚕飼育のためには使用されていない。

ネパール側の投入については、カウンターパートが専任でなく、また頻繁に交代した。更には、JT/JTAに対する交通費・日当の予算が十分に確保されず、養蚕農家に対する普及活動を年間計画に基づいて実施することが困難であった、と指摘されている。

(3) 外部条件の達成度

成果が十分に発現するためには、活動レベルに設定された以下の2つの外部条件を満たす必要がある。

- ① 配属されたカウンターパートが継続して勤務する。
- ② 民間企業がシルク産業に対して関心を持ち続ける。

外部条件①に関しては、中間レビュー調査団や運営指導調査団からの提言にもかかわらず、ネパール政府カウンターパートは頻繁に交代している。これはプロジェクトの実施・運営に影響を与えており、この外部条件は満たされたとは言い難い。外部条件②については、いくつかの民間企業が既に座繰り生糸製品を開発・販売しており、今後さらにビジネスを拡大する意向を表明している。したがって、この外部条件は満たされている。

3-1-4 インパクト

(1) 上位目標の達成度

上位目標1は「優良繭生産及びオリジナルシルク生産のモデルがネパール国内で展開される」であり、以下のとおり、一定の進捗が見られる。

表 3 - 1 上位目標 1 の達成状況

指標	達成状況
1 モデルの展開数 (1箇所)	プロジェクトの対象地域はダディン郡に限定されているが、高品質の繭生産に係る技術マニュアルは、他地域の支場に配置されているJT/JTAにも配布され、養蚕技術の知識・技術を普及するために活用されている。加えて、座繰り生糸生産はダディン郡以外にもカトマンズ、コパシ、バンディプール、チトワン及びポカラに普及している。また、座繰り生糸を使用した商品は民間企業により開発・販売されている。
2 政府による公平公正な品質評価結果に基づく養蚕農家グループと民間企業による繭取引の仕組みの導入	<ul style="list-style-type: none"> ➤ プロジェクトの専門家は繭の品質評価に立会い、JT/JTAに対して、①良繭と不良繭の分別方法、②計量方法、③繭層歩合の計算方法等について講義を実施した。 ➤ プロジェクトは公平公正な品質評価実施に不可欠な技術マニュアルを作成するとともに、JT/JTA及びSMを対象に品質評価に係る研修を実施した。 ➤ プロジェクトの指導・助言により、DOIEDは民間企業に繭や座繰り生糸の取引を促進するための補助政策を開始し、民間企業の参入に途を拓いた。具体的には、Interaction Meetingを頻繁に開催して民間企業の意向をDOIEDが直接聞く機会を設け、民間企業の意向を政策に反映させようとしたことは有益であった。DOIEDは補助金制度導入と同時に民間への情報提供にも積極的に取り組むようになった。また、価格決定委員会を設立する際にも、構成メンバーに民間企業、NGO、養蚕農家も含めるよう配慮を行っている。 ➤ DOIEDは繭や座繰り生糸の在庫に関する情報を収集し、民間企業に提供している。 ➤ DOIEDは繭や生糸の価格を決定するために委員会を設置し、繭生産に係る経費、繭質、国際価格などを十分に考慮したうえで、価格の改定を実施している。

出典：プロジェクト報告書及びインタビュー

上位目標 2 は「改善を通じて、養蚕農家及び蚕糸業関係者の収入が向上する」であり、以下のとおり、一定の進捗が見られる。

表 3 - 2 上位目標 2 の達成状況

指標	達成状況						
優良繭の販売による対象地域農家（50%）及び女性座繰り生産者（20%）の現金収入向上	<p>終了時評価調査時、優良繭の販売による対象地域農家の収入についてのデータは入手不可であった。関連情報として、対象地域における養蚕農家の年平均繭販売高を以下の表に示す。</p> <table border="1"> <thead> <tr> <th>2008年</th> <th>2009年</th> <th>2010年</th> </tr> </thead> <tbody> <tr> <td>NPR 6,475</td> <td>NPR 4,324</td> <td>NPR 5,359</td> </tr> </tbody> </table> <p>なお、2008年から2010年にかけて、ネパール政府は繭の支援価格を30%上昇させている。2009年に養蚕農家、民間企業、養蚕グループが座繰り生糸生産を開始し、現在までにナラン村及びサラン村のグループがそれぞれ92.5kg、160.8kgの座繰り生糸を生産し、民間に販売を行った。また、バイレニ村にはプロジェクト及びDOIEDによる支援を受け、これまでに1トンの座繰り生糸を生産した養蚕農家／起業家が現れた。上記のような、養蚕農家による座繰り生糸生産による収入の合計は、NPR 2,864,200である。これら座繰り生糸生産グループで働いているのは多くが女性であり、大規模ではないものの、農村女性に就業機会と現金収入機会を提供している。</p>	2008年	2009年	2010年	NPR 6,475	NPR 4,324	NPR 5,359
2008年	2009年	2010年					
NPR 6,475	NPR 4,324	NPR 5,359					

(2) その他のインパクト

以下のインパクトが観察された。

- ・バンディプール及びポカラにおいて、DOIEDの導入した補助金を利用することによって、座繰り生糸商品が開発されている。
- ・プロジェクトに参加し、研修やOJTを経験したSMがチトワン郡のマディにおいて、プロジェクトで習得した知識や技術を活用し、養蚕技術の普及研修を実施している。
- ・本プロジェクトの実施によるマイナスのインパクトは特に発現していない。

3 - 1 - 5 持続性

持続性は、以下の理由から中程度である。

(1) 政策・制度面

「妥当性」で述べたとおり、国家養蚕振興政策はいまだに承認されていないものの、プロジェクトはネパールの政策及びニーズと合致しており、補助金の交付等、今後とも支援政策の継続が期待される。また、カスケード方式（Officer→JT/JTA→SM→養蚕農家）による研修システムを導入したことによって、今後ネパール側自身で活動を継続・拡大することが可能になったといえる。さらに、2009年より養蚕農家と民間企業の直接取引の制度が導入され、その結果、民間企業による商品開発が進み、民間企業の座繰り生糸の需要が高まっている。また、繭の品質評価制度と価格決定委員会を導入したことで、市場のメカニズムに基づいて繭・生糸の価格が決定されるようになった点は、持続性の観点からも評価できる。

DOIEDの職員は特に専門家と協働することによって、DOIEDの組織が強化されたと述べ

ているが、カウンターパートの度重なる交代はプロジェクトによる正の効果を低減することとなった。

(2) 技術面（知識及びスキル）

幾つかのプラス面が確認されている。まず、JT/JTAは、プロジェクト活動を通じて、自身の知識及びスキルに自信を深めており、予算的裏付けさえあれば、プロジェクト終了後も現在の活動を継続して実施できると述べている。また、主な養蚕技術の定着度は高くなっており、移転技術が対象地域以外にも拡大しており、同技術が普及可能なものであることを示唆している。さらに、技術マニュアルは、Officer、JT/JTA、SM、養蚕農家といったすべてのレベルで高く評価されている。これらのことは、カスケード方式の研修が順調に機能していることを意味している。

課題としては、カウンターパートが頻繁に異動したことにより、プロジェクトによって移転された知識や技術がDOIEDにおいて十分定着していないのではないかと推測されることや、JT/JTAやSMによって移転された技術の中で、養蚕農家が十分に理解し実行するまでに時間を要しているものがあることが挙げられる。

(3) 財政面

DOIED及び9つの養蚕支場へ割り当てられる予算は増加傾向にあり、DOIEDは繭の乾燥や輸送、蚕室の改善、座繰り生糸／化学肥料／消毒剤の購入などへの補助金を今後も継続して提供する計画である。補助金については、徐々に縮小し、最終的には廃止されるのが好ましいと考えられるが、ネパールにおける養蚕業はいまだ発展段階にあることから、現段階ではより多くの養蚕農家や民間企業の参画を促すための有効なツールであるといえる。養蚕農家の活動を適切にモニターするための交通費・日当が十分確保されておらず普及活動に支障を来していることは、幾度もJT/JTAによって指摘された。

3-2 貢献要因と阻害要因の検証

前述の5項目評価において既に述べているが、主な貢献要因と阻害要因は以下のとおりである。

主な貢献要因としては、2009年より養蚕農家と民間企業の繭・座繰り生糸の直接取引が開始され、その結果、民間企業の座繰り生糸についての理解が深まり、座繰り生糸製品開発が進み、繭・座繰り生糸の需要が高まったことが挙げられる。

主な阻害要因としては、プロジェクト・ダイレクターを含むカウンターパートが頻繁に異動したこと、いまだ国家養蚕振興政策が承認されておらず、補助金を含む養蚕振興に対する政策的なコミットメントが弱いことなどが挙げられる。

3-3 結論

プロジェクト活動は計画通り進められており、プロジェクト終了時には一定程度プロジェクト目標を達成することが想定される。

養蚕は、桑生産、蚕の飼育、座繰り生糸の生産、生糸を用いた製品開発といった様々な側面をもつ複合的な産業であり、それぞれの側面のもつ特徴とそれらを結びつけるサプライチェーンを意識した支援を行うことが重要である。

養蚕農家が設備投資に回せる資金にも限りがあり、また前述のとおり、養蚕業が複合的な側面をもつ産業であることから、一部指標についてはいまだ達成されていない。しかしながら、かかる状況にありながら、民間企業の活力を取り込む政策が実施されたこともあり、5項目評価の観点からも、ポジティブな成果を確認することができた。

今後、プロジェクトは2011年11月に終了を迎えることになるが、残りのプロジェクト期間においても本調査団で行った提言に基づきつつプロジェクトの運営を行い、プロジェクト終了後も見据えた持続性の強化が行われることを期待したい。

第4章 提言と教訓

4-1 提言

<プロジェクト終了後もフォローしていく事項>

(1) 養蚕振興政策の承認

2008年8月の運営指導調査団の提言を受け、MOACにて国家養蚕振興政策の草案が作成されたにもかかわらず、いまだMOAC内での改訂プロセスを終了していない。高品質の繭生産、民間企業の参入、普及員による普及活動促進、本プロジェクトで確立したモデルの普及といった点を政策的な観点から担保・促進していくためにも同政策の迅速な承認が望まれる。

(2) 養蚕振興関連機関との連携強化

座繰り生糸生産に係るワークショップが開催されるなどの本プロジェクトでの活動を通じ、政府、民間企業及び養蚕農家グループの関係は強化され、蚕糸業に係る上流から下流までのサプライチェーンが構築されている。蚕糸業は、野菜の生育等に向かない地方部においては有望な産業の一つであり、こうした関係者の連携を強化する活動は今後とも続けられるべきである。そのためには、繭生産後の活動を担っている産業省 (Ministry of Commerce and Industry) や商工会議所といったステークホルダーも巻き込んだ枠組みを構築し、更なる関係機関との連携強化を図ることが望まれる。

(3) シルク振興のためのボランティア派遣

本プロジェクトの協力・支援により、民間企業の座繰り生糸製品開発に係る意欲・需要は旺盛である。しかしながら、座繰り生糸製品開発に参入している民間企業の数はまだ限定的であり、絹という素材に対する知識もまだ十分ではない。今後、さらに民間企業の参入を促進し、今回プロジェクトで構築したサプライチェーンを維持・発展させるためには、「シルク振興」を行うボランティアを派遣し、プロジェクトの成果のフォローアップ活動を行うことが望まれる。

(4) SMの制度化

本プロジェクトにおいては、養蚕技術普及のため、優れた養蚕技術をもつ農家をSMとして選定し、養蚕農家への技術普及に活用してきた。養蚕技術普及においてこうしたSMの果たす役割は重要であり、今後ネパール側によって制度化され、SMの活動が維持されることが望まれる。

(5) JT/JTAのファシリテーションスキルの向上

本プロジェクトにおいては、ローカルNGOを活用し、農民組織の強化に取り組んできたが、(ネパール政府の方針もあり、) 同活動へのJT/JTAの関与は十分とはいえず、また農民組織強化等に係るJT/JTAのファシリテーションスキルはいまだ十分なものではない。したがって、今後JT/JTAのファシリテーションスキル強化に係る取り組みが行われることが望まれる。

(6) 収繭量の改善

本プロジェクトのプロジェクト目標の指標として、「箱当たり収繭量20kg」と設定されていたものの、2008年：14.6kg、2009年：12.7kg、2010年：14.0kgと指標を達成できていない。これは、とりわけ秋第2期の収繭量が他の期に比べ少ないことによる影響が大きい。したがって、収繭量を増やすためには、適切な消毒、十分な桑の提供、適切な蚕の取り扱い等の指導がJT/JTAにより、技術ガイドラインに基づき実施されることが望まれる。

(7) ドネベシ支場における稚蚕飼育室の有効活用

本プロジェクトにおいて、ドネベシ支場に稚蚕飼育室が建設されたが、棚の構造が利用しにくい構造となっており、現在は研修施設として利用されているものの、稚蚕飼育室としては利用されていない。技術仕様に基づき、DOIED及びドネベシ支場がこの施設を稚蚕飼育室として活用することが期待される。

(8) 予算措置

持続性の観点から、ネパール政府はJT/JTAの普及活動を支援する経費等に対し、十分な予算措置を行うことが求められる。

<プロジェクト期間内にフォローすべき事項>

(9) ベースラインデータの収集

上位目標の指標である「優良繭の販売による対象地域農家の現金収入向上」に関し、プロジェクト開始時のベースラインデータが収集されていなかったところ、プロジェクトで構築した養蚕統計・モニタリングシステムを通じて、同指標に係るデータ収集が行われることが望まれる。また、今後他のプロジェクトにおいても、事業開始時点でのベースラインデータの収集を行うことが望まれる。

(10) 座繰り器の活用

ネパール側の要望に基づき、座繰り器10基をドネベシ支場に供与したものの、コミュニティへの研修が一通り実施された、繭の買い上げ政策が変更となったなどの理由により、現在は活用されていない。本座繰り器を有効活用すべく、民間企業及び住民に対する研修プログラムを作成し、同研修に関するアナウンスを行うことが望まれる。民間企業は座繰り生糸製品の開発を進めており、同種の研修に係るニーズは高いものと推測される。

4-2 教訓

(1) 民間セクターの巻き込み

本プロジェクトでは、政府、民間企業、養蚕農家グループが一堂に会する場を設定し、民間セクターも巻き込んだ関係者間の連携強化を図っている。また、プロジェクトの指導・助言もあり、民間企業が直接養蚕農家グループから繭、座繰り生糸を買い上げて、商品開発を行う制度が導入された。これにより、民間企業による座繰り生糸を活用した商品開発の需要が喚起され、また市場の需要と結びついたことで、養蚕農家の生計向上にも寄与することとなった。したがって、養蚕のように、生産→加工→販売とサプライチェーンが連なっている

産業に支援を行う場合は、民間セクターも含め、下流に位置する産業と市場を意識しつつ、サプライチェーンを発展させるような支援を行うことが重要である。

(2) カスケード方式の研修

本プロジェクトでは、プロジェクトで開発した技術マニュアルを活用して、**Officer→JT/JTA→SM→養蚕農家**といった形のカスケード方式の研修が実施された。このように、ネパール側のリソースを活かした段階的な研修を実施することで、ネパール側による継続的な研修実施が可能となった。したがって、プロジェクト形成段階においては、プロジェクト終了後も相手国政府が自立的に運営可能なシステムを構築することを意識した協力を行うことが重要である。

付 属 資 料

1. ミニッツ・合同評価報告書
2. 改訂PDM（和文）

1. ミニッツ・合同評価報告書



**MINUTES OF MEETING
FOR
THE EIGHTH JOINT COORDINATION COMMITTEE MEETING
ON
PROMOTION OF QUALITY COCOON PRODUCTION
AND PROCESSING PROJECT**

The Japan International Cooperation Agency (hereinafter referred to as “JICA”) organized the Terminal Evaluation Team, headed by Mr. Toru Take, from June 20th to July 4th, 2011, for the purpose of the terminal evaluation for Promotion of Quality Cocoon Production and Processing Project (hereinafter referred to as “the Project”).


The Joint Evaluation Team (hereinafter referred to as “the Team”), which consists of four members from JICA and two members from Nepal, was jointly organized for the purpose of conducting the terminal evaluation and preparation of necessary recommendations to the respective governments.

After intensive study and analysis of the activities and achievements of the Project, the Team prepared the Joint Evaluation Report (hereinafter referred to as “the Report”), which was presented to the Joint Coordination Committee. The Joint Coordination Committee accepted the Report and agreed on the following matters attached hereto.

Kathmandu, July 4th, 2011

Mr. Toru Take
Leader, JICA Terminal Evaluation Team
JICA Nepal Office
Japan International Cooperation Agency

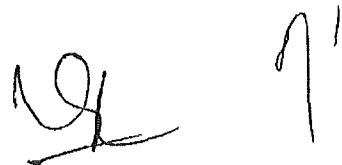


Mr. Vijoy Kumar Mallick
Director General
Department of Agriculture
Ministry of Agriculture and Cooperatives

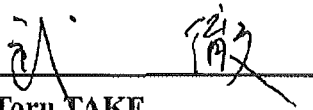
Attached Document

1. Common Understanding concerning the Measures to be Taken by Both Sides

The Terminal Evaluation Report was developed as a result of the Joint Evaluation activities as per attached in Appendix 1. The Joint Coordination Committee (JCC) confirmed the Report, and both Nepalese and Japanese sides agreed to follow the recommendations from the Report and take necessary measures accordingly.

Handwritten signature and a mark resembling a stylized '7' or '1'.

**THE JOINT TERMINAL EVALUATION REPORT
ON
PROMOTION OF QUALITY COCOON PRODUCTION
AND PROCESSING PROJECT
IN
NEPAL**




Mr. Toru TAKE

Leader

Japanese Evaluation Team

JICA Nepal Office



Ms. Uma Maiya SHRESTHA

Leader

Nepalese Evaluation Team

Department of Agriculture

MOAC

Kathmandu

July 4th, 2011

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ANNEX

1. Schedule of the Evaluation
2. Project Design Matrix Version 2
3. Plan of Operations Version 2
4. Achievement Grid
5. Implementation Process Grid
6. Evaluation Grid
7. Dispatch of Experts
8. Local Cost (Japanese side)
9. Provision of Equipment and Materials
10. Assignment of Counterpart Personnel

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ABBREVIATIONS AND ACRONYMS

ACP	Association for Craft Producers
C/P	Counterpart Personnel
CRC	Community Rearing Center
DADO	District Agricultural Development Office
DOA	Department of Agriculture
DOIED	Directorate of Industrial Entomology Development
JCC	Joint Coordination Committee
JT	Junior Technician
JTA	Junior Technical Assistant
JICA	Japan International Cooperation Agency
M/M	Minutes of Meetings
MOAC	Ministry of Agriculture and Cooperatives
NGO	Non-Governmental Organization
NPC	National Planning Commission
ODA	Official Development Assistance
PDM	Project Design Matrix
PO	Plan of Operations
PSSCRC	Parental Stock Seed Cocoon Resource Center, Dhunibesi
SAN	Silk Association of Nepal
SDD	Sericulture Development Division
SM	Silk Mobilizer
WGA	Women Guidance Association

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1. Introduction

1.1. Objectives of the Terminal Evaluation

Objectives of the Terminal Evaluation were as follows:

- (1) To verify the achievement and implementation process of “Promotion of Quality Cocoon Production and Processing Project” (hereafter referred to as “the Project”) in terms of five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact and Sustainability) based on the Record of Discussion (R/D) and Project Design Matrix (PDM)
- (2) To identify the obstacles and facilitating factors that have affected the implementation process and to review the project plan of the remaining period of the Project; and
- (3) To discuss and identify necessary measures for overcoming challenges on the project operation and report and recommend the results of discussions to the relevant government agencies in Nepal and Japan.

1.2. Members of the Joint Evaluation Team

Table 1-1: Japanese Evaluation Team Members

Name	Designation & Organization
Mr. Toru TAKE Team Leader	Senior Representative, JICA Nepal Office
Dr. Makoto KIUCHI	Director, Division of Insect Sciences, National Institute of Agrobiological Sciences
Mr. Tomohiro ARIMA	Representative, JICA Nepal Office
Mr. Atau KISHINAMI	Consultant, International Development Associates, Ltd.

Table 1-2: Nepalese Evaluation Team Members

Name	Designation & Organization
Ms. Uma Maiya SHRESTHA Team Leader	Senior Agricultural Economist, Department of Agriculture, MOAC
Mr. Bhoj Raj SAPKOTA	Agricultural Economist, Monitoring and Evaluation Division, MOAC

1.3. Schedule of the Terminal Evaluation

The schedule of the Terminal Evaluation is attached as ANNEX1.

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2. Outline of the Project

2.1. Background of the Project

In Nepal, around 66% of the employed population is engaged in agriculture, which generates around one third of Gross Domestic Product (GDP) of the country. Nepalese land is characterized by its high ratio of mountainous area coverage and arable land is almost completely exploited. Therefore, production of high value added crops (e.g. sericulture, fruit cultivation and tea cultivation) with utilization of various geographic and climatic conditions is expected to be promising.

Sericulture in Nepal began around 30 years ago, which is relatively recent compared to that of other countries. Compared to Gunma prefecture which is the largest cocoon production area in Japan, mulberry plantation area per household is 1/3, cocoon yield per ha is 1/4, and production per household is 1/14. These facts indicate the low productivity of sericulture in the country. Further, the quality of raw silk made in Nepal is “Grade A” in most cases, whereas Indian silk is “Grade 2A” or “Grade 4A” and Japanese one is “Grade 4A”. It shows that the quality of Nepalese silk does not respond to the expectation/needs of the international market. The direct reasons of low productivity and quality come from the limited number of skilled technicians and extension workers to provide appropriate techniques (e.g. mulberry cultivation, disease prevention, rearing method, mounting method, and cocoon selection).

The Government of Nepal played a leading role on the development of the domestic silk industry by carrying out the introduction and instruction of cocoon production, cocoon procurement, drying and production of raw silk from the procured cocoons. The Ministry of Agriculture and Cooperatives made several achievements on sericulture development (cf. establishing branch offices in several regions, introducing reeling machines, preserving new varieties of silkworm from Japan, silkworm egg production and distribution, etc.) with support from donor agencies and NGOs. The quality of the produced cocoon, however, remained at a low level and led not only to the lower quality of raw silk, but also to higher costs, compared to that of the market price. Accordingly, Nepalese raw silk could not compete against Chinese and Indian silk which are also imported to Nepal. Together with the officially fixed pricing system, the raw silk made by the Government was not likely to be sold, which indicated that the more the Government produced raw silk from low quality cocoon, the more deficits emerged.

Under these circumstances, the Government of Nepal requested the Government of Japan for a technical cooperation project for verification of quality cocoon and silk production model. In response to the request, JICA, together with the Government of Nepal started the Project in December 2006.

2.2. Summary of the Project

Project Title



Promotion of Quality Cocoon Production and Processing Project

Implementing Organizations

- Ministry of Agriculture and Cooperatives (hereinafter referred to as “MOAC”)
- Department of Agriculture (hereinafter referred to as “DOA”), MOAC
- Directorate of Industrial Entomology Department (hereinafter referred to as “DOIED”)

Project Duration

December 2006 –November 2011 (five years)

Target Area

Dhading District, SVDC/ Baireni, Salang, Nalang, Kumpur, Sankosh

Target Group

- Staff of DOIED
- Seri-farmers in the Targeted Area

Overall Goal

- The model¹ for quality cocoon and silk production are replicated to other parts of Nepal.
- The income of seri-farmers and workers around serifarmers is increased through the improvement.

Project Purpose

The quality cocoon and silk production model is verified in the target area through capacity building and strengthening of the linkage among serifarmers groups, Government technicians, NGOs, Private entrepreneurs and other stakeholders.

Outputs

1. The technical capacity among farmers groups are strengthened through capacity development of Government technicians.
2. The cooperation among Government, Private entrepreneurs, and seri-farmers' groups for market exploration is established.
3. The capacity of DOIED to strengthen linkage among Governmental agencies, farmers and Private entrepreneurs is strengthened.

¹ A model specified in the Project Purpose mainly consists of the following components.

- Preparation of manuals and implementation of training courses in a cascade manner (Officers→JT/JTA→SM→seri-farmers)
- Establishment of a system in which private entrepreneurs directly buy Zaguri silk from seri-farmers
- Development of Zaguri silk products by private entrepreneurs
- Establishment of a monitoring system by JT/JTA and SM by using an inspection sheet
- Establishment of collection system of statistics regarding sericulture
- Strengthening of seri-farmers groups to the direction of establishment of cooperatives

3. Methodology of the Evaluation

1) Procedure

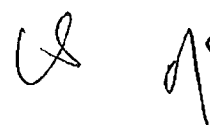
The Evaluation included analysis of documents, field surveys and interviews with stakeholders such as counterpart personnel, JICA experts, community people (e.g. farmers) and so forth, while using PDM version 2 (refer to ANNEX 2), PO version 2 (refer to ANNEX 3), Achievement Grid (refer to ANNEX 4), Implementation Process Grid (refer to ANNEX 5) and Evaluation Grid (refer to ANNEX 6).

2) Item of Analysis

- (1) Achievement of Project
- (2) Implementation Process
- (3) Five Evaluation Criteria described below:

Table3-1 : Definition of the Five Evaluation Criteria

Five Evaluation Criteria		Definitions as per JICA Evaluation Guideline
1	Relevance	Relevance refers to the validity of the Project Purpose and the Overall Goal in connection with the development policy of the Government of Nepal as well as the needs of beneficiaries.
2	Effectiveness	Effectiveness refers to the extent to which the expected benefit of the Project has been achieved as planned. It also examines whether these benefits have been brought about as a result of the Project.
3	Efficiency	Efficiency refers to the productivity of the implementation process, examining if the input of the Project have been efficiently converted into the outputs.
4	Impact	Impact refers to direct and indirect, positive and negative effects caused by the implementation of the Project, including the extent to which the Overall Goal has been attained.
5	Sustainability	Sustainability refers to the extent to which an implementing agency can further develop the Project, and the benefits generated by the Project can be sustained under the recipient country's policies, technology, systems and financial state.



4. Project Performance and Implementation Process

4.1. Inputs

4.1.1. Japanese side

(1) Dispatch of Experts

Two long-term experts were dispatched in the fields of i) chief advisor ii) coordination/farmers organization while a total of 25 short-term experts were dispatched in the field of i) product development, ii) chief adviser and iii) extension of sericulture. Refer to ANNEX7.

(2) Local Cost

Local cost allocated by JICA for the implementation of the Project activities from the commencement of the Project to March 2011 is Nrs30,944,301 in total. Refer to ANNEX8.

(3) Provision of Equipment and Materials

Equipment and materials such as Zaguri machines, photocopier/printer and computers have been provided. Refer to ANNEX9.

(4) Overseas Training

A total of 13 officers/JT/JTA participated in training courses in India in the field of “Bi-Voltine Sericulture Rearing Technology” and “Sericulture Administration” and a total of 10 officers participated in “Observational Tour Programs” in Lao-PDR, Thailand and India.

4.1.2. Nepalese side

(1) Assignment of Counterpart Personnel

A total of 14 counterpart personnel (seven from DOIED, one from SDD, six from PSSCRC) have been assigned to the Project. Refer to ANNEX10.

(2) Facilities

DOIED has provided an office space and other necessary facilities and utilities for the Project experts.

(3) Local Cost

The Government provides subsidy not only for seri-farmers but also for private entrepreneurs which produce Zaguri silk. DOIED also provides travel/daily allowance for JT/JTA to monitor farmers' activities. According to the Nepalese side, the allocated budget for Dhunibesi farm was approximately NRs. 29,576,000. About 15% of the budget was spent for Nuwakot area.

4.2. Activities implemented

Almost all the planned activities required were implemented as scheduled according to PO. However, activity 3-1 “To develop facilitation capacity among Government technicians through organizing farmers” is not considered to have made an expected progress. It may be attributed to the limited budget for travel/daily allowance for JT/JTA to visit villages. The Project will continue this activity by involving JT/JTA till the completion of the Project.

4.3. Achievement of the Outputs

The levels of achievement of the Outputs were as follows:

Output 1: The technical capacity among farmers groups are strengthened through capacity development of Government technicians.

Summary of the degree of achievement of Output 1 is presented in the Table 4-1. Most of the Project activities were carried out according to PO and annual plans, and satisfactorily generated the Output.

Table4-1: Degree of Achievement of Output 1

Indicator	Degree of Achievement
1-1 Distribution of 5 technical manuals	Five technical manuals and a rearing calendar were published and utilized by JT/JTAs, silk mobilizers and sericulture farmers. Those publications are i) Silkworm rearing calendar, ii) Illustrated technical manual on silkworm rearing technology, iii) Illustrated technical manual on mulberry cultivation technology, iv) Illustrated technical manual on cocoon assessment, v) Technical manual on silkworm disease management, and vi) Silk production. The indicator, therefore, was fulfilled.
1-2 The retention (20% increase in monitoring score) of technique among seri-farmers	<ul style="list-style-type: none"> ➤ Survey was conducted in early 2009 and early 2011 and the results of questionnaire were compared. ➤ The rate of adoption of major sericulture techniques slightly increased from 56.3% to 61.6% in three villages, Nalang, Salang and Baireni, while the ratio of “C” rank farmers who partially utilize technique and require improvement decreased from 12.6% to 1.2%. ➤ Use of Disinfection and compost reached 100% and 98.9% respectively. However, the ratio of cementing rearing room and that of using chemical fertilizer remain at 13% and 10%

	respectively. ➤ The indicator, therefore, was partially fulfilled.
1-3 The retention (30% increase on last score in trainings) of technique and facilitation skills among Governmental technicians	JT/JTA trainings were implemented three times by officers. Pre-test and post-test were conducted at the trainings to survey on JT/JTAs' understanding of the training contents. In average, 49% improvement was observed. The indicator, therefore, was fulfilled.

Source: Project reports and interviews

Output 2: The cooperation among Government, Private entrepreneurs, and seri-farmers' groups for market exploration is established.

Summary of the degree of achievement of Output 2 is presented in the Table 4-2. Most of the Project activities were carried out according to PO and annual plans and satisfactorily produced the Output.

Table 4-2: Degree of Achievement of Output 2

Indicators	Degree of Achievement
2-1 Introduction of fair grading system by Government	The Project published a technical manual which is inevitable for fair cocoon quality assessment, and implemented training for JT/JTA and silk mobilizers. At the same time, the government set up a committee, which consists of DOA, DOIED, SAN, private sector and sericulture farmers, to determine prices of cocoon and silk. The committee has already revised prices, carefully considering cocoon production cost, quality, international price, etc. The indicator, therefore, was fulfilled.
2-2 More than 3 Private entrepreneurs involved in Zaguri product development	ACP, Mahaguthi, Kala Guthi, and WGA have participated in Zaguri silk product development. The indicator, therefore, was fulfilled.
2-3 Intensity of linkage among Government, Private entrepreneurs and seri-farmers group (more than 4 firms of meetings/activities in the final year)	Interaction meetings were held 18 times and government, private sector and sericulture farmers discussed such issues as cocoon transaction, production, market system, etc. They were held in Baireni, Salang, Nalang and Dhunibesi farms. A workshop on Promotion of Zaguri silk was held in order to establish common understanding of roles of the above three stakeholders for promoting Zaguri silk production. The indicator, therefore, was fulfilled.

Source: Project reports and interviews

Output 3: The capacity of DOIED to strengthen linkage among Governmental agencies, farmers and Private entrepreneurs is strengthened.

Summary of the degree of achievement of Output 3 is presented in the Table 4-3. Most of the Project activities were carried out according to PO and annual plans and satisfactorily produced the Output. Indicator 3-1 was fulfilled; however, as mentioned above, Activity 3-1 was conducted with an intensive support from NGO.

Table 4-3: Degree of Achievement of Output 3

Indicators	Degree of Achievement
3-1 Improvement in performance of seri-farmers groups	The Project facilitated sericulture groups in Nalang and Salang to start Zaguri production and as a result, they have already started to sell Zaguri silk to the private sector. In terms of institutional development of sericulture groups, all sericulture farmers belong to some group and the majority of them use micro credit loans and manage their saving and fund in a proper way. The indicator, therefore, was fulfilled.
3-2 Involvement of Government in activities if farmer groups and Private entrepreneurs (12 visits/yr to farmers groups, 3 visits/yr to private sector)	<ul style="list-style-type: none"> ➤ The frequency of visit by JT/JTA to sericulture farmers was 5.6 times in Nalang, 14.4 times in Salang and 5.6 times in Baireni. The case of Salang only exceeded the target. According to seri-farmers and JT/JTA, however, the frequency is approximately 8.0 in Nalang and besides that, they visit farmers upon request. In addition, Chief of Dhunibesi visited those villages a few times a year with Japanese experts. ➤ The frequency of visit by silk mobilizers to sericulture farmers was 9.6 times, 34 times, and 13.6 times respectively. ➤ The visit to the private sector significantly exceeded the target. (18 times) ➤ The indicator was partially fulfilled.
3-3 Introduction of new monitoring system and statistics	<ul style="list-style-type: none"> ➤ Stakeholders discussed what data should be collected and how these data should be obtained. ➤ They produced various formats. ➤ They collected data required to establish statistics for sericulture administration. ➤ DOIED assigned an officer to deal with sericulture statistical data. ➤ The Project conducted various surveys and compiled the data

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	<p>by using the results from i) survey on sericulture trend in Dhading, ii) questionnaire survey on technology adoption by sericulture farmers, iii) questionnaire survey on Zaguri production by sericulture farmers and institutional development of sericulture groups, iv) survey on silkworm rearing situation, and v) information collection on silkworm rearing at CRCs by using various formats.</p> <p>➤ The indicator, therefore, was fulfilled.</p>
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Source: Project reports and interviews

4.4. Achievement of the Project Purpose

Summary of the findings is presented in the Table 4-4. The progress of the four Outputs indicated that the Project's Purpose would gradually be achieved. Target yield per box, however, was not fully achieved as will be discussed in the next chapter.

Table 4-4: Degree of Achievement of Project Purpose

Indicator	Degree of Achievement						
<p>1 Increase in quality cocoon production (normal cocoon ratio: 80%, shell ratio:20%, hatching percentage: 90%, yield per box:20kg)</p>	<p>➤ Looking at the record of past three years, the normal cocoon ratio at the Project site was more than 89.3%, while the shell ratio was more than 22.6% and hatching percentage was more than 90%. The target, therefore, was achieved.</p> <p>➤ Annual average yield per box was below the target rate as shown in the below table.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>2008</td> <td>2009</td> <td>2010</td> </tr> <tr> <td>14.6kg</td> <td>12.7kg</td> <td>14.0kg</td> </tr> </table> <p>The yield of the following season of some areas was beyond the target of 20kg: 22.7kg in Baireni and 21kg in Nalang on spring 1st 2008, 21.8kg and 23.6kg in Salang on spring 2nd 2009 and on spring 1st 2011 respectively. The target was partially achieved.</p>	2008	2009	2010	14.6kg	12.7kg	14.0kg
2008	2009	2010					
14.6kg	12.7kg	14.0kg					
<p>2 Production of original silk products by private entrepreneurs (3 products by 3 entrepreneurs)</p>	<p>The Project provided Zaguri silk for several private companies and supported product development activities. As a result, Association of Craft Producers (ACP), Mahaguthi, Kala Guthi and Women Guidance Association (WGA) have produced new products (e.g. scarves and shawls) and started their sales. In addition, Everest Art Paper has been producing and exporting interior products made out of Zaguri silk reeled by Adhikari Zaguri Center in Baireni VDC.</p>						

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	The indicator, therefore, was fulfilled.
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Source: Project reports and interviews

4.5. Implementation Process

The Team mainly studied the implementation process in terms of i) revision of PDM, ii) monitoring activities and iii) meetings. The process appeared satisfactory.

(1) Revision of PDM

At the Mid-Term Review, PDM was modified by sorting out activities and clarifying/quantifying objectively verifiable indicators. The modification contributed to a better management of the Project.

(2) Monitoring Activities

The Project arranged progress monitoring to be conducted by DOIED at the end of each year. DOIED sent its representatives for the activity. Though the frequency of field visits by the project director and project manager was limited, field coordinator (Chief of Dhunibesi) took similar responsibility and the frequency was appropriate.

(3) Joint Coordination Committee (JCC)

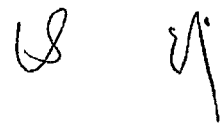
The Joint Coordination Committee meeting were held seven times so far as shown in ANNEX 5 with the participation of C/Ps, Japanese experts, Representatives from JICA Nepal Office and Embassy of Japan and relevant officers from MOAC. Main topics discussed included i) progress and achievement of the Project, ii) revision and approval of PDM and PO, and iii) Project-related activities.

(4) Monthly Meeting

Monthly meetings were held 25 times so far in order to discuss upcoming Project activities (e.g. training dates) with participants of DOIED, silk mobilizes, seri-farmers, NGO and experts.

(5) Interaction Meeting

Interaction meetings were held 18 times so far and government, private sector and sericulture farmers discussed such issues as cocoon transaction, production, market system, etc.



5. Evaluation Results

5.1. Relevance

The relevance is high for the following reasons.

(1) Policies of Nepal

The Project is in harmony with the Nepalese policies and relevant to the needs of the government. Three-Year National Plan states the poverty alleviation as one of the priority issues and sericulture development is considered as one of the agricultural industries that alleviate poverty. The Plan specifies main components of sericulture, which are i) area expansion of mulberry cultivation and seri-farmers, ii) increase in cocoon production and iii) training and capacity building of relevant organization and personnel. These components are clearly in line with the Project activities. In addition, considering potentiality of the sericulture program, NPC prioritized it as "Priority 1".

(2) Consistency with Japan's Assistance Policies

Japan's "Agriculture and Rural Development Program" focuses on three pillars, which are i) food security, ii) income generation and iii) capacity development of government and farmers groups, under the priority issue of "poverty alleviation in rural areas". The Project is related to both income generation and capacity development of government and farmers groups and therefore, is relevant to Japan's ODA policy.

(3) Selection of Target Group/Area

When the Project started, Dhading District was considered as an appropriate target area in terms of accumulated experiences from the past technical cooperation. In addition, it was difficult for the Japanese side to go to other potential districts due to security reasons in the past.

5.2. Effectiveness

The effectiveness is moderate for the following reasons.

(1) Progress of Project Purpose

As mentioned in the previous chapter, the Project Purpose will generally be achieved by the Project completion as indicated by: i) the normal cocoon ratio at the Project site, the shell ratio and hatching percentage and ii) production of original silk products by private entrepreneurs. The average yield per box, however, was 14.0kg in 2010, which fell short of the target figure of 20kg, because rearing result of autumn 2nd season was unexpectedly low. The main causes of this included that i) the interval between autumn 1st and 2nd is shorter than other seasons, ii) soil became unproductive and also pathogen was accumulated after three seasons (spring 1st, spring 2nd and autumn 1st) and iii) mulberries

do not sufficiently grew because of the above reasons. Although it is not specified in “Important Assumption” of PDM, weather conditions, especially high temperature and humidity, damaged cocoons, which obviously reduced the rearing results.

(2) Logic between Project Purpose and Outputs

Three Outputs specified in PDM are the basic concepts/components of the Project’s approach. They are considered to be necessary and sufficient conditions in order to produce the Project Purpose.

(3) Important Assumptions

The following three important assumptions are set at the output level to be fulfilled to achieve Project Purpose.

- i) The Government organizes cocoon inspection system for trading based on genuine quality.
- ii) The Government creates the environment for Private entrepreneurs to invest on original silk products.
- iii) DOIED accepts proposals from the Project and takes necessary measures.

Regarding i), DOIED set up a committee to determine prices of cocoon and silk and the committee has already revised prices, carefully considering cocoon production cost, quality, international price, etc. In addition, the Project prepared “Illustrated Technical Manual on cocoon assessment” in order to establish a grading system based on quality. Regarding ii), the Government provides subsidy not only for seri-farmers but also for private entrepreneurs who produce Zaguri silk and encourages cocoons procurement. As for iii), DOIED have been providing subsidy to Zaguri silk producers by the suggestion of the Project. The above three important assumptions, therefore, are fulfilled.

5.3. Efficiency

The efficiency is relatively high for the following reasons.

(1) Progress of Outputs

Most indicators at the Outputs level have already shown progression towards their fulfilment by the general achievement of Activities. The ratio, however, of cementing rearing room and that of using chemical fertilizer remain at 13% and 10% respectively and have not accomplished the indicator. The main causes of this included that i) seri-farmers usually rear silkworms at their existing houses, which makes cementing difficult and ii) there is a financial difficulty in cementing floors as well as buying chemical fertilizer.

(2) Inputs

In general, inputs were appropriate in terms of quality, quantity and timing and have sufficiently been utilized for conducting activities and producing Outputs. Japanese experts, who have

long experiences in the field of sericulture, were dispatched as planned. Based on their experience, a model was developed and implemented. Provided equipment have been well operated and maintained. A cocoon dryer in Nalang, however, is not regularly utilized mainly because the yield of cocoons at each seri-farmer is small and farmers do not necessarily need a drier at this moment. Zaguri machines provided for PSSCRC and Dhunibesi CRC also are not currently utilized but expected to be made good use for the training purpose. In addition, CRC of Dhunibesi constructed by the Project is not currently utilized for rearing purpose. Regarding the Nepalese inputs, counterpart personnel are not full-time and quite often transferred as discussed below. It was pointed out that daily/travel allowance for JT/JTA are not adequate to sufficiently monitor farmers' activities as proposed in the Annual Program.

(3) Important Assumptions

The following two important assumptions are set at the activity level to be fulfilled to achieve Outputs.

- i) The Nepalese Counterparts assigned for this Project continue to work for the Project.
- ii) The Private entrepreneurs are interested and affirmative in the silk industry.

Regarding i), despite a recommendation made at the Mid-Term Evaluation and Consultation Study, Nepalese counterpart personnel were frequently changed. The event hindered a smooth implementation and management of the Project. This assumption, therefore, is not fulfilled. As for ii), several private entrepreneurs already started to develop Zaguri silk products and expressed their wish to enhance their business. The assumption, therefore, is fulfilled.

5.4. Impact

(1) Progress of Overall Goal

Overall Goal 1 is "The model for quality cocoon and silk production are replicated to other parts of Nepal". There are some progresses as shown in the below table.

Indicators	Degree of Achievement
1 One case where the model is replicated	Though the Project area is confined to Dhading District (Dhunibesi Farm), technical manuals concerning production of quality cocoon were distributed to JT/JTAs in other farms and utilized for extending sericulture technical know-hows. In addition, Zaguri production has expanded to Kathmandu, Kopasi, Bandipur, Chitwan and Pokhara areas besides Dhading. Product development by using Zaguri silk has been promoted by private sector and some products have already been on sale.
2 Introduction of trading	➤ The Project experts were present at cocoon grading. They

<p>between farmers groups and Private entrepreneurs based on fair grading system</p>	<p>instructed JT/JTAs on i) separation method (good and bad cocoon), ii) weighing method, iii) calculation method of shell ratio, etc.</p> <ul style="list-style-type: none"> ➤ The Project published technical manuals which are essential for fair cocoon quality assessment, and it also conducted training for JT/JTAs and silk mobilizers. ➤ DOIED has started direct cocoon transaction between sericulture farmers and private sector from 2009. To promote this trend, DOIED introduced new subsidies to promote production and transaction of cocoon and Zaguri silk. ➤ DOIED started collecting information on stock of cocoon and Zaguri silk, and providing the information for the private sector. ➤ DOIED set up a committee to determine prices of cocoon and silk. The committee has already revised prices, carefully considering cocoon production cost, quality, international price, etc.
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Source: Project reports and interviews

Overall Goal 2 is "The income of seri-farmers and workers around seri-farmers is increased through the improvement". There are some progresses as shown in the below table.

Indicators	Degree of Achievement						
<p>Increase in income of seri-farmers (50%) and Zaguri manufacturers (20%) from cocoon production in the target area</p>	<p>Data regarding income of seri-farmers from cocoon production is not available at the time of the Terminal Evaluation. As a reference, average cocoon sales by a sericulture farmer in the Project area is shown in the below table.</p> <table border="1" data-bbox="612 1496 1139 1592"> <thead> <tr> <th>2008</th> <th>2009</th> <th>2010</th> </tr> </thead> <tbody> <tr> <td>Nrs.6,475</td> <td>Nrs.4,324</td> <td>Nrs.5,359</td> </tr> </tbody> </table> <p>The trend was flatten or decreasing. During this period, the government increased support price of cocoon by 30%. In 2009, the private sector, sericulture farmers, entrepreneurs and sericulture groups started Zaguri production. So far, Nalang Zaguri group and Salang group have produced 92.5kg and 160.8kg of Zaguri silk respectively for the private sector. Nalang group sold 25.0kg of spun silk. A sericulture farmer/entrepreneur produced one ton of</p>	2008	2009	2010	Nrs.6,475	Nrs.4,324	Nrs.5,359
2008	2009	2010					
Nrs.6,475	Nrs.4,324	Nrs.5,359					

	Zaguri silk so far. The total income out of Zaguri was about Nrs.2864,200.
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Source: Project reports and interviews

(2) Other Impacts

The following impacts were observed.

- In Bandipur and Pokhara, Zaguri silk products have been developed by the incentives (e.g. subsidy) introduced by DOIED.
- A silk mobilizer, who was trained and worked in the course of the Project activities, moved to Madi, Chitwan district and currently carries out training courses by using skills and knowledge obtained from the Project.
- No negative impacts have been observed.

5.5 Sustainability

Sustainability is moderate for the following reasons.

(1) Policy and Institutional Aspects

As mentioned in “Relevance”, policy support might be expected since the Project is in harmony with the Nepalese policies and relevant to the needs of the government, although “National Sericulture Policy” has not been approved. By introducing training system in a cascade manner (Officers→JT/JTA→Silk Mobilizers→seri-farmers), the Nepalese side has obtained a method to continue or develop the activities. DOIED officials stated that DOIED is institutionally strengthened through the Project implementation, especially by working with experts. Transfer of counterpart personnel, however, hinders this positive effect produced by the Project.

(2) Technological Aspects (knowledge and skills)

There are some positive aspects confirmed. According to JT/JTA, they are confident in their knowledge and skills and are able to keep implementing the current activities, provided that they have financial back-up. Adoption rate of major sericulture techniques is in an increasing trend, which indicates that the transferred technologies can be accepted and spread to other neighbouring areas. Furthermore, manuals are highly appreciated by users at all levels. Those events show that the training in a cascade manner is well functioning. In addition, provided equipment have generally been well operated and maintained.

Challenges include that the frequent transfer of counterpart personnel made it difficult for skills and knowledge which were provided by the Project to remain in DOIED and that it would take a long time for seri-farmers to fully understand and practice some techniques instructed by JT/JTA/SM.

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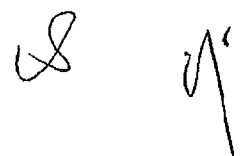
(3) Financial Aspects

Budget for DOIED and nine sericulture development divisions (farms) is showing a tendency to increase and DOIED expressed its plan to continue providing subsidies for drying and transportation of cocoons, improvement of rearing houses, purchasing of Zaguri silk, chemical fertilizers and disinfectants, etc. Although it might be desirable that the subsidy eventually be reduced and abolished, it currently may be an effective tool to encourage an involvement of more seri-farmers and the private sector. Major issue pointed out by JT/JTA is that travel/daily allowances are not sufficient in order to appropriately monitor farmers' activities.

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6. Conclusion

In conclusion, the Project activities have been conducted as planned and it is expected that the Project Purpose would be achieved at a certain satisfactory level by the end of the Project period. There are some unfulfilled indicators (indicator 1 at the Project Purpose level) since the Project has been challenging a difficult issue in the context of complicated process of producing Zaguri silk products and limited resources especially at the seri-farmers' level. Evaluation based on five criteria (Relevance, Effectiveness, Efficiency, Impact and Sustainability) shows some positive results and graded moderate or above despite this time-consuming process and limited resources. The Project, therefore, will be completed in November 2011. Sustainability would be further strengthened when the recommendations specified in the Chapter 7 are met.



7. Recommendations

The Terminal Evaluation Team recommends the followings:

(1) Approval of the National Sericulture Policy

Although the National Sericulture Policy was drafted in accordance with the recommendation made by the Consultation Study Team in August 2008, the Policy is still in the process of revision by MOAC and has not been approved yet. The process should be accelerated in order to promote every aspect of sericulture industry, including i) quality cocoon production, ii) encouragement of private entrepreneurs involvement and iii) allocation of budget to actively monitor farmers' activities by technicians.

Furthermore, the model developed through the project should be extended into other areas with allocation of budget according to the proposed National Sericulture Policy.

(2) Strengthening Collaboration with Relevant Authorities

Through the project activities such as a workshop on Promotion of Zaguri silk, relationship between the government, private entrepreneurs and seri-farmers' group was strengthened, and supply chain of sericulture industry from upstream to downstream was established. Sericulture industry is one of the potential industries for rural area, thus these efforts should be retained and developed. To that end, the framework to encourage the participation of relevant authorities, such as FNCCI and the Ministry of Commerce and Industry, in order to promote post cocoon activities as well.

(3) Institutionalization of SM

Realizing the important role of SM in bridging and transferring sericulture technology from resource centre to farmers, the local governments should institutionalize and retain SM even after termination of the Project.

(4) Upgrading of JT/JTA's Facilitation Capacity

Government's involvement concerning strengthening of farmers' organization is not strong. In order to smoothly carry out joint activities among seri-farmers, it is essential to organize farmers' organization, such as a cooperative. The Team, therefore, recommends upgrading JT/JTA's facilitation capacity.

(5) Improvement of Cocoon Yield

Yield of cocoons is still low and remains less than 20kg/box in average. In particular, in Autumn 2nd season is usually quite low compared to other three seasons. In order to increase the yield, necessary measures, such as adequate disinfection, satisfactory mulberry cultivation, and proper treatment of silkworm, should be taken by seri-farmers under technical guidance and instructions of

technicians.

(6) Collection of Baseline Data

In order to provide data/statistics corresponding to indicators for overall goal, relevant data should be collected through the monitoring system and statistics introduced by the project. Moreover, baseline data should be collected at the early stage of a project.

(7) Utilization of Zaguri Machines for Training Purpose

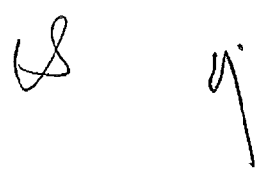
Based on the request, the Project provided 10 sets of Zaguri machines for PSSCRC. PSSCRC should notify the availability of training courses by using the machines to the public and train farmers and relevant personnel of the private entrepreneurs, which also contribute to the effective use of its personnel.

(8) Utilization of CRC at PSSCRC, Dhunibesi

CRC of Dhunibesi which was newly constructed by the Project is not currently utilized for rearing purpose due to defect in rearing racks. It is strongly recommended that DOIED and Dhunibesi should utilize CRC as per technical requirements.

(9) Ensuring of the Supporting Budget

For the sustainability of the Project, the counterpart personnel from the Government of Nepal should ensure the supporting budget, whether from development partner or from the Government itself, so that it can not hinder to achieve the project output.

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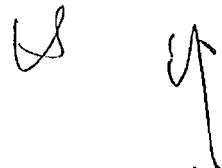
8. Lessons Learnt

(1) Training in a Cascade Manner

The Project implemented training courses in a cascade manner (Officers→JT/JTA→Silk Mobilizers→seri-farmers). In this manner, there remains clear system to continue or develop the activities only by the Nepalese side itself. In forming a project, therefore, it is necessary to consider establishing the system in which concerned countries can continue to carry out the activities on their own even after the project completion.

(2) Involvement of the Private Sector

The Project established a system in which private entrepreneurs directly buy Zaguri silk from seri-farmers and develop products. It significantly reduced the stock of cocoon and enhanced the domestic demand of Zaguri silk. Involvement of the private sector should be considered in the planning stage.



ANNEX1: The Schedule of the Terminal Evaluation									
Date & Time		Mr. Take	Mr. Kiuchi	Mr. Kishinami	Mr. Arima	Mr. Gurung	Last Updated:		20-Jun-11
		Mission Leader	Promotion of Seri Culture	Evaluation / Analysis	Planning / Management	Senior Program Officer	Expaert Team		Ms. Uma Maya Shrestha
							Dr. Yanagawa, Mr. Yamaguchi, Ms. Kawaguchi, Ms. Shibuva		
7	Jun	26	Sun		Arrive at Kathmandu	Report Preparation			
8	Jun	27	Mon	10:00	Mtg. at JICA Nepal Office				
				11:30	Courtesy Call to EOJ			Courtesy Call to EOJ	
				13:00	Field Visit to Kopasi office (Observe their activities, interview with office chief, Mr. Palikhe)				
				17:00	Arrival at KTM				
9	Jun	28	Tue	10:30	1st Joint Evaluation Committee at DOA • Explanation of evaluation objective, method, etc • Brief Reporting of Pre-survey results by Consultant				
				13:00	CC to Secretary Ministry of Agriculture and Cooperatives				
				14:00	CC Director General Mr. V. K. Mallick, DOA				
10	Jun	29	Wed	7:00	start from KTM				
				8:00	arrive at Dhunibesi office, observe Dhunibesi office facilities and activities				
				9:30	tea and snacks at Naublse				
				10:30	observe Ram Nath Adhikari's Zaguri production center, Balreni VDC				
				13:00	observe Zaguri production activities and interview with farmers, Nalang VDC				
				15:00	head for KTM				
				16:00	Khaja at Balreni				
				19:00	arrive at KTM				
11	Jun	30	Thu		2nd Joint Evaluation Committee • Review on achievements and drafting 5 criteria evaluation • Discussion on Conclusion and Recommendation				
12	Jul	1	Fri		• Revision and Preparation of the Report				
13	Jul	2	Sat		Report Preparation				
14	Jul	3	Sun		3rd Joint Evaluation Committee				
15	Jul	4	Mon	AM	Joint Coordination Committee (JCC) • Presentation of Evaluation Report • Signing of M/M				
				14:00	Reporting to JICA				
				16:00	Reporting to EOJ			Reporting to EOJ	
16	Jul	5	Tue		Leave to BKK	Leave to BKK			

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ANNEX2: Project Design Matrix

Target Area : Dhading District, 5VDC/ Bairini, Salang, Nalang, Kumpur, Sankosh (Bhumisithan, Murali Bhanjyang*)
 Duration : From Dec. 2006 / To Nov. 2011
 5 Years
 Target Group 1) Staff of Directorate of Industrial Entomology Development
 2) Seri-Farmers in the Targeted Area

As of 15th June, 2009

Narrative Summary	Objectively Verifiable Indicator	Means of Verification	Important Assumption
<p>[Overall Goal] The model for quality cocoon and silk production are replicated to other parts of Nepal.</p> <p>The income of seri-farmers and workers around seri-farmers is increased through the improvement.</p>	<ul style="list-style-type: none"> * 1 case where the model is replicated * Introduction of trading between farmers groups and Private entrepreneurs based on fair grading system * Increase in income of seri-farmers(50%) and zaguri manufacturers(20%) from cocoon production in the target area 	<ul style="list-style-type: none"> * Annual report and budget of DOIED * Sericulture statistics and sample survey 	<ul style="list-style-type: none"> * Government's Policy on Sericulture Promotion continues.
<p>[Project Purpose] The quality cocoon and silk production model is verified in the target area through capacity building and strengthening of the linkage among seri-farmers groups, Government technicians, Private entrepreneurs and other stakeholders.</p>	<ul style="list-style-type: none"> * Increase in quality cocoon production (normal cocoon ratio 60%, shell ratio 20%, hatching percentage 90%, yield per box 20kg) * Production of original silk products by private entrepreneurs (3 products by 3 entrepreneurs) 	<ul style="list-style-type: none"> * Result from Monitoring and Grading by GoN * Result from Monitoring and interview survey 	<ul style="list-style-type: none"> * Government's Policy on Sericulture Promotion continues. * Governmental staffs and Private entrepreneurs concerned to Project Implementation continue the support to Seri-farmers. * Silk price doesn't have a great fall.
<p>[Output] 1. The technical capacity among farmers groups are strengthened through capacity development of Government technicians.</p>	<ul style="list-style-type: none"> * Distribution of 5 technical manuals * The retention (20% increase in monitoring score) of technique among seri-farmers * The retention (30% increase on test score in trainings) of technique and facilitation skills among Government technicians 	<ul style="list-style-type: none"> * Record of Project activities * Result from Monitoring and interview survey * Result from Monitoring and interview survey 	<ul style="list-style-type: none"> * The Government organizes cocoon inspection system (or trading based on a genuine quality). * The Government creates the environment for Private entrepreneurs to invest on original silk products. * DOIED accepts proposals from the Project and take necessary measures.
<p>2. The cooperation among Government, Private entrepreneurs, and seri-farmers' groups for market exploration is established.</p>	<ul style="list-style-type: none"> * Introduction of fair grading system by Government * More than 3 Private entrepreneurs involved in zaguri product development * Intensity of linkage among Government, Private entrepreneurs and seri-farmers group (more than 4 times of meetings/activities in the final year) 	<ul style="list-style-type: none"> * Record of Project activities * Record of Project activities and interview survey * Record of Project activities and interview survey 	
<p>3. The capacity of DOIED to strengthen linkage among Governmental Agencies, farmers and Private entrepreneurs is strengthened.</p>	<ul style="list-style-type: none"> * Improvement in performance of seri-farmers groups * Involvement of Government in activities of farmers groups and Private entrepreneurs (12 visits to farmers groups, 3 visits to private sector) * Introduction of new monitoring system and statistics 	<ul style="list-style-type: none"> * Spiderweb tool self-evaluation * Result from Monitoring and interview survey * Record of Project activities 	
<p>[Activity 1] 1-1 To standardize technology and methodology for farmers for production of cocoons, post-harvesting, and Zaguri silk production and compile as manuals 1-2 To conduct trainings to Government technicians, silk mobilizers and farmers groups in Cascade Method as OJT</p> <p>[Activity 2] 2-1 To propose distribution system suitable for current situation of market and Private entrepreneurs based on value chain survey 2-2 To propose cocoon inspection system to grade a cocoon equally by its genuine quality 2-3 To design the method for intervention of Private entrepreneurs and support DOIED to introduce direct procurement of cocoon by Private entrepreneurs as a trial 2-4 To provide support for Private entrepreneurs producing product using Zaguri silk</p> <p>[Activity 3] 3-1 To develop facilitation capacity among Government technicians through organizing farmers 3-2 To hold periodical meetings (Triangular, RCC, JCC) for the coordination and problem solving among farmers, Government, and private entrepreneurs 3-3 To develop appropriate monitoring system and statistics</p>	<p>[Input from Japanese side] 1) Dispatch of Experts</p> <p>Long Term: Two Persons (Chief Advisor/Sericulture Promotion Policy, Coordinator/Farmers Organization) Short Term: As necessary 2) Procurement of Equipments & Facilities Community Rearing House, Zaguri Training Facility & Cocoon Drier as necessary</p> <p>3) Training Third country Training as necessary</p> <p>4) Local Cost Assignment of NGO and Local Staff Cost for In-country Training, observation visit and WFS as necessary</p>	<p>[Input from Nepalese side] 1) Assignment of PD, PM, and Necessary Government staff/technicians for implementing the Project 2) Preparation for Land and Project office (Central office at DOIED and Field office at Dhading) 3) Running cost for the Project Implementation 4) Salary and TA/DA for staff, Water/Electricity/Rental fee, etc</p>	<ul style="list-style-type: none"> * The Nepa'ese Counterparts assigned for this Project continue to work for the Project. * The Private entrepreneurs are interested and affirmative in the Silk Industry.
			<p>Pre-Conditions * The necessary Number of Nepalese Counterpart staff are assigned. * The farmers in Target Area select Sericulture as desirable cash crop. * The Governments' existing services (Supply of i) mulberry sapling, ii) Silkworm Egg and iii) Antiseptics, etc.) continue during the Project period. * The insurgent situation in the target area is kept normal.</p>

* To concentrate on active 5VDCs to establish the Model, Bhumisithan and Murali Bhanjyang are excluded from the Main target area. However, possible services including trainings will be continued.

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Tentative Plan of Operation (from June 2009)	Organization In Charge	Annual Plan of Operation												ACTIVITIES Details	RESULTS	SCORE %
		Operations in 2009				Operations in 2010				Operations in 2011						
[Activity 1]		1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr			
[Output 1] The technical capacity among farmers groups are strengthened through capacity development of Government technicians.																
1-1 To standardize technology and methodology for farmers for production of cocoons, post-harvesting, and Zaguri silk production and compile as manuals														One was published already, two manuals in 2009 and two in 2010 will be published	The Project has published 6 kinds of technical manual for sericulture farmers. They are: 1. Silkworm rearing calendar, 2. Illustrated technical manual on silkworm rearing technology, 3. Illustrated technical manual on mulberry cultivation technology, 4. Illustrated technical manual on cocoon assessment, 5. Technical manual on silkworm disease management, and 6. Silk production	100
1-1-1 Recognition and making packages of techniques and methods necessary for sericulture farmers	DOIE D/Ko pashi/JICA														Based on the discussions on major technology which is inevitable for improving cocoon production, it was decided to make a package and publish technical manuals on technologies especially on silkworm rearing technology, cultivation of mulberry tree, and cocoon grading. It was also decided to publish Silk Production which is useful for Zaguri production and product development using silk. These manuals were simple with many visual materials.	100
1-1-2 Preparation of manuals of those techniques and methods which were made as packages	DOIE D/Ko pashi/JICA													Training for officers on manual production will be conducted in Kopashi.	Two officer level trainings were conducted prior to the publication of technical manuals on silkworm rearing and mulberry garden management. KJ method was used in the training and all the participated officer discussed technical issues and made summary for each technical field. Mr. Shimizu, then Chief Advisor, edited and published "Silkworm rearing calendar". In regards with "Silk Production", Ms. Eriko Kawaguchi prepared the content. Mr. Akio Yamaguchi edited the "Technical manual on silkworm disease management". Mr. Bhakta Raj Palikhe edited "Illustrated technical manual on cocoon assessment" and "Illustrated technical manual on mulberry cultivation technology". Two languages of English and Nepali were used for all the publication.	100

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1-1-3	Publishing and distribution of techniques and methods compiled as manuals	DOIE D./Ko pashi/ JICA			Planned technical manuals were all published. They were utilized in training, workshop and demonstrations. Sericulture farmers' training started from Autumn 1st season and fifteen training have been conducted so far.	100
1-1-4	Revision of manuals based on the training results	DOIE D./Ko pashi			Combating strategy against silkworm diseases is extremely important in order to improve cocoon production. Technical manual on silkworm rearing technology is not sufficient in conducting training; therefore, it was required to have also technical manual focusing on how to deal with silkworm diseases. The Project edited brochures on silkworm diseases which was made as immediate learning tool for sericulture farmers and published "Technical manual on silkworm disease management".	100
1-2	To conduct trainings to Government technicians, silk mobilizers and farmers groups in Cascade Method		4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3		In Cascade Method, firstly the Project conducted trainings to JT/JTA and Silk Mobilizers by officers using those published technical manuals on 9-10 March, 2010, 14-16 Feb, 2011, and 21-24 Feb, 2011. Then JT/JTAs have conducted 11 demonstrations and 15 farmer-level training.	95
1-2-1	To carry out extension worker-level training and conduct exam on understanding of trainees	DOIE D./JIC A./Ko pashi		twice a year	JT/JTA trainings by officers using published technical manuals were conducted three times. Examination was implemented before and after the training and the Project tried to see how effective the training was. As a result, JT/JTA understood the content of lectures very well and 49% improved in average.	100
1-2-2	To carry out TOT training to Silk Mobilizers by extension workers (mulberry plantation, harvesting, silk worm rearing, disinfection, mounting, cocoon separation, etc.) and conduct exam on understanding of trainees	Dhuni besi		twice a year	Silk Mobilizer Training was conducted twice and significant improvement of 137% in average was witnessed in the exam done before and after the trainings. (Adaptation of techniques in sericulture farmers was surveyed by questionnaire as a part of end-line survey in February 2011. A rank farmers who understand techniques very well and utilize most of the techniques occupied 70% in Nalang and Salang and 45% in Bairant. Looking at three VDCs, Nalang, Salang and Bairant, some improvement was seen from 53.4% to 62.2%. Significant difference was not identified in concreting floor at 13% and utilizing chemical fertilizer at 10%. On the other hand, practices such as using compost fertilizer, separating bad and good cocoons, deflossing, identifying appropriate date for harvesting were improved.)	80
1-2-3	To provide advice on the result of monitoring on TOT training	DOIE D./JIC A			As a result of monitoring TOT training and demonstration at farmers, the Project decided to publish "Technical manual on silkworm disease management" which farmers less understand. Based on CA's advice, DOIED allocated subsidy in order to concrete floor of rearing rooms to combat silkworm diseases.	100

2-3	To design the method for intervention of Private entrepreneurs and support DOIED to introduce direct procurement of cocoon by Private entrepreneurs as a trial				After interaction meeting among DOIED, private sector, sericulture farmers, and the Project on 7 Feb. 2009, DOIED made environment in which private sector could purchase dried cocoon and zaguri silk from government and sericulture farmers in order to promote direct purchase of cocoon by private sector. Such direct cocoon sales by farmers to private sector started from July 2009. On the other hand, DOIED has started subsidy provision to private sector in order to promote direct purchase of cocoon and Zaguri silk by private sector. DOIED also periodically collects data on the stock of dry cocoon and zaguri silk and created system in which those stock information can be provided to private sector if necessary.	100
2-3-1	Survey of necessary conditions for making private sector involved in Nepali cocoon and silk market	DOIE D/JIC A			DOIED organized "Workshop on coordination with private sector involvement on post cocoon" on 8-9 November, 2009 to discuss coordination and cooperation between government and private sector inviting representatives from DOA, private sector, NGO, and sericulture farmers.	100
2-3-2	Private entrepreneurs purchase cocoon directly from seri. farmers' groups	DOIE D			DOIED has purchased cocoon from sericulture farmers to minimum extent from Autumn 1st in 2009. In 2009 S.K. Handicraft purchased 2 tons of dried cocoon from DOIED which was equivalent to Nrs. 1million and produced raw silk and Zaguri silk. Private sector purchased 123kg of raw cocoon equivalent to Nrs.24,000 directly from Dhanbasi Office during 2009. In 2010, and 2011, the volume purchased by private sector dramatically increased up to 584.5 kg (Nrs.140,582) of raw cocoon and 1,213kg (Nrs.709,229) of dried cocoon. In addition, Adhikari Zaguri Production unit purchased 1,241kg of raw cocoon (Nrs.310,250) and 2,777kg (Nrs. 1,666,620) of dried cocoon from the government farms and produced 1ton of Zaguri silk. Sericulture farmers in Nalang and Salang VDCs has been producing Zaguri silk out of their own cocoon and selling them to private sector. So far, Nalang Zaguri group and Salang group have produced 92.5kg and 160.8kg of Zaguri silk respectively for the private sector. Nalang group sold 25.0kg of spun silk. The total income out of Zaguri was about Nrs.2864,200.	100

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2-4-4	To invite private sector to cocoon and silk market	DOIE D/JIC A														DOIED organized "Workshop: a long term vision and plan for sericulture development in Nepal" on 20-21 August, 2009 and made plan to facilitate private sector participate in cocoon and silk market. Workshop on promotion of Zaguri Silk also contributed advertizing Zaguri silk among private sector. Currently more than four companies has involved in production of Zaguri silk and silk product development.	100
[Activity 3]			2009				2010				2011						
[Output 3] The capacity of DOIED to strengthen linkage among Governmental Agencies, farmers and Private entrepreneurs is strengthened.			4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3														
3-1	To strengthen facilitation capacity of government staff through institutional development of farmer groups through NGO involvement		4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3												In order to strengthen facilitation skill of extension workers, the frequency of visit and OJT is very important. But visiting sericulture farmers require travel and daily allowance (TADA) from government budget, therefore shortage of TADA became constrain for not being able to send out extension workers to the field. On the other hand, the project kept its stance that it cannot provide regular TADA to government staff including extension workers in Dhunibesi farm. Therefore, extension workers hardly participated in regular meeting of sericulture farmers groups. The Project provided two trainings to extension workers on facilitation skills. Extension workers also participated in assessment of institutional development of sericulture groups and learned how to assess ID of farmers groups using spider-web tool. Extension workers also conducted demonstration and farmer-level training utilizing technical manuals with their own initiatives. Throughout these activities, the project expected their facilitation skill was improved to some extent.		85
3-1-1	To clarify the role of each stakeholder (government, farmer, private sector)	DOIE D/JIC A													The role of each stakeholder has been clarified in early stage of the project.	Stakeholders hold a series of meeting and drew a consensus on each role of counterpart and the Project. Then they decided TOR to contract out with NGO.	100
3-1-2	To make TOR for NGO and make agreements	DOIE D/JIC A/Dh unibes i													TOR of NGO was made in Jan 09. Agreement for 2008/09 was made on Feb 09, Agreement for 2009/10 will be made in Jun 09. It's	Three proposals from three NGOs were submitted. After the selection process, ICDC (Integrated Community Development Campaign) was selected and contracted with PQCFPP.	100

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3-1-3	Monitoring and provision of guidance on NGO's institutional development of seri farmer groups	DOIE D/JIC A/Dh unibes i				Regular monitoring was done by Project Coordinator or Project Assistance at each activity NGO conducted. The Project instructed NGO to assess level of institutional development of sericulture farmers groups utilizing spider-web evaluation tool. By assessing the situation of ID three points in March 2009, Feb., 2010 and Feb., 2011, the Project tried to assess how NGO's activities affected on ID of groups comparing the difference. The result revealed that some groups which were very low in terms of ID in 2009 improved ID level after two years.	100
3-1-4	Monitoring and provision of guidance on NGO's inputs towards capacity development for institutional development of seri farmer groups	DOIE D/JIC A/Dh unibes i				Activities concerning ID strengthening by NGO were familiar with every stakeholder in the monthly meeting at Dhunbesi farm after June 2009, however there was very limited occasions in which Dhunbesi farm sent extension workers to project site at their own cost. The major reason was that provision of TADA was not possible although government side felt it was necessary to send JT/JTA to each ID activity. The Project could not afford paying TADA for extension workers. Therefore, participation by extension workers in such kind of activity was minimum.	50
3-1-5	Implementation of facilitation training to extension workers by NGO	JICA/ NGO	-	-	Firstly human skill development training was conducted for JT/JTA in Feb. 2009 directly by the Project.	The Project conducted human skill development training in Feb. 2009 targeting 16 extension workers with aim at improvement of facilitation skill. NGO also implemented leadership training in December 2009. But Dhunbesi farm sent an officer to the training instead of JT/JTA. In November 2010, NGO conducted leadership and facilitation training and two officers, 4 JT/JTAs in Dhunbesi and two JT/JTAs in DADO Dhading took part. The Project provided opportunity to improve facilitation skill through method of spider-web in March 2009, Feb. 2010 and Feb., 2011.	80
3-1-6	To supervise and provide advice to extension workers on facilitation	DOIE D/JIC A/Dh unibes i/ NGO				It is actually ID of farmers should be one of TOR for extension workers (Nepal Agriculture Extension Strategy). It is not easy for extension worker to go to sericulture groups due to various reasons; for example, TADA is not sufficient, JT/JTAs' capacity on ID is not developed, etc. The real situation is one step before providing advice and instruction on facilitation skills. The Project introduced spider-web evaluation of ID in 2009, 2010 and 2011 and tried to instruct extension workers by watching facilitation skills of NGO staff. Stakeholders discussed after spider-web exercise, provide advice to extension workers and promote improvement of their facilitation.	80

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3-2-5	To make proposed improvement plans into action raised from regular meeting among government, seri-farmer groups and private	DOIE D/JIC A/Dh unibes i				Several discussions on Zaguri production, transaction system, etc. led inception of transaction between DOIED and private sector and between sericulture farmers and private sector. DOIED started collecting information on stock of dried cocoon and Zaguri silk to deal with increasing demands for Zaguri silk and established new subsidies for drying cocoon and production of Zaguri silk.	100
3-3	To develop statistical data collection and activity monitoring methods		4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12			Based on the discussion on the content and how to collect statistical data required for sericulture administration, the Project produced the format and tried to collect data. Besides that, through the various survey and data collection such as current trend survey in sericulture in Dhading district, questionnaire survey on adaptation of sericulture techniques by sericulture farmers, questionnaire survey on Zaguri production by seri-farmers, questionnaire survey on institutional development of seri-farmers groups, survey on rearing situation of seri-farmers, survey on CRC rearing situation, the Project produced formats and collected data.	85
3-3-1	Study the current statistical data collection and monitoring activities	DOIE D/JIC A			Study was done in May-Jun 09.	DOIED publish annual progress report regularly in every year. However, maintenance of sericulture statistical documents and data collection activities were very slow, there is no section which is specialized dealing with sericulture statistical data. There is no such surveys conducted like survey on on adaptation of sericulture techniques by sericulture farmers, survey on rearing situation of seri-farmers, and survey on CRC rearing situation.	100
3-3-2	To develop monitoring formats	DOIE D/JIC A				The produced format contains data which seems important for sericulture statistics including organizational structure of DOIED and farms and its budget, kinds of subsidies and expenditure, number of sericulture household in each farm, area of mulberry tree plantation, cocoon production, etc. The project produced formats for current trend survey in sericulture in Dhading district, questionnaire survey on adaptation of sericulture techniques by sericulture farmers, questionnaire survey on Zaguri production by seri-farmers, questionnaire survey on institutional development of seri-farmers groups, survey on rearing situation of seri-farmers, and survey on CRC rearing situation.	100

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3-3-3	To implement monitoring using the developed monitoring formats	DOIE D/JIC A			DOIED started collecting statistical data based on newly drafted formats. But the collected data from each farm was not complete and insufficient. The current trend survey in sericulture in Dhading was conducted by silk mobilizers and the collect data was compiled. The questionnaire survey on adaptation of sericulture techniques by sericulture farmers, questionnaire on Zaguri production by sericulture farmers, and questionnaire survey on institutional development of sericulture farmers groups were conducted by ICDC (NGO). Since they visited each household to fill in questionnaire, detailed information was collected. Rearing survey of sericulture farmers and CRC have been done and collected by JT/JTA.	80
3-3-4	To assess the monitoring results and revise the developed monitoring formats and method	DOIE D/JIC A			Revisions were made in formats and the collection method after monitoring results.	100
3-3-5	To make adoptions of monitoring methods to DOIED and its branch offices	DOIE D			DOIED assigned a third class officer to deal with sericulture statistics, sent formats to each farm, and collected sericulture related information. As a result of that, information of budget and expenditure in terms of personnel cost, activity cost, maintenance cost of facilities, etc., kinds of subsidies and disbursed amount, sericulture household in each farm, area of mulberry tree plantation, cocoon production and Zaguri silk production, was collected. However, those collected information was not complete and insufficient. It is necessary to continue to grasp more accurate information.	70
3-3-6	To discuss improvement plan on adopted monitoring system	DOIE D/JIC A			DOIED has been publishing annual progress report which contains apiculture and mushroom cultivation as well as sericulture every year in 2005/06, 2006/07 and 2007/08. The annual report in 2008/09 was compiled based on CA's advice, therefore more accurate information was grasped. Though currently data for 2009/10 has been compiled using the new formats, each farm is not holding sufficient sericulture data. The Project is suggesting them to utilize the focal person specialized in dealing with sericulture statistics.	70

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ANNEX4: Achievement Grid

Narrative Summary	Indicators	Degree of Achievement	Prospects						
<p>Overall Goal 1</p> <p>The model for quality cocoon and silk production are replicated to other parts of Nepal.</p>	<p>1 One case where the model is replicated</p> <p>2 Introduction of trading between farmers groups and Private entrepreneurs based on fair grading system</p>	<p>Though the Project area is confined to Dhading District (Dhunibesi Farm), technical manuals concerning production of quality cocoon were distributed to JT/JTAs in other farms and utilized for extending sericulture technical know-how. In addition, Zaguri production has expanded to Kathmandu, Kopasi, Bandipur, Chitwan and Pokhara areas besides Dhading. Product development by using Zaguri silk has been promoted by private sector and some products have already been on sale.</p> <ul style="list-style-type: none"> ➤ The Project staff were present at cocoon grading. They instructed JT/JTAs on i) separation method (good and bad cocoon), ii) weighing method, iii) calculation method of shell ratio, etc. ➤ The Project published technical manuals which are inevitable for fair cocoon quality assessment and also conducted training for JT/JTAs and silk mobilizers. ➤ DOIED has started direct cocoon transaction between sericulture farmers and private sector from 2009. To promote this trend, DOIED introduced new subsidies to promote production and transaction of cocoon and Zaguri silk. ➤ DOIED started collecting information on stock of cocoon and Zaguri silk, and providing the information for the private sector. ➤ DOIED set up a committee to determine prices of cocoon and silk. The committee has already revised prices, carefully considering cocoon production cost, quality, international price, etc. 	<p>There are some progresses concerning both Indicator 1 and 2.</p>						
<p>Overall Goal 2</p> <p>The income of seri-farmers and workers around serifarmers is increased through the improvement.</p>	<p>1 increase in income of seri-farmers (50%) and zaguri manufacturers (20%) from cocoon production in the target area</p>	<p>Cocoon sales per sericulture farmer in the Project area is shown in the below table.</p> <table border="1" data-bbox="719 874 1218 938"> <thead> <tr> <th>2008</th> <th>2009</th> <th>2010</th> </tr> </thead> <tbody> <tr> <td>Nrs.6,475</td> <td>Nrs.4,324</td> <td>Nrs.5,359</td> </tr> </tbody> </table> <p>The trend was flatten or decreasing. During this period, the government increased support price of cocoon by 30%. In 2009, the private sector, sericulture farmers, entrepreneurs and sericulture groups started Zaguri production. So far, Nalang Zaguri group and Salang group have produced 92.5kg and 160.8kg of Zaguri silk respectively for the private sector. Nalang group sold 25.0kg of spun silk. A sericulture farmer/entrepreneur produced one ton of Zaguri silk so far. The total income out of Zaguri was about Nrs.2864,200.</p>	2008	2009	2010	Nrs.6,475	Nrs.4,324	Nrs.5,359	<p>There are some progresses concerning the sales to the private sector.</p>
2008	2009	2010							
Nrs.6,475	Nrs.4,324	Nrs.5,359							
<p>Project Purpose</p> <p>The quality cocoon and silk production model is verified in the target area through capacity building and strengthening of the linkage among serifarmers groups,</p>	<p>1 Increase in quality cocoon production (normal cocoon ratio: 80%, shell ratio:20%, hatching percentage: 90%, yield per box:20kg)</p>	<ul style="list-style-type: none"> ➤ Looking at the record of past three years, the normal cocoon ratio at the Project site was more than 89.3%, while the shell ratio was more than 22.6%, and hatching percentage was more than 90%. The target, therefore, was achieved. ➤ Annual average yield per box was below the target rate as shown in the below table. <table border="1" data-bbox="719 1262 1256 1326"> <thead> <tr> <th>2008</th> <th>2009</th> <th>2010</th> </tr> </thead> <tbody> <tr> <td>14.6kg</td> <td>12.7kg</td> <td>14.0kg</td> </tr> </tbody> </table> <p>The following season, however, of some areas was beyond the target of 20kg: 22.7kg in Baireni and 21kg in Nalang on spring 1st 2008, 21.8kg and 23.6kg in Salang on spring 2nd 2009 and on spring 1st 2011 respectively.</p>	2008	2009	2010	14.6kg	12.7kg	14.0kg	<p>The progress of the four Outputs indicated that the Project's Purpose would gradually be achieved. Target yield per box, however, was not fully achieved.</p> <p>Demonstration and farmer-level training to be conducted in Autumn 1st 2011 will contribute improvement on cocoon</p>
2008	2009	2010							
14.6kg	12.7kg	14.0kg							

ANNEX4: Achievement Grid

Narrative Summary	Indicators	Degree of Achievement	Prospects
Government technicians, NGOs, Private entrepreneurs and other stakeholders.	2 Production of original silk products by private entrepreneurs (3 products by 3 entrepreneurs)	The Project provided Zaguri silk for several private companies and supported product development activities. As a result, Association of Craft Producers (ACP), Mahaguthi, Kala Guthi and Women Guidance Association (WGA) have produced new products (e.g. scarf and shawls) and started their sales. In addition, Everest Art Paper has been producing and exporting interior products made out of Zaguri silk reeled by Adhikari Zaguri Center in Baireni VDC.	production.
<p><u>Output 1</u></p> <p>The technical capacity among farmers groups are strengthened through capacity development of Government technicians.</p>	1-1 Distribution of 5 technical manuals	Six kinds of rearing calendar and technical manuals were published and utilized by JT/JTAs, silk mobilizers and sericulture farmers. Those publications are i) Silkworm rearing calendar, ii) Illustrated technical manual on silkworm rearing technology, iii) Illustrated technical manual on mulberry cultivation technology, iv) Illustrated technical manual on cocoon assessment, v) Technical manual on silkworm disease management, and vi) Silk production.	<p>Most of the Project activities were carried out according to PO and annual plans and satisfactorily produced the Output..</p>
	1-2 The retention (20% increase in monitoring acres) of technique among serf-farmers	<ul style="list-style-type: none"> ➤ Survey was conducted in early 2009 and early 2011 and the results of questionnaire were compared. ➤ In the survey in 2009, A rank farmers who well understand sericulture techniques and utilize them occupied 70%. The rate of adoption of major sericulture techniques slightly increased from 56.3% to 61.6% in three villages, Nalang, Salang and Baireni, while the ratio of C rank farmers who partially utilize technique and require improvement decreased from 12.6% to 1.2%. ➤ However, ratio of cementing rearing room and that of using chemical fertilizer remain at 13% and 10% respectively. 	
	1-3 The retention (30% increase on last score in trainings) of technique and facilitation skills among Governmental technicians	JT/JTA trainings were implemented three times by officers. Pre-test and post-test were conducted at the trainings to survey on JT/JTAs' understanding of the training contents. In average, 49% improvement was observed.	
<p><u>Output 2</u></p> <p>The cooperation among Government, Private entrepreneurs, and serf-farmers' groups for market exploration is established.</p>	2-1 Introduction of fair grading system by Government	The Project published technical manual which is inevitable for fair cocoon quality assessment and implemented training for JT/JTA and silk mobilizers. At the same time, the government set up a committee, which consists of DOA, DOIED, SAN, private sector and sericulture farmers, to determine prices of cocoon and silk. The committee has already revised prices, carefully considering cocoon production cost, quality, international price, etc.	<p>Most of the Project activities were carried out according to PO and annual plans and satisfactorily produced the Output..</p>
	2-2 More than 3 Private entrepreneurs involved in zaguri product development	ACP, Mahaguthi, Kala Guthi, and WGA have participated in Zaguri silk product development.	
	2-3 Intensity of linkage among Government, Private entrepreneurs and	Interaction meetings in regard with Zaguri silk production were held and government, private sector and sericulture farmers discussed such issues as cocoon transaction, production, market system, etc. Interaction meetings were held 18 times in Baireni, Salang, Nalang and Dhunibesi farms. Workshop on Promotion of Zaguri	

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ANNEX4: Achievement Grid

Narrative Summary	Indicators	Degree of Achievement	Prospects
	seri-farmers group (more than 4 firms of meetings/activities in the final year)	silk was held in order to establish common understanding of direction of the above three stakeholders for promoting Zaguri silk production.	
<p><u>Output 3</u></p> <p>The capacity of DOIED to strengthen linkage among Governmental agencies, farmers and Private entrepreneurs is strengthened.</p>	<p>3-1 Improvement in performance of seri-farmers groups</p> <p>3-2 Involvement of Government in activities if farmer groups and Private entrepreneurs (visits/yr to farmers groups, 3 visits/yr to private sector)</p> <p>3-3 Introduction of new monitoring system and statistics</p>	<p>The Project facilitated sericulture groups in Nalang and Salang to start Zaguri production and as a result, they have already started to sell Zaguri silk to the private sector. In terms of institutional development of sericulture groups, all sericulture farmers belong to any group and the majority of them uses micro credit loans and manage their saving and fund in a proper way.</p> <ul style="list-style-type: none"> ➤ The frequency of visit by JT/JTA to sericulture farmers was 5.6 times in Nalang, 14.4 times in Salang and 5.6 times in Baireni. The case of Salang only exceeded the target. According to seri-farmers and JT/JTA, however, the frequency is approximately 8.0 in Nalang and besides that, they visit farmers upon request. In addition, Chief of Dhuni-besi visited those villages a few times a year with Japanese experts. ➤ The frequency of visit by silk mobilizers to sericulture farmers was 9.6 times, 34 times, and 13.6 times respectively. ➤ The visit to the private sector significantly exceeded the target. (18 times) ➤ The indicator was partially fulfilled. <p>Stakeholders discussed what data should be collected and how these data should be obtained.</p> <ul style="list-style-type: none"> ➤ They produced various formats. ➤ They collected data required to establish statistics for sericulture administration. ➤ DOIED assigned an officer to deal with sericulture statistical data. <p>The Project conducted various surveys and compiled the data by using the results from i) survey on sericulture trend in Dhading, ii) questionnaire survey on technology adaptation by sericulture farmers, iii) questionnaire survey on Zaguri production by sericulture farmers and institutional development of sericulture groups, iv) survey on silkworm rearing situation, and v) information collection on silkworm rearing at CRCs by using various formats.</p>	<p>Most of the Project activities were carried out according to PO and annual plans and satisfactorily produced the Output. Indicator 3-1 was fulfilled; however, as mentioned above, Activity 3-1 was conducted with an intensive support from NGO.</p> <p>Institutional development activities will continue till September</p>

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ANNEX5: Implementation Process Grid

Item	Evaluation questions	Status as of June 2011												
1. Team work	Do the project team members share their roles and responsibility appropriately?	There were no particular problems and team work was adequate.												
2. Communication	Communication among the team members or between the Japanese experts and Counterpart personnel adequate?	There were no particular problems and communication was adequate.												
3. Decision making	Does decision making process in the project team efficient, transparent and participatory?	<ul style="list-style-type: none"> ➤ Interaction meetings in regard with Zaguri silk production were held and government, private sector and sericulture farmers discussed such issues as cocoon transaction, production, market system, etc. Interaction meetings were held 18 times in Baireni, Salang, Nalang and Dhunibesi farms. Workshop on Promotion of Zaguri silk was held in order to establish common understanding of direction of the above three stakeholders for promoting Zaguri silk production. ➤ Whenever the project selected NGO and consultant, the transparent selection system was applied. ➤ The Project tried to prepare official letters i) to share the updated information, ii) to request attending meeting and iii) to participate in project activities as much as possible since C/P demanded so. 												
4. Progress monitoring	Did the project team monitor progress of the project appropriately?	<ul style="list-style-type: none"> ➤ The Project arranged progress monitoring by DOIED at the end of the year. DOIED sent its representatives for the activity. ➤ Though the frequency of field visits by project director and project manager was limited, field coordinator (Dhunibesi Chief) took that responsibility and the frequency was appropriate. ➤ Project team visited fields appropriately. 												
5. Participation of managing authority	Were level of participation, contribution and commitment of the project satisfactory?	<ul style="list-style-type: none"> ➤ Most of the project activities were participated by the project team members, either Dhunibesi chief or extension workers, a project assistant, or a project coordinator. ➤ In some NGO activities, nobody from the project team could attend but such case was minimal. 												
6. Cooperation with other projects	Was there any cooperation with other related projects in the same area?	DADO Dhading (District Agricultural Development Office) cooperated with the Project by providing technical resource person for seminars and by providing financial support for mulberry sapling distribution to seri-farmers.												
7. Function of JCC	Was JCC functioned as expected? (frequency of the meetings, participation of the members, decision making and follow-ups)	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>JCC</th> <th>Date</th> <th>Main agenda</th> </tr> </thead> <tbody> <tr> <td>1st JCC</td> <td>3rd April, 2007</td> <td>Discussion Annual Plan of Operation (2007)</td> </tr> <tr> <td>2nd JCC</td> <td>9th May, 2008</td> <td>Approval on the contents of Plan of Operations Discussion on major issue pointed out in the comment from consultation study team</td> </tr> <tr> <td>3rd JCC</td> <td>12th Aug, 2008</td> <td>The Plan of Operation of the project should be focus more on technical transferred to counterparts for capacity building, to deploy a long term Project coordinator for project management, amendment on record of discussion</td> </tr> </tbody> </table>	JCC	Date	Main agenda	1st JCC	3rd April, 2007	Discussion Annual Plan of Operation (2007)	2nd JCC	9th May, 2008	Approval on the contents of Plan of Operations Discussion on major issue pointed out in the comment from consultation study team	3rd JCC	12th Aug, 2008	The Plan of Operation of the project should be focus more on technical transferred to counterparts for capacity building, to deploy a long term Project coordinator for project management, amendment on record of discussion
JCC	Date	Main agenda												
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ANNEX5: Implementation Process Grid

		5th JCC	27th May, 2009	Approval of the revised indicators of PDM for Mid-term Evaluation
		6th JCC	15th June, 2009	Approval of the report of Mid-term review and revised PDM and PO
		7th JCC	18th March, 2010	Approval of the findings by Consultation Study Team
8. Participation of JICA	Were level of supervision and support made by JICA Nepal Office and JICA Headquarters appropriate?	JICA sent advisory consultation missions three times and made useful propose in order to improve the project activities and direction. It was, therefore, appropriate.		

4. 2

Five Criteria	Items		Criteria and Method for Judgement	Required Data	Source of Information	Data Collection	Results
	Question	Sub-question					
Relevance	Is the Project purpose consistent with development policy of Nepal?	Is the Project Purpose consistent with national, regional and agricultural policies of Nepal?	• Reference to policies at various levels	• Nepalese national, regional and agricultural policies (at the time of planning) • Current Nepalese national, regional and agricultural policies	• MOAC, DOA, DO/ED • experts	• interview	The Project is in harmony with the Nepalese policies and relevant to the needs of the government. Three-Year National Plan states the poverty alleviation as one of the priority issues and sericulture development is considered as one of the agricultural industries that alleviate poverty. The Plan specifies main components of sericulture, which are i) area expansion of mulberry cultivation and sericulture, ii) increase in cocoon production and iii) training and capacity building of relevant organization and personnel. These components are clearly in line with the Project activities. In addition, considering potentiality of the sericulture program, NPC prioritized it as "Priority 1".
	Was the selection of the target area and groups relevant with the needs?	• Do the contents of the Project match the needs of target areas and communities? • Is the size of the target group appropriate?	• Opinions of C/Ps, experts, extension staff, farmers and those concerned • Clarification of functions of target groups		• MOAC, DOA, DO/ED • experts • extension staff • farmers	• interview, questionnaire	When the Project started, Dhading District was considered as an appropriate target area in terms of accumulated experiences from the past technical cooperation. In addition, it was difficult for the Japanese side to go to other potential districts due to security reasons in the past.
	Is the Project purpose consistent with ODA policy of Japan and Country Strategy of JICA?	• Is the Project purpose consistent with ODA policy of Japan? • Is the Project purpose consistent with country-specific strategy of JICA?	• Comparison with Japan's aid policy • Comparison with JICA's policy for Nepal	• Policy documents of Japan's aid to Nepal	• JICA	• review of documents (e.g. country-specific strategy of JICA)	Japan's "Agriculture and Rural Development Program" focuses on three pillars, which are i) food security, ii) income generation and iii) capacity development of government and farmers groups, under the priority issue of "poverty alleviation in rural areas". The Project is related to both income generation and capacity development of government and farmers groups and therefore, is relevant to Japan's ODA policy.
	Is the approach of the Project appropriate as a means for development?	• Is verification of the quality cocoon and silk production modal one of the best means to solve the current problem in the sericultural sector of Nepal?	• Opinions of C/Ps, experts, extension staff, farmers and those concerned	• Problems in agricultural development in the target area	• experts • DOA, DO/ED • C/P • extension staff	• interview, questionnaire	Techniques to produce quality cocoon is not adequate among farmers, and productivity is still low. In addition, the silk market along with the private sector has been weak and could not afford to adopt the principle of market mechanism. The Project aims to solve these issues, and therefore is considered to be relevant.
		• Does Japan have technological advantages?	• Opinions of C/Ps, experts, extension staff, farmers and those concerned	• Techniques of Japan's sericulture	• experts • C/P • extension staff	• interview, questionnaire	Japan has long experiences in implementing technical cooperation project in the field of sericulture promotion in India. In addition, JICA implemented the mini-project-type technical cooperation "Sericulture Promotion in the Kingdom of Nepal" and a follow-up program in the past. These programs have contributed to the development of sericulture in Nepal, such as the introduction of the new silkworm varieties, commercial egg production, establishment of mulberry supplying system, etc. Sericulture in Nepal began around 30 years ago, which is relatively recent compared to that of Japan. Compared to Gunma prefecture, mulberry plantation area per household is 1/3, cocoon yield per ha is 1/4, and production per household is 1/14. These facts indicate the low productivity of sericulture in the country. In addition, the quality of raw silk made in Nepal is "Grade A" in most cases, whereas Japanese one is "Grade 4A".
Will the Project Purpose likely to be achieved by the end of the period of cooperation?	• To what extent is the Project Purpose achieved?	• Comparison of the actual achievement with the revised PDM	• refer to the achievement grid.	• project report • experts • C/P	• project report review • interview	Refer to the achievement grid.	

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Effectiveness	<p>•Were there any contributing factors to accelerate the achievement of the Project purpose?</p> <p>•Were there any factors that inhibit the achievement of the Project purpose?</p>	<p>•Are important assumptions appropriate and fulfilled?</p>	<p>•Opinions of experts, C/Ps, extension staff, farmers and those concerned</p>	<p>•information on revision and introduction of cocoon inspection system</p> <p>•information on environment for private entrepreneurs</p>	<p>•MOAC, DOA, DOIED</p> <p>•experts</p> <p>•C/P</p> <p>•extension staff</p> <p>•farmers</p>	<p>•interview, questionnaire</p>	<p>The following three important assumptions are set at the output level to be fulfilled to achieve Project Purpose.</p> <p>i) The Government organizes cocoon inspection system for trading based on genuine quality.</p> <p>ii) The Government creates the environment for Private entrepreneurs to invest on original silk products.</p> <p>iii) DOIED accepts proposals from the Project and takes necessary measures.</p> <p>Regarding i), DOIED set up a committee to determine prices of cocoon and silk and the committee has already revised prices, carefully considering cocoon production cost, quality, international price, etc. In addition, the Project prepared "Illustrated Technical Manual on cocoon assessment" in order to establish a grading system based on quality. Regarding ii), the Government provides subsidy not only for semi-farmers but also for private entrepreneurs who produce Zaguri silk and encourages cocoons procurement. As for iii), DOIED have been providing subsidy to Zaguri silk producers by the suggestion of the Project. The above three important assumptions, therefore, are fulfilled.</p>
		<p>•Are there any influences besides important assumptions?</p>	<p>Opinions of experts, C/Ps, extension staff, farmers and those concerned</p>		<p>•DOIED</p> <p>•experts</p> <p>•C/P</p> <p>•extension staff</p> <p>•farmers</p>	<p>•interview, questionnaire</p>	<p>No influence is reported.</p>
	<p>Will the Project Purpose be attained if all the planned outputs were created?</p>	<p>•To what extent Output1 contributed to the achievement of the Project Purpose?</p>	<p>•confirmation of the achievement of Output1</p>	<p>•refer to the achievement grid.</p>	<p>•experts</p> <p>•C/P</p>	<p>•interview, questionnaire</p>	<p>Output1 has contributed to the achievement of the Project Purpose.</p>
		<p>•To what extent Output2 contributed to the achievement of the Project Purpose?</p>	<p>•confirmation of the achievement of Output2</p>	<p>•refer to the achievement grid.</p>	<p>•experts</p> <p>•C/P</p>	<p>•interview, questionnaire</p>	<p>Output2 has contributed to the achievement of the Project Purpose.</p>
		<p>•To what extent Output3 contributed to the achievement of the Project Purpose?</p>	<p>•confirmation of the achievement of Output3</p>	<p>•refer to the achievement grid.</p>	<p>•experts</p> <p>•C/P</p>	<p>•interview, questionnaire</p>	<p>Output3 has contributed to the achievement of the Project Purpose.</p>
	Efficiency	<p>Will the Outputs likely to be achieved by the end of the period of cooperation?</p>		<p>•Comparison of the actual achievement with the original plan</p>	<p>•refer to the achievement grid</p>	<p>•project report</p> <p>•experts</p> <p>•C/P</p>	<p>•report review</p> <p>•interview, questionnaire</p>
<p>•Were there any contributing factors to accelerate the achievement of the Project purpose?</p> <p>•Were there any factors to inhibit the achievement of the Project purpose?</p>		<p>•Are important assumptions appropriate?</p>	<p>•Opinions of C/Ps, farmers and those concerned</p>	<p>•information of C/P allocation</p> <p>•information on private entrepreneurs' interest in the silk industry</p>	<p>•experts</p> <p>•C/P</p> <p>•extension staff</p> <p>•farmers</p>	<p>•interview, questionnaire</p>	<p>The following two important assumptions are set at the activity level to be fulfilled to achieve Outputs.</p> <p>i) The Nepalese Counterparts assigned for this Project continue to work for the Project.</p> <p>ii) The Private entrepreneurs are interested and affirmative in the silk industry.</p> <p>Regarding i), despite a recommendation made at the Mid-Term Evaluation and Consultation Study, Nepalese counterpart personnel were frequently changed. The event hindered a smooth implementation and management of the Project. This assumption, therefore, is not fulfilled. As for ii), several private entrepreneurs already started to develop Zaguri silk products and expressed their wish to enhance their business. The assumption, therefore, is fulfilled.</p>
		<p>•Are there any influences besides important assumptions?</p>	<p>•Opinions of C/Ps, extension staff, farmers and those concerned</p>		<p>•experts</p> <p>•C/P</p> <p>•extension staff</p> <p>•farmers</p>	<p>•interview, questionnaire</p>	<p>No influence is reported.</p>
<p>Are activities sufficient to generate Outputs?</p>		<p>•Are activities sufficient to generate Output1?</p>	<p>•Degree of achievement of Output1</p>	<p>•refer to the achievement grid</p>	<p>•experts</p> <p>•C/P</p>	<p>•interview, questionnaire</p>	<p>Activities are well elaborated and sufficient to generate Output1.</p>
		<p>•Are activities sufficient to generate Output2?</p>	<p>•Degree of achievement of Output2</p>	<p>•refer to the achievement grid</p>	<p>•experts</p> <p>•C/P</p>	<p>•interview, questionnaire</p>	<p>Activities are well elaborated and sufficient to generate Output2.</p>
	<p>•Are activities sufficient to generate Output3?</p>	<p>•Degree of achievement of Output3</p>	<p>•refer to the achievement grid</p>	<p>•experts</p> <p>•C/P</p>	<p>•interview, questionnaire</p>	<p>Activities are well elaborated and sufficient to generate Output3.</p>	

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Are Inputs appropriate?	<ul style="list-style-type: none"> • Are inputs from the Japanese side sufficient in terms of quantity, quality and timing? 	<ul style="list-style-type: none"> • Problems caused by insufficient inputs 	<ul style="list-style-type: none"> • dispatch of long and short-term experts (number, timing, fields) • provision of equipment (items, types, quantity, timing) • acceptance of C/Ps for training in Japan/third countries • local cost 	<ul style="list-style-type: none"> • experts • C/P • extension staff • farmers 	<ul style="list-style-type: none"> • interview, questionnaire • review of project reports 	<p>In general, inputs were appropriate in terms of quality, quantity and timing and have sufficiently been utilized for conducting activities and producing Outputs. Japanese experts, who have long experiences in the field of sericulture, were dispatched as planned. Based on their experience, a model was developed and implemented. Provided equipment have been well operated and maintained. A cocoon dryer in Malang, however, is not regularly utilized mainly because the yield of cocoons at each seric farmer is small and farmers do not necessarily need a dryer at this moment. Zaguni machines provided for PSSCRC and Dhunibesi CRC also are not currently utilized but expected to be made good use for the training purpose. In addition, CRC of Dhunibesi constructed by the Project is not currently utilized for rearing purpose.</p>	
	<ul style="list-style-type: none"> • Are inputs from the Nepalese side sufficient in terms of quantity, quality and timing? 	<ul style="list-style-type: none"> • Problems caused by insufficient inputs 	<ul style="list-style-type: none"> • assignment of C/Ps (number, timing fields) • project operation cost • provision of facilities • local cost 	<ul style="list-style-type: none"> • experts • C/P • extension staff • farmers 	<ul style="list-style-type: none"> • interview, questionnaire • review of project reports 	<p>Regarding the Nepalese inputs, counterpart personnel are not full-time and quite often transferred as discussed below. It was pointed out that daily/travel allowance for JT/JTA are not adequate to sufficiently monitor farmers' activities as proposed in the Annual Program.</p>	
Impacts	Looking at the level of achievement of the Project Purpose so far, are there prospects that the overall goal will be attained as an effect of the Project?	<ul style="list-style-type: none"> • To what extent is Overall Goal achieved? 	<ul style="list-style-type: none"> • Degree of achievement of Overall Goal 1 	<ul style="list-style-type: none"> • refer to the achievement grid 	<ul style="list-style-type: none"> • statistics, baseline survey • farmers 	<ul style="list-style-type: none"> • review of statistics and baseline survey • interview 	<ul style="list-style-type: none"> • refer to the achievement grid.
			<ul style="list-style-type: none"> • Degree of achievement of Overall Goal 2 	<ul style="list-style-type: none"> • refer to the achievement grid 	<ul style="list-style-type: none"> • statistics, baseline survey • farmers 	<ul style="list-style-type: none"> • review of statistics and baseline survey • interview 	<ul style="list-style-type: none"> • refer to the achievement grid.
	Were there any disturbing factors to attain the overall goal?	<ul style="list-style-type: none"> • Are important assumptions appropriate? • Are there any influences besides important assumptions? 	<ul style="list-style-type: none"> • Opinions of experts, C/Ps, extension staff, farmers and those concerned 	<ul style="list-style-type: none"> • information on weather conditions 	<ul style="list-style-type: none"> • experts • C/P 	<ul style="list-style-type: none"> • interview, questionnaire 	<ul style="list-style-type: none"> • Not reported.
	Is the Overall Goal realistic and directly related to the Project Purpose?	<ul style="list-style-type: none"> • Is Project Purpose consistent with Overall Goal? 	<ul style="list-style-type: none"> • Review of PDM logic 	<ul style="list-style-type: none"> • information on the government's policy on sericulture promotion • information on governmental staff and private entrepreneurs' support for seric-farmers • information on silk price 	<ul style="list-style-type: none"> • experts • C/P 	<ul style="list-style-type: none"> • interview, questionnaire 	<ul style="list-style-type: none"> • Overall Goal is realistic and directly related to the Project Purpose.
	Are there any positive impacts and influences besides overall goal?	<ul style="list-style-type: none"> • Are there any positive and negative impacts in terms of i) policy, ii) technical aspect, iii) environment, iv) socio-economy, v) organization, finance, etc.? 	<ul style="list-style-type: none"> • Opinions of C/Ps, extension staff, farmers and those concerned 	<ul style="list-style-type: none"> • examples of impacts and influences by the Project 	<ul style="list-style-type: none"> • experts • DOA • C/P • extension staff 	<ul style="list-style-type: none"> • interview, questionnaire 	<ul style="list-style-type: none"> • The following impacts were observed. • developed by the incentives (e.g. subsidy) introduced by DOIED. • course of the Project activities, moved to Madi, Chitwan district and currently carries out training courses by using skills and knowledge obtained from the Project.
	Are there any negative unexpected impacts occurred as ripple effects?	<ul style="list-style-type: none"> • Are there any negative unexpected impacts caused by project implementation? • Are there any countermeasures against unexpected negative effects? 	<ul style="list-style-type: none"> • Opinions of C/Ps, extension staff, farmers and those concerned • Opinions of C/Ps, extension staff, farmers and those concerned 	<ul style="list-style-type: none"> • examples of impacts and influences by the Project • examples of countermeasures 	<ul style="list-style-type: none"> • experts • C/P • extension staff • farmers • experts • C/P • extension staff • farmers 	<ul style="list-style-type: none"> • interview, questionnaire • interview, questionnaire 	<ul style="list-style-type: none"> • Negative impacts have not been observed. • As mentioned above, negative impacts have not been observed.
	<ul style="list-style-type: none"> • Are the Nepalese policies concerning sericulture likely to continue after the completion of the Project? 	<ul style="list-style-type: none"> • Reference to policies at various levels 	<ul style="list-style-type: none"> • Current/future Nepalese national, regional and agricultural policies 	<ul style="list-style-type: none"> • DOA, DOIED 	<ul style="list-style-type: none"> • interview, questionnaire 	<ul style="list-style-type: none"> • As mentioned in "Relevance", policy support might be expected since the Project is in harmony with the Nepalese policies and relevant to the needs of the government, although "National Sericulture Policy" has not been approved. By introducing training system in a cascade manner (Officers→JT/JTA→Silk Mobilizers→seric-farmers), the Nepalese side has obtained a method to continue or develop the activities. DOIED officials stated that DOIED is institutionally strengthened through the Project implementation, especially by working with experts. Transfer of counterpart personnel, however, hinders this positive effect produced by the Project. 	

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Sustainability	Institutional and Organizational Aspects	<p>*Will the mechanism of extension of the Project effects be established?</p>	<p>*Reference to policies at various levels</p>	<p>*Current/future Nepal national, regional and agricultural policies</p>	<p>*DOA, DOIED *experts *C/P</p>	<p>*interview, questionnaire</p>	<p>By introducing training system in a cascade manner (Officers→JT/JTA→Sik. Mobilizers→seri-farmers), the Nepalese side has obtained a method to continue or develop the activities.</p>
		<p>*Is DOIED likely to have a sufficient institutional capacity (e.g. human resources, decision making process, etc.) after the completion of the Project?</p>	<p>*confirmation of the existence of institutional capacity</p>	<p>*examples that show institutional capacity</p>	<p>*DOA, DOIED *experts *C/P</p>	<p>*interview, questionnaire</p>	<p>DOIED officials stated that DOIED is institutionally strengthened through the Project implementation, especially by working with experts. Frequent transfer of counterpart personnel, however, reduces this positive effect.</p>
		<p>*Are concerned agencies (DOIED, private entrepreneurs, farmers, etc.) likely to have an adequate cooperation system after the completion of the Project?</p>	<p>*confirmation of the existence of institutional capacity</p>	<p>*examples that show institutional capacity</p>	<p>*DOA, DOIED *experts *C/P</p>	<p>*interview, questionnaire</p>	<p>All the stakeholders stated that they wish to maintain and enhance the cooperation.</p>
		<p>*Does DOIED have a strong ownership towards the Project?</p>	<p>*Opinions of experts, C/Ps, extension staff, farmers and those concerned</p>	<p>*Examples of ownership</p>	<p>*DOA, DOIED *experts *C/P</p>	<p>*interview, questionnaire</p>	<p>After the Project completion, DOIED will try to keep the positive effects of the Project by providing subsidies.</p>
	Financial Aspects	<p>*Is sufficient budget secured in order to continue the activities after the completion of the Project?</p>	<p>*Budgetary/financial situation of DOIED</p>	<p>*Budget plan of DOA and DOIED</p>	<p>*DOA, DOIED *experts *C/P *financial documents</p>	<p>*interview, questionnaire *review of documents</p>	<p>Budget for DOIED and nine sericulture development divisions (farms) is showing a tendency to increase and DOIED expressed its plan to continue providing subsidies for drying and transportation of cocoons, improvement of rearing houses, purchasing of zagri silk, chemical fertilizers and disinfectants, etc. Although it might be desirable that the subsidy eventually be reduced and abolished, it currently may be an effective tool to encourage an involvement of more seri-farmers and the private sector. Major issue pointed out by JT/JTA is that travel/daily allowances are not sufficient in order to appropriately monitor farmers' activities.</p>
		<p>*Will the transferred technology be accepted and spread to other neighboring areas?</p>			<p>*experts *DOA, DOIED *C/P *farmers</p>	<p>*interview, questionnaire</p>	<p>There are some positive aspects confirmed. According to JT/JTA, they are confident in their knowledge and skills and are able to keep implementing the current activities, provided that they have financial back-up. Adoption rate of major sericulture techniques is in an increasing trend, which indicates that the transferred technologies can be accepted and spread to other neighbouring areas. Furthermore, manuals are highly appreciated by users at all levels. Those events show that the training in a cascade manner is well functioning. In addition, provided equipment have generally been well operated and maintained.</p>
	Technological aspects	<p>*Will the equipment be appropriately maintained & operated?</p>	<p>*Situation with regard to maintenance and operation of provided equipment</p>	<p>*Information on maintenance and operation of provided equipment, budgetary situation for maintenance</p>	<p>*experts *C/P *equipment management book</p>	<p>*interview, questionnaire</p>	<p>Major equipment, such as motorbike are maintained operated up to present.</p>
		<p>*Are there any factors that hinder sustainability?</p>	<p>*Opinions of experts, C/Ps, extension staff, farmers and those concerned</p>	<p>*Concrete examples</p>	<p>*experts *DOA, DOIED *C/P</p>	<p>*interview, questionnaire</p>	<p>Challenges include that the frequent transfer of counterpart personnel made it difficult for skills and knowledge which were provided by the Project to remain in DOIED and that it would take a long time for seri-farmers to fully understand and practice some techniques instructed by JT/JTA/SM.</p>

ANNEX7: Dispatch of Experts

Long-term Expert

No.	Name	Responsibility	Dispatch period			Affiliation	2006	2007	2008	2009	2010	2011
			Start	End	Remarks							
1	Mr. Osamu Shimizu	Chief Advisor	2006.12.1	2008.11.30		None						
2	Ms. Yuko Shibuya	Project Coordinator/Farmer Organization	2009.1.9	2011.11.30		None						

Short-term Expert

No.	Name	Responsibility	Dispatch period			Affiliation	2006	2007	2008	2009	2010	2011
			Start	End	Remarks							
1	Ms. Eriko Kawaguchi	Textile Product Development	2008.6.9	2008.7.24	1st dispatch 2008	Japan Women's University			x			
2	Ms. Eriko Kawaguchi	Textile Product Development	2008.8.24	2008.10.5	2nd dispatch 2008	Japan Women's University			x			
3	Ms. Eriko Kawaguchi	Textile Product Development	2009.1.15	2009.2.28	3rd dispatch 2008	Japan Women's University				x		
4	Dr. Hiroaki Yanagawa	Chief Advisor	2009.1.21	2009.3.20	1st dispatch 2009	Dainippon Silk Foundation				x		
5	Dr. Hiroaki Yanagawa	Chief Advisor	2009.5.17	2009.7.15	2nd dispatch 2009	Dainippon Silk Foundation				x		
6	Ms. Eriko Kawaguchi	Textile Product Development	2009.6.1	2009.7.15	1st dispatch 2009	Japan Women's University				x		
7	Dr. Hiroaki Yanagawa	Chief Advisor	2009.10.26	2010.12.24	2nd dispatch 2009	Dainippon Silk Foundation					x	
8	Ms. Eriko Kawaguchi	Textile Product Development	2009.10.26	2009.12.9	2nd dispatch 2009	Japan Women's University					x	
9	Mr. Akio Yamaguchi	Sericulture Extension	2009.10.26	2009.12.9	1st dispatch 2009	Dainippon Silk Foundation					x	
10	Dr. Hiroaki Yanagawa	Chief Advisor	2010.1.25	2010.3.25	3rd dispatch 2009	Dainippon Silk Foundation					x	
11	Ms. Eriko Kawaguchi	Textile Product Development	2010.2.9	2010.3.25	3rd dispatch 2009	Japan Women's University					x	
12	Mr. Akio Yamaguchi	Sericulture Extension	2010.2.9	2010.3.25	2nd dispatch 2009	Dainippon Silk Foundation					x	
13	Mr. Akio Yamaguchi	Sericulture Extension	2010.5.11	2010.6.24	1st dispatch 2010	Dainippon Silk Foundation					x	
14	Dr. Hiroaki Yanagawa	Chief Advisor	2010.6.3	2010.7.17	1st dispatch 2010	Dainippon Silk Foundation					x	
15	Ms. Eriko Kawaguchi	Textile Product Development	2010.6.3	2010.7.17	1st dispatch 2010	Japan Women's University					x	
16	Mr. Akio Yamaguchi	Sericulture Extension	2010.8.16	2010.9.29	2nd dispatch 2010	Dainippon Silk Foundation						x
17	Ms. Eriko Kawaguchi	Textile Product Development	2010.10.31	2010.12.14	2nd dispatch 2010	Japan Women's University						x
18	Dr. Hiroaki Yanagawa	Chief Advisor	2010.11.8	2010.12.7	2nd dispatch 2010	Dainippon Silk Foundation						x
19	Dr. Hiroaki Yanagawa	Chief Advisor	2011.2.1	2010.3.12	3rd dispatch 2010	Dainippon Silk Foundation						x
20	Mr. Akio Yamaguchi	Sericulture Extension	2011.2.1	2010.3.12	3rd dispatch 2010	Dainippon Silk Foundation						x
21	Dr. Hiroaki Yanagawa	Chief Advisor	2011.6.6	2011.7.16	1st dispatch 2011	Dainippon Silk Foundation						x
22	Ms. Eriko Kawaguchi	Textile Product Development	2011.6.6	2011.7.16	1st dispatch 2011	Japan Women's University						x
23	Mr. Akio Yamaguchi	Sericulture Extension	2011.6.6	2011.7.16	1st dispatch 2011	Dainippon Silk Foundation						x
24	Mr. Akio Yamaguchi	Sericulture Extension	2011.8.18	2011.9.26	2nd dispatch 2011	Dainippon Silk Foundation						x
25	Dr. Hiroaki Yanagawa	Chief Advisor	2011.10.30	2011.11.26	2nd dispatch 2011	Dainippon Silk Foundation						x

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ANNEX8: Local Cost (Japan side)

Unit:Nrs.

No.	Budget Heading	Fiscal Year						Total
		2006	2007	2008	2009	2010	2011	
		Dec 2006 - Mar 2007	April 2007 - Mar 2008	April 2008 - Mar 2009	April 2009 - Mar 2010	April 2010 - Mar 2011	April 2011 - Nov 2011	
0	General expenditure**					2,085,767.00		
1	Operation & management on equipment		746,695.00	260,532.00	162,056.00		235,000.00	1,404,283.00
2	Communication cost	23,310.00	61,982.00	54,752.00	38,575.00		70,000.00	248,619.00
3	Transportation	13,300.00	519,892.00	142,284.00	132,059.00	22,279.00	20,000.00	849,814.00
4	Expendables	116,536.00	637,237.00	447,188.00	789,091.00		414,000.00	2,404,052.00
5	Printing cost	0.00	0.00	151,714.00	447,915.00		45,000.00	644,629.00
6	Rent	0.00	0.00	20,000.00	54,000.00		0.00	74,000.00
7	Office stationary	459,800.00	52,806.00	99,718.00	22,200.00		0.00	634,524.00
8	Training cost for staff	0.00	28,660.00	28,600.00	0.00		0.00	57,260.00
9	Miscellaneous	93,026.00	1,008,768.00	709,974.00	1,599,977.00		250,000.00	3,661,745.00
10	Contract with local consultant	0.00	40,000.00	142,400.00	552,680.00	0.00	0.00	735,080.00
11	Contract with local NGO	0.00	0.00	1,144,252.00	2,053,545.00	1,955,263.00	500,000.00	5,653,060.00
12	Construction	4,209,986.00	561,455.00	585,000.00	0.00	0.00	0.00	5,356,441.00
13	Travel allowance	106,226.00	931,255.00	652,187.00	1,084,178.00	838,416.00	360,000.00	3,972,262.00
14	Fees and honorarium	179,200.00	984,850.00	1,319,890.00	1,377,855.00	1,370,836.00	615,000.00	5,847,631.00
15	Refreshment	0.00	27,802.00	70,255.00	184,968.00	107,420.00	64,500.00	454,945.00
16	Equipment	123,500.00	321,531.00	525,435.00	548,990.00	0.00	0.00	1,519,456.00
Total		5,324,884.00	5,922,933.00	6,354,181.00	9,048,089.00	6,379,981.00	2,573,500.00	33,517,801.00

* In regard with the figure for FY2011, only planned budget is referred.

**Since JICA has changed account format for expenditure from FY2010, general expenditure includes operation & management on equipment, communication cost, expendables, printing cost, rent, office stationary, training cost for staff and miscellaneous.

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ANNEX9: Provision of Equipment and Materials

S.No	Item	Specification	Qty	Delivery date	Location	Utilization & Mangement Condition
1	Mahindra Scorpion Pickup	Mahindra	1	31 March, 2007	Project office	Good
2	Gas Heater	Chinese	1	20 Dec, 2006	Project office	Good
3	Canon Fax Machine	Canon	1	25 Dec, 2006	Project office	Good
4	Canon printer MF8180	MF8180	1	28 Dec, 2006	Project office	Good
5	HQLaptop Computer	HP	2	25 Jan, 2007	Project office	Good
6	Microsoft windows XP,Office	MS	1	22 Feb, 2007	Project office	Good
7	Nokia Mobile Phone	Nokia	1	28 Feb, 2007	Project Staff	Good
8	Nokia Mobile Phone	Nokia	1	5 March, 2007	DOIED	Good
9	Nokia Mobile Phone	Nokia	1	7 Feb, 2007	Project Staff	Good
10	Panasonic LCD Projector	Panasonic	1	19 March, 2007	Project office	Good
11	80GB Harddisk pen drive		1	20 March, 2007	Project office	Good
12	2GB Pen dirve		1	21 March, 2007	Project office	Good
13	Microsoft windows XP,Office	MS	1	5 Aug, 2007	Project office	Good
14	Acer Laptop Computer	Acer	1	14 May, 2007	DOIED	Good
15	Nekon Digital Camnera	Nekon, 1GB Card	1	14 May, 2007	DOIED	Good
16	Acer Laptop Computer	Acer, 160GB	1	7 Jan, 2007	Project Office	Good
17	Sony Digital Camera	Sony, 1GB Card	1	8 Sept, 2007	Project Office	Loss by Bhandara
18	Sony Digital Camera	Sony, 1GB Card	1	28 Sept, 2007	PSSCRC,Dhu	Good
19	Wireless Router	4port	1	20 Aug, 2007	Project office	Good
20	Electric Weight Balance	150 kg capacity	1	25 March, 2008	PSSCRC,Dhu	Good
21	Olympus Digital camara	Olympus,1GB Ca	1	6 April, 2008	SDD Khopasi	Good
22	ADSL TPLink Router	TP Link	1	16 June, 2008	Project office	Good
23	Toshiba Laptop Computer	Toshiba,160GB	1	18 Jan, 2009	Project Office	Good
24	Voltage Regulator	SVC-1.5	2	28 Jan, 2009	Project Office	Good
25	Desk top Computer	MIB 945, LCD M	4	20 Feb, 2009	DOIED, Khopa	Good
26	Brother Inkjet Multi FunctionP	DCP 165C	2	20 Feb, 2009	DOIED, Khopa	Good
27	Sony digital Camera	DSC W110, 1GB	2	3 Feb, 2009	DOIED, Khopa	Good
28	Yamaha Generator	Yamaha	1	6 March, 2009	Project Office	Good
29	Ms windows Xp, office	Microsoft	1	9 March, 2009	Project Office	Good
30	Honda Splender NXZ Bike	Splender,NXG D	1	16 March, 2009	PSSCRC, Dhu	Good
31	Sony Digital video	Sony, 30GB Car	1	20 March, 2009	Project Office	Good
32	Power Spray	India	8	3 March, 2010	Farmers grou	Some good some broken
33	Digital Balance eltronics	German	1	18 Jan, 2010	SDD, Khopasi	Good
34	Rewinding Machine	Local Made	2	5 March, 2010	Kala Guthi	out of order
35	NEC Laptop Computer	NEC, 160 GB	1	18 Jan, 2010	PSSCRC, Dhu	Good
36	Wheel type winding Equipment	Japan made	1set	7 July, 2010	Private secto	Good
37	Ikat binding Stand	Japan made	2	7 July, 2010	Private secto	Good
38	Wooden bobin	Japan made	5	7 July, 2010	Kalaguthi, Dhu	Good
39	Hand Loom Small	Local Made	1	March 2010	Salang group	Good
40	Zaguri Equipments	Local Made	78	various time	Govt, PS, FG	Some good some broken
41	Zaguri Stand	Local Made	67	various time	Govt, PS, FG	Good
42	Stove cover	Local Made	76	various time	Govt, PS, FG	Good
43	Stove	Local Made	30	various time	Govt, PS, FG	Good
44	Cocoon Cooking pan	Local Made	31	various time	Govt, PS, FG	Good
45	Gas Stove	Local Made	2	Dec 2008	Kalaguthi, Dhu	Good
46	Hand Twisting Machine	Local Made	1	March 2010	Baireni group	Good
47	Plastic collapsible mounting	India Made	1000	5 April,2010	Khopasi, Dhu	Good
48	Plastic rearing Tray	India Made	200	5 April, 2010	Khopasi, Dhu	Good
49	Incubation Frame	India Made	500	14May, 2010	Khopasi	Good
50	Digital Balance eltronics	india	2	5 April, 2010	PSSCRC, Dhu	Good
51	Rewinding Machine,metal	Local Made	2	March 2010	Nalang, Salan	Good

(Handwritten signature/initials)

ANNEX10: Assignment of Counterpart Personnel

No.	Name of C/P	Government Post	Position in PQCPPP	Japanese C/P	Term with PQCPPP		Remarks
					From	To	
1	Mr. Badri Bishal Kamachaya	Program Director (DOIED)	Project Director	Mr. Osamu Shimizu Dr.Hiroaki Yanagawa	12/1/2006 Jan,2009	5/31/2007 March,2009	
2	Dr. Yubak Dhoj GC	Program Director (DOIED)	Project Director	Dr.Hiroaki Yanagawa	July,2009	Feb,2010	Transfer
3	Mr. Jagadish Bhakta Shrestha	Officiate Program Director (DOIED), Senior Ind.Entomologist	Project Manager Project Director Project Manager Project Director	Mr. Osamu Shimizu Dr.Hiroaki Yanagawa	Dec,2006 6/1/2007 Jan,2009 July, 2010	May,2007 12/14/2008 Feb,2009 till date	
4	Mr. Durga Prashad Dawadi	Officiate Program Director (DOIED), Senior Ind.Entomologist	Project Director Project Manager Project Director Project Manager	Dr.Hiroaki Yanagawa	4/1/2009 July,2009 March, 2010 July, 2010	July,2009 , Feb,2010 June,2010 till date	
5	Mr. Bhakta Raj. Palike	Chief of Khopasi SDD	Project Activities Support	Mr. Osamu Shimizu Dr.Hiroaki Yanagawa	June, 2007 Jan, 2009	Dec,2008 till date	
6	Mr. Madhu Sudan Ghimire	Chief of Dhunibeshi, PSSCRC, Project Officer	Field Coordinator Project Officer	Mr. Osamu Shimizu Dr.Hiroaki Yanagawa Dr.Hiroaki Yanagawa	12/1/2007, Jan, 2009 Mav,2010	Dec-2008 May, 2010 till date	Transfer from Dhunibesi on DOIED
7	Mrs. Bandana Jha	Project Officer,DOIED	Officer DOIED	Dr.Hiroaki Yanagawa	Aug,2009	May,2010	replacby by Mr. Ghimire
8	Mr. Raj Narayan Singh	Chief of Dhunibeshi, PSSCRC	Field Coordinator	Dr.Hiroaki Yanagawa	May,2010	till date	
9	Mr. Keshav Raj Kafle	Junior Entomologist	Officer DOIED	Mr. Osamu Shimizu Dr. Hiroaki Ynagawa	12/1/2006 Jan,2009	Dec-2008 June, 2009	Transfer
10	Mr. Nilesh Kunwar	Officer	Extension Staff	Dr.Hiroaki Yanagawa	project inception	till date	
11	Mr. Bagwan Prashad Pokharel	JT of Dhunibeshi, PSSCRC	Extension Staff	Dr.Hiroaki Yanagawa	project inception	till date	
12	Mr. Jiwacha Mandal	JT of Dhunibeshi, PSSCRC	Extension Staff	Dr.Hiroaki Yanagawa	9 April, 2009	till date	
13	Mr. Baidya Nath Purbe	JT of Dhunibeshi, PSSCRC	Extension Staff	Dr.Hiroaki Yanagawa	project inception	till date	
14	Ms. Tara Timilshina	JTA of Dhunibeshi, PSSCRC	Extension Staff	Dr.Hiroaki Yanagawa	project inception	till date	

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**Promotion of Quality Cocoon Production and Processing Project
Joint Coordination Committee Meeting**

JICA/DOIED

Ph.No: 5546876, 5524225

Venue : Meeting Hall, Department of Agriculture

Date : 4th July, 2011 (Monday)

Time : 10 : 30 A.M.

JCC Members Name List

S. No	Name	Organization	Designation	Signature
1	Mr. Vijay Kumar Mallick	DOA	Director General	
2	Dr. Bishnu Datta Anand	DOA	Deputy Director General	
3	Mr. Toru Take	JICA Nepal Office	Senior Representative	
4	Mr. Tomohiro Arima	JICA Nepal Office	Representative	
5	Dr. Hiroaki Yanagawa	PQCPPP, JICA	Chief Advisor	
6	Dr. Makoto Kiuchi	JICA, Japan	Evaluation Team Member	
7	Mr. Atsu Kishinami	JICA, Japan	Evaluation Team Member	
8	Mr. Bhoj Raj Sapkota	MOAC	Agriculture Economist	
9	Mrs. Uma Maiya Shrestha	DOA	Senior Agro. Economist	
10	Mr. Jagadish Bhakta Shrestha	DOIED	Program Director	
11	Mr. Narendra Gurung	JICA Nepal Office	Senior Officer	
12	Mr. Madhu Sudan Ghimire	DOIED	Industrial Entomologist	
13	Mr. Raj Narayan Sing	PSSCRC, Dhunibesi	Chief (Field Coordinator)	
14	Mr. Mohan Bahadur Prasad	DOA	Deputy Director General	

**Promotion of Quality Cocoon Production and Processing Project
Joint Coordination Committee Meeting**

JICA/DOIED

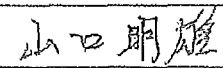
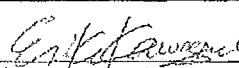
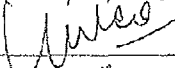



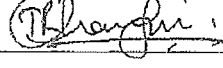
Ph.No: 5546870, 5524225

Venue : Meeting Hall, Department of Agriculture

Date : 4th July, 2011 (Monday)

Time : 10 : 30 A.M.

JCC Observer Name List

S. No	Name	Organization	Designation	Signature
1	Mr. Akio Yamaguchi	PQCPPP, JICA	Extension Expert	
2	Ms. Eriko Kawaguchi	PQCPPP, JICA	Product Development Expert	
3	Ms. Yuko Shibuya	PQCPPP, JICA	Project Coordinator	
4	Mr. Raghav Shrestha	PQCPPP, JICA	Project Officer	
5	Ms. Bandana Jha	DOIED	Industrial Entomologist	
6	Mr. Jaganath Sharma	DOIED	Junior Technician	
7	Mr. Tilak Raj Chaulagai	DOA, M&E	Agg. Economist	
8				
9				
10				
11				
12				
13				
14				

対象地域： ダディン郡5VDC/ バイレニ、サラン、ナラン、クンプル、サンコシ（プミスタン、ムラリバンジャン*）
 実施期間： 2006年12月～2011年11月
 （5年間）
 対象グループ 1) 産業昆虫課 普及員
 2) 対象地域養蚕農家

作成日

2009年6月15日

要約	指標	指標入手手段	外部条件
<p>【上位目標】 優良繭生産およびオリジナルシルク生産のモデルがネパール国内で展開される。 改善を通じて、養蚕農家および蚕糸業関係者の収入が向上する。</p>	<ul style="list-style-type: none"> モデルの展開数（1箇所） 政府による公平公正な品質評価結果に基づく養蚕農家グループと民間企業による商取引の仕組みの導入 優良繭の販売による対象地域農家（50%）及び女性座繰り生産者（20%）の現金収入向上 	産業昆虫課年間レポート・予算 養蚕統計及びサンプル調査	政府の養蚕振興政策が継続する
<p>【プロジェクト目標】 養蚕農家グループと政府普及員/民間企業の能力向上・連携強化を通じて、優良繭・シルクの生産モデルが実証される。</p>	<ul style="list-style-type: none"> 農家の商品質向上（正常繭歩合80%、繭層歩合20%、孵化歩合90%、箱あたり収繭量20kg） 民間企業によるオリジナルシルクの生産（3種類/3社） 	プロジェクトモニタリング結果、品質評価結果 プロジェクトモニタリング結果、サンプル調査	<p>【上位目標達成のための外部条件】</p> <ul style="list-style-type: none"> 政府の養蚕振興政策が継続する プロジェクトで関与した政府普及員・民間企業が、国内養蚕農家への支援を継続する シルクの市場価格が暴落しない
<p>【成果】</p> <p>1. 普及員の能力強化を通じて、養蚕農家グループの能力が強化される。</p>	<ul style="list-style-type: none"> 技術マニュアルの配布（5種類） 養蚕農家への技術の定着度（モリリング採点20%向上） 普及員への技術の定着度（研修時テスト30%向上） 	プロジェクト活動報告 プロジェクトモニタリング結果、サンプル調査 プロジェクトモニタリング結果、サンプル調査	<p>【プロジェクト目標達成のための外部条件】</p> <ul style="list-style-type: none"> 政府が公平公正な商取引のための仕組みを整理する 政府がオリジナルシルク製品生産に関する民間資本投資を推進する環境を整える 産業昆虫課がプロジェクトの提案を受け入れ、実施する
<p>2. 市場開拓のための政府、民間企業、農家グループ間の協力関係が構築される。</p>	<ul style="list-style-type: none"> 商品品質評価法の改善 座繰り糸製品の開発に参入した民間企業（3社） 農家、政府、民間企業の連携強度（会議・活動4回/最終年度） 	プロジェクト活動報告 プロジェクト活動報告、聞き取り調査 プロジェクト活動報告、聞き取り調査	
<p>3. 政府、農家、民間企業間の連携のための産業昆虫課の能力が強化される。</p>	<ul style="list-style-type: none"> 養蚕農家グループの活動改善 政府の農家グループ・民間企業に対する積極的関与（農家訪問12回/年/民間訪問3回/年） 統計、モニタリングシステムの導入 	スパイダーウェブ自己評価 プロジェクトモニタリング結果、聞き取り調査 プロジェクト活動報告	
<p>【活動1】</p> <p>1-1 農家レベルでの繭生産・ポストハーベスト・座繰り糸生産のための標準技術・手法を定め、マニュアルにまとめる</p> <p>1-2 OJT形式の技術研修として、普及員、シルクモビライザー、農家グループへのカスケード方式研修を実施する</p> <p>【活動2】</p> <p>2-1 バリューチェーン調査とそれに基づいた市場に適応した流通システムを提案する</p> <p>2-2 公平公正な商品品質評価システムを提案する</p> <p>2-3 民間企業の参入方法を検討し、民間企業による直接買い取りについて産業昆虫課による試行導入を支援する</p> <p>2-4 民間企業に対して座繰り糸を用いた製品製作のための支援を行う</p> <p>【活動3】</p> <p>3-1 NGOとの農民組織化を通じて、ファシリテーション能力を強化する</p> <p>3-2 農家、政府、民間企業間の問題解決（繭や生糸の生産、品質、価格決定など）に係る定期的ミーティング（三者間、JCC、RCC）を開催する</p> <p>3-3 統計及び事業モニタリング手法を開発する。</p>	<p>【日本側投入】</p> <p>1) 専門家派遣</p> <p>長期：2名（チーフアドバイザー/養蚕振興政策、業務調整/農民組織化） 短期：年間 8MM程度（養蚕普及、商品開発など、必要に応じて）</p> <p>2) 供与機材・施設整備</p> <p>共同養蚕飼育施設および乾燥施設、座繰り研修施設の建設（ローカル資材）</p> <p>3) 研修員受入</p> <p>第3国研修：インドへの技術研修</p> <p>4) プロジェクト運営費・現地活動費</p> <p>NGO委託経費、ローカルスタッフ配置、国内研修実施経費、ワークショップ等開催費用</p>	<p>【ネパール側投入】</p> <p>1) カウンターパート及び要員の配置（PD、PM、普及員配置、等）</p> <p>2) 土地、建物及び施設の提供</p> <p>カトマンズのD01ED本部、及びダディン郡支場へプロジェクト執務室を提供</p> <p>3) プロジェクト活動費</p> <p>研修費、光熱費、管理費、カウンターパート出張旅費等</p>	<p>【成果達成のための外部条件】</p> <ul style="list-style-type: none"> 配属されたカウンターパートが継続して勤務する 民間企業がシルク産業に対して関心を持ち続ける <p>【前提条件】</p> <ul style="list-style-type: none"> カウンターパートが必要数配置される 農家が養蚕を選択する 桑苗・蚕種・消毒など、政府が農家へ提供するサービスが安定して継続する 事業対象地の治安が悪化しない

*モデル構築に注力するため、対象地域は現在活動が活発である5VDCとするが、プミスタン、ムラリバンジャンについては研修等の可能な活動について継続する。

