インドネシア共和国 家畜衛生ラボ能力向上プロジェクト 終了時評価調査報告書

平成 27 年 6 月 (2015年)

独立行政法人国際協力機構 農村開発部 農村 JR 15-068

インドネシア共和国 家畜衛生ラボ能力向上プロジェクト 終了時評価調査報告書

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序 文

独立行政法人国際協力機構(JICA)は、インドネシア共和国関係機関との討議議事録(R/D)に基づき、技術協力プロジェクト「家畜衛生ラボ能力向上プロジェクト」を 2011 年 11 月から 4 年間の予定で実施してきました。

今般、本プロジェクトの協力期間の終了を 2015 年 11 月に控え、進捗や実績を確認のうえで目標及び成果達成に向けた貢献・阻害要因を分析すること、評価 5 項目 (妥当性、有効性、効率性、インパクト及び持続性)の観点から日本・インドネシア国側双方で総合的にプロジェクトを評価すること、及び今後の対策について提言を行うこと、教訓をまとめることを目的として、2015 年 5 月 7 日から 5 月 27 日まで終了時評価調査団を現地に派遣しました。

現地ではインドネシア共和国側の団員と合同評価調査団を形成し、評価結果を合同評価報告書に取りまとめ、インドネシア共和国側の政府関係者と今後の方向性について協議し、ミニッツ (M/M) に署名を取り交わしました。本報告書は、その結果を取りまとめたものであり、今後のプロジェクトの実施にあたり広く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頂いた内外の関係者の皆様に対し、心より感謝申し上げます。

2015年6月

独立行政法人国際協力機構 農村開発部部長 北中 真人

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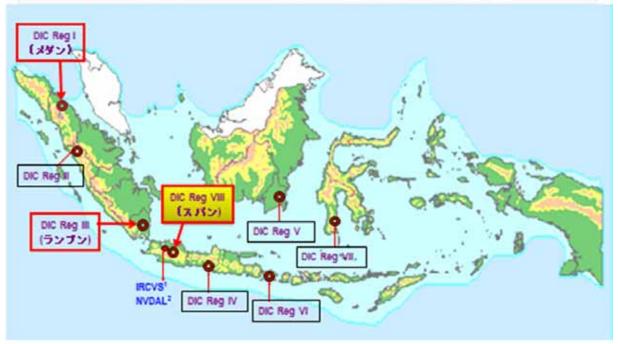
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プロジェクト位置図

インドネシア 家畜衛生ラボ 配置図



O DIC (Disease Investigation Centre)・国立奈面疾病診断センター

インドネラアはペリケースとして意用:

- *IRCVS (截医学研究所)
- 2 NVDAL (四立動物匹勒品接近所)

スバン家畜疾病診断センター(スバンDIC)



写 真



スバン家畜疾病診断センター(スバン DIC)



施設入口に設置されている無償資金協力建設 石碑



センター所長、及び各ラボ長との全体会議



バイオテクノロジー研究室



プロジェクト指導のもと整理された薬剤品



供与機材を用いた実験風景



スバン DIC ラボが指導する KPSBU レンバン酪農 組合



レンバン酪農組合組合員の牛舎



個体識別番号 (タグ) による管理



スバン DIC ラボが指導する B タイプラボ



合同評価団による評価レポート M/M 署名式



Joint Coordination Committee による終了時評価 M/M 署名式

略 語 表

略語	正式名称	日本語
AAHL	Australian Animal Health Laboratory	オーストラリア動物衛生研究所
CFT	Complement Fixation Test	補体結合反応試験
DAH	Directorate of Animal Health	動物衛生局(畜産・動物衛生総局)
DGLAHS	Directorate General of Livestock & Animal Health Services	畜産・動物衛生総局(農業省)
DIC	Disease Investigation Center	家畜疾病診断センター
DINAS	Provincial/District Office	州・県政府事務所
ELISA	Enzyme-Linked Immunosorbent Assay	酵素抗体法
FAO	Food and Agriculture Organization	(国連) 食糧農業機関
HPAI	High-Pathogenic Avian Influenza	高病原性鳥インフルエンザ
IDR	Indonesian Rupiah	インドネシアルピア
ILRI	International Livestock Research Institute	国際家畜研究所
IRCVS	Indonesian Research Centre for Veterinary Science	インドネシア獣医学研究所
iSIKHNAS	Integrated Animal Health Information System (Sistem Informasi Kesehatan Hewan Nasional Terintegrasi)	統合家畜衛生情報システム
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
MM	Man Month	人月(人/月)
ND	Newcastle Disease	ニューカッスル病
NVDAL	National Veterinary Drug Assay Laboratory	国立動物医薬品検査所
ODA	Official Development Assistance	政府開発援助
OIE	World Organization for Animal Health (仏:Office International des Epizooties)	国際獣疫事務局
OJT	On-the-Job Training	職場内訓練
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
PUSKESWAN	Center for Animal Health (Pusat Kesehatan Hewan)	簡易獣医診療所
SOP	Standard Operation Procedure	標準操作手順書

評価調査結果要約表

1. 案件の	1. 案件の概要			
国名:イン	ドネシア共和国	案件名:家畜衛生ラボ能力向上プロジェクト		
分野:農業	開発・農村開発	援助形態:技術協力プロジェクト		
所轄部署:農村開発部 農業農村 開発第一グループ 第一チーム		協力金額:2億3,000万円		
協力期間	R/D: 2011年7月17日~ 2015年7月16日	先方関係機関: 【実施機関】農業省 畜産・動物衛生総局 動物衛生局 【カウンターパート機関】スバン家畜疾病診断センター (スバン DIC) 日本側協力機関:農林水産省 他の関連協力:特になし		

1-1 協力の背景と概要

インドネシア共和国(以下、「インドネシア」と記す)は、畜産業の発展及び生産性向上に対する主要な活動として、長年、家畜疾病対策に取り組んでいる。特に近年、人獣共通感染症を含む動物感染性疾病は社会経済的な損失だけでなくヒトの健康を守る観点からも大きな懸念となっている。

わが国の無償資金協力事業で建設されたスバン家畜疾病診断センター(Disease Investigation Center: DIC)はジャカルタ州、西ジャワ州、バンテン州を管轄しているが、この3州はインドネシアでも養鶏業が盛んな地域であるため、家畜疾病対策上、非常に重要な地域となっている。こうした背景の下、インドネシア政府は将来の西ジャワ地域の効果的な家畜疾病対策実現に向けて、スバン DIC の家畜疾病診断サービスにかかわる組織機能強化を目的とした技術協力プロジェクトの実施をわが国政府に要請した。これを受け、独立行政法人国際協力機構(JICA)は農業省畜産・動物衛生総局(Directonate General of Livestock & Animal Health Services: DGLAHS-MOA)を主要なカウンターパート機関とし、2011年7月から2015年7月までの4年間の予定で家畜衛生ラボ能力向上プロジェクト(以下、「本プロジェクト」と記す)を開始した。今回の終了時評価は、2015年7月の事業期間終了を控え、事業全体の活動内容、成果及びプロジェクト目標について評価5項目(妥当性、有効性、効率性、インパクト、持続性)で評価し、成果やプロジェクト目標達成や事業終了後の持続性担保に向けた提言、並びに今後の類似事業の実施にあたっての教訓を抽出することを目的として実施された。

1-2 協力内容

(1) プロジェクト概要

本プロジェクトは、インドネシアに新設されたスバン DIC の能力強化を図り、スバン DIC が管轄する 3 州の家畜疾病対策の強化をめざすものである。

- (2) 上位目標
 - 西ジャワ地域(スバン DIC 管轄地域)の家畜疾病対策が強化される。
- (3) プロジェクト目標 スバン DIC の家畜疾病診断サービスの質・量が向上する。
- (4) 成果
 - 1) スバン DIC スタッフが基本的かつ体系的な家畜疾病診断技術を習得する。
 - 2) スバン DIC スタッフの、顧客の立場に立った検体診断サービス (パッシブ・サーベイランス) に係る実施能力が強化される。

- 3) スバン DIC スタッフのパイロットサイトにおける、疾病調査及び疾病対策技術支援(アクティブ・サーベイランス) の実施能力が強化される。
- 4) スバン DIC スタッフが、管轄地域内の獣医技術者・獣医師・農家に必要な家畜衛生に係る情報提供(ニューズレター、巡回意見交換等)、啓発活動、技術支援活動を継続的に実施する。

(5) 投入(評価時点)

- 1) 日本側
 - 専門家派遣

長期専門家:延べ3名(チーフアドバイザー/家畜衛生管理、業務調整/家畜衛生広報、獣医診断技術/疫学)(合計 121.8 人/月¹)

短期専門家:延べ17名(病理診断技術、獣医疫学、寄生虫症診断、獣医公衆衛生、臨床診断、血清診断、病性鑑定、生化学診断、実験室維持管理)(合計28.1人/月)

ローカルスタッフ雇用

事務職員:延べ2名、システムエンジニア:1名、フィールド・トレーナー:1名、ドライバー:延べ4名

- ・機材供与:デスクトップ/ノートPC、コピー機、乗用車(4WD)、冷却微量遠心機、CCDカメラ&モニター付顕微鏡等検査診断に必要な機器
- ・その他の活動費:会議等費用負担等:6,209 万 5,000 IDR (インドネシアルピア)
- 本邦研修/第三国研修

本邦研修:16名(人獣共通感染症対策、獣医技術研究、国際獣疫対策上級専門家育成、パラメディック獣医診断技術)

第三国研修:3名〔東南アジア向け発生源における鳥インフルエンザ診断(マレーシア):1名、タイ国ブルセラ病診断・サーベイランス研修:2名)〕

- 2) インドネシア側
 - ・カウンターパート (C/P) 配置:延べ64名 (DGLAHS-MOA:延べ6名、スバン DIC: 延べ58名)
 - ・施設及び資機材:スバン DIC 内プロジェクト事務室、机、椅子、雑品目、他
 - ・プロジェクト事務スペースの水道光熱費
 - ・ローカルコスト:637 億 755 万 8,600 IDR ²

2. 評価調査団の概要

日本側	担当分野	氏	名	所 属
	団長・総括	要田	正治	JICA 国際協力専門員
	家畜疾病診断	中尾	哲也	農林水産省 動物検疫所 精密検査部 微生物検査課長
	獣医疫学	山本	健久	農業・食品産業技術総合研究所 動物衛生研究所 ウイルス・疫学研究領域(疫学) 主任研究員
	計画管理	廣中	進司	JICA 農村開発部 農業農村開発第一グループ 第一チーム ジュニア専門員
	評価分析	井上	洋一	㈱日本開発サービス 調査部 主任研究員

¹プロジェクト期間終了時点の見込値

^{2 2011~2014}年 執行済み 2015年予算申請額

インドネシア側	Dr. Nilma	Senior Veterinary Officer, Sub Directorate of Animal Disease	
	Lubis	Surveillance, Directorate	of Animal Health, DGLAHS
	Dr. M. Farid.	Senior Veterinary Officer	, JICA Project Management Unit, DGLAHS
	AZ		
	Dr. Megawaty	Veterinary Officer, Sub	Directorate of Institutional and Animal
	Iskandar	Health Resources, Direc	torate of Animal Health, DGLAHS
	Ms. Yuliana	Senior Officer, Subdivision	on Cooperation and Public Relation, Planning
	Susanti	Division, DGLAHS	
調査期間	2015年5月8	3 日∼5 月 26 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) 成果1

達成された。

プロジェクト開始前の 2010 年では診断できる疾病の種類は 13 疾病のみであったが、終了時評価調査時点(2015 年 5 月)では予定した 41 疾病(75 の診断技術)に対する検査診断を自立的に行えるレベルに達している。これらの技術移転を通して検査技術や運用が標準化され、終了時評価調査時点で検査診断プロトコル〔標準操作手順書(Standard Operation Procedure: SOP)〕58 種類、マニュアル類 3 種類、技術資料 20 種類、様式 6 種類、その他資料 4 種類が整備された。

プロジェクト期間終了後も経験を積む必要のある項目もあるが、スバン DIC は 2014 年に国際標準化機構(ISO) より ISO9001(品質マネジメント規格)の認証及び ISO17025 (試験所の能力に関する規格) の認定を受けていることから、スバン DIC は国家規格や国際規格に準拠した試験方法で、十分な技量を有する試験員により正確な結果が出せる試験所であり、その品質が担保されたものと解釈できる。

これらのことから、スバン DIC では基本的かつ体系的な家畜疾病診断技術が確立されたといえることから、終了時評価時点において成果1は達成されたと考えられる。

(2) 成果 2

達成された。

プロジェクトは 2011 年より検体受領から診断の流れに関する改善策の推進、報告システムの開発など、継続的にサービスの改善に取り組んできた。成果 1 に示したとおり、プロジェクトの努力によってスバン DIC 内の診断体制は標準化され、ISO17025 の認定を受けたことからも、検査所として適切な検査診断サービスが国際的に標準化された体制で実施されていると認められる。

また、中間レビュー時点では診断サービス部長 1 名による最終診断体制であったが、成果 1 での検査診断の基本的技術移転、成果 3 でのアクティブ・サーベイランス等の活動を通して 7 名のラボチーフの診断結果に基づいた具体的なコメントや適切な最終判断を行える能力を獲得していることが、JICA 専門家により認められている。

このように、スバン DIC 内では診断体制が整備されたことにより、顧客の立場に立った検体診断サービスにかかわる実施能力は向上したといえる。したがって、終了時評価時点において成果 2 は達成されたと考えられる。

(3) 成果3

達成された。

疫学ラボスタッフは、JICA 専門家の支援を受けながら、主体的にサンプリングの方法、調査票の作成、得たデータの解析方法等、サーベイランス実施計画を作成している。実際のサーベイランス活動や解析も疫学ラボが中心的な役割を果たしている。また、スバン DIC では年間 100 回以上のアクティブ・サーベイランスが実施されており、その都度適切な提言がフィードバックされていることから、スバン DIC では効果的、効率的なアクティブ・サーベイランスが運用管理されているといえる。

サーベイランスにはすべての獣医スタッフ、パラメディックがサーベイランスに参加する体制となっており、プロジェクト対象疾病のサーベイランスの実施を通じて他の 10~12 疾病のサーベイランス実施運営能力に対しても正の影響があったとスバン DIC のスタッフのインタビューで聞き取られている。また、プロジェクトの牛ブルセラ病及び牛流産サーベイランスの実施を通じて、州・県政府事務所 (Provincial/District Office: DINAS) や各州・各県にある B/C タイプ・ラボ、酪農協のスタッフの防疫意識やサーベイランスにかかわる技術にも一定程度の向上が認められたとともに、スバン DIC との連携、協力体制も強化された。

このように、疫学ラボが中心となって実施されたプロジェクトのアクティブ・サーベイランスを切り口として、スバン DIC で実施するアクティブ・サーベイランス全体の能力向上が図られ、関係機関との連携の下で効果的、効率的なアクティブ・サーベイランスが実施できるようになった。このことから、終了時評価時点での成果 3 は達成されたと考えられる。

(4) 成果 4

達成された。

プロジェクト開始前は管轄地域内の獣医技術者・獣医師に対し DIC スタッフは家畜衛生に係る情報提供 (ニューズレター、巡回意見交換等)、啓発活動、技術支援活動を能動的に行っていなかった。プロジェクト開始後は、成果 4 のホームページやインドネシア語の家畜疾病啓発用パンフレット等を通して、それらの活動が開始されている。また、年 2 回の調整会議で啓発活動、技術支援活動の計画が策定されており、これらの活動が継続的に実施される体制が整えられている。

農家に対する啓発活動や技術支援は、県以下の地方政府畜産部局の役割であり、DIC や州の B タイプ・ラボが直接実施できない現状がある。そのため、彼らを通した間接的な農家支援にとどまるが、年間 100 回以上実施されているアクティブ・サーベイランスの機会をとらえ、スバン DIC スタッフは可能な範囲で啓発活動、技術支援活動を実施している。

このように、スバン DIC では獣医技術者・獣医師・農家に必要な家畜衛生に係る情報 提供、啓発活動、技術支援活動を継続する体制が整備され、成果 1~成果 3 の活動を通し てスバン DIC スタッフがそれらの活動を実施する能力が備えられた。したがって、終了 時評価時点での成果 4 は達成されたと考えられる。

(5) プロジェクト目標

ほぼ達成された。

2011年のプロジェクト開始後、スバン DIC で必要な検査・診断機器、設備、材料等が整備されたとともに、JICA 専門家や外部講師による実地訓練、本邦研修や第三国研修によってスタッフの知識、技術は大きく向上し、診断可能な疾病の数、検査実施数も高い精度を維持しながら増加(年間約61,000件)(指標1)している(成果1)。これには、成果2の活動で実施した業務フローの改善〔検体受領からフィードバックまでの流れの標

準化【各疾病で定められた標準日数内での診断結果の通知】(指標 2) やラボ診断報告システム【各ラボチーフによる適切な最終診断体制の構築】(指標 2) など〕や診断結果に基づいた適切な提言に関する能力強化による貢献も大きい。成果 3 では取り組みの必要性の高い牛ブルセラ病及び牛流産に対するアクティブ・サーベイランスをプロジェクトの対象疾病として選定し、パイロットサイトの現状や問題点を明らかにした。

また、スバン DIC では疫学ラボが中心となって、多くのラボがアクティブ・サーベイランスに参加する体制を構築し、サーベイランスの計画立案から実施、解析・評価の一連の活動を実施する能力が向上し(会議やワークショップ等の開催を通じて 2012 年 8 回・2013 年 22 回・2014 年 17 回実施)(指標 3)、他の通常業務として実施されているアクティブ・サーベイランスにも正の影響が認められている。アクティブ・サーベイランスを通して DINAS や B/C タイプ・ラボ、酪農協などの関係機関との連携も強化され、業務の分担なども徐々に進展してきている。

他方、プロジェクトでは成果 4 の活動として計画的に啓発活動や技術支援活動を行う 体制が整備されるとともに、ホームページやポスター、パンフレットなども多く作成さ れている。

スバン DIC の利用者 (州/県政府事務所の獣医技術者/獣医師/農家) ヘスバン DIC 顧客満足度調査を実施した結果、2011 年調査は 87.4%、2014 年調査は 94.8%の利用者が「診断サービスがプロジェクト実施前よりも向上し、「満足」または「ほぼ満足」と回答し、高い満足度を示している (指標 4)。

以上のことから、スバン DIC の家畜疾病診断サービスの質・量は向上したと考えられたため、終了時評価調査時点でプロジェクト目標はほぼ達成されたと考えられる。

3-2 評価結果の要約

(1) 妥当性

プロジェクトの妥当性は終了時評価時点で高く維持されている。

2010年10月に実施された事前評価ではインドネシアの家畜・動物衛生に関する政策及びターゲット・グループのニーズ、日本の援助政策とプロジェクト目標が合致していることが確認されているが、その後の本プロジェクトの妥当性を損ねるような政策の変更やニーズの変化等は認められず、その妥当性は終了時評価時点においても維持されている。

具体的には、2015年以降の次期「畜産開発中期計画 2015-2019」は作成中であるが、インドネシアの畜産開発のなかの家畜・動物疾病対策の重要性は維持されていることがDGLAHSとの面談時に確認された。2013年には統合家畜衛生情報システムの運用を開始、2014年には本プロジェクトのアクティブ・サーベイランスの対象疾患であるブルセラ病に対して、2025年までの撲滅に向けたロードマップを発表しており、効果的な家畜疾病対策に向けた政策的努力を行っている。

他方、インドネシアは 2005 年 7 月に高病原性鳥インフルエンザ (High-Pathogenic Avian Influenza: HPAI) のヒト感染例が確認されて以降、2012 年 8 月 10 日時点において世界で最も多い 191 の感染例(うち 159 の死亡例) 3 が確認されており、現在も感染例と死亡例の報告が続いている。HPAI は人獣共通感染症であり、効果的な感染制御のためにはヒト感染だけではなく、家畜・動物に対するサーベイランスの実施と早期封じ込めが必須である。本プロジェクトは地域の家畜衛生対策の一端を担う DIC の機能強化を支援するものであり、ブルセラ病及び牛流産サーベイランスの実施能力強化を通して HPAI を含む重要感染症サーベイランスの実施能力強化をめざすものである(ブルセラ病も国家優先疾病の 1 つ

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³ インドネシア保健省及びWHOによる公表情報

である)。JICA のインドネシア共和国国別分析ペーパー(2012年)において「感染症等の地球規模課題への対応能力向上に係る支援を重視する」ことが明記されていることから、プロジェクト目標は日本の援助政策との整合性も維持されているとともに、地球規模課題対応との観点での国際的要求に適うものである。

(2) 有効性

プロジェクトの有効性はおおむね高い。

JICA 専門家の技術移転により 41 疾病に対する診断技術がおおむね確立している(成果 1)。成果 2 では検体診断サービス(パッシブ・サーベイランス)を適切に行うための体制整備やスタッフの能力強化が図られ(成果 2)、プロジェクトで対象とした牛ブルセラ病及び牛流産サーベイランスの実施を通して通常業務として実施されているアクティブ・サーベイランス全体の実施能力が強化される(成果 3)とともに、スバン DIC 内部のラボ間の連携強化やフィールド活動の機会を活用した関係者への啓発活動や技術支援活動も効果的に実施された。また、将来の西ジャワ地域での効果的な家畜疾病対策に向け、DINAS やB/C タイプ・ラボ、酪農協等の関係者に対する啓発活動、技術支援活動を実施する体制もおおむね確立した(成果 4)といえる。これらの成果によってスバン DIC の家畜疾病診断サービスの質的、量的向上は図られた(プロジェクト目標)といえ、各成果、プロジェクト目標測定のための指標もおおむね満たされた。スバン DIC は ISO9001(品質マネジメントシステム)の認証取得及び ISO17025(試験所の能力に関する規格)の認定を受けたことでこれらの達成事項の品質も担保されたと考えられることから、終了時評価時点でプロジェクト目標はおおむね達成されたといえる。

プロジェクト活動を通してスバン DIC スタッフ個々の能力は大きく向上し、検査業務だけでなく疾病監視業務、啓発・技術移転業務の質を落とさずに年間検査数を大幅に伸ばしてきた。また、プロジェクト活動を通して学術的成果も得られ、インドネシア・日本国側双方の努力によって望ましい人材育成が図られたと考えられる。しかしながら、スバンDIC は若い検査施設であり、獣医師及び獣医技術スタッフの年齢の中央値も終了時評価時点でそれぞれ 37 歳及び 32.5 歳である。したがって、プロジェクト期間終了後も継続して新規技術・知識の獲得に向けた努力が継続されることが望まれる。

(3) 効率性

プロジェクトの効率性はおおむね高い。

プロジェクト開始後、活動に必要な機器、機材の調達、設置が行われ、これと並行して対象地域の家畜衛生対策の実情やスバン DIC の業務運用システム、検査機能等にかかわるベースライン調査が実施された。調査結果に基づき、各ラボで 2015 年までに獲得すべき技術・サービスが詳細に規定された「プロジェクト技術到達目標シート」が作成され、同シートに沿って技術移転そのものは JICA 専門家よりおおむね計画どおり実施、中間レビュー時点までにおおむね終了している。中間レビュー以降は日常業務を通した技術定着が図られ、アクティブ・サーベイランスや関係機関への情報提供や啓発活動、技術移転活動が順調に実施された。

実施される試験や診断の頻度により差があるものの、プロジェクトにより供与された検査機器、機材等は有効に活用されている。これらの機器等は ISO の規格に則って日常的なメンテナンスが適切に実施されている。施設設備に関しても JICA 短期専門家が派遣され、作成されたマニュアルに基づき、ISO の規格に合致したメンテナンスが実施されている。また、終了時評価までに合計 16 名のインドネシア人 C/P が本邦研修に派遣され、多くの知識、技能を獲得し、スバン DIC でのプロジェクト活動、日常業務に有効に活用している。

上記の結果、投入の質・量・タイミングは適切であったと考えられる。

(4) インパクト

プロジェクトの実施によって、以下に示す正のインパクトが確認または期待されている。

これまで示してきたとおり、スバン DIC は診断機能(診断可能な疾病数及び検査方法の増加)の強化が実現し、パッシブ・サーベイランスの機能も強化された。検査診断サービスの品質や検査施設としての適切性は ISO の認証、認定を受けたことで国際的にも担保されたといえる。また、地域全体として家畜疾病対策を効果的に行うためには外部関係者の能力強化も必須であるが、スバン DIC では啓発活動や技術支援活動を継続的に実施する体制が整備され、プロジェクトの活動を通して連携体制も強化されたといえる。

しかしながら、西ジャワ地域全体の家畜疾病対策強化の実現に向けて、スバン DIC は適切な病性鑑定を行うために外部の関係機関への啓発活動、技術支援活動を地道に継続するとともに、DINAS や B/C タイプ・ラボ等との業務分担の促進、スバン DIC スタッフのさらなる能力強化、公衆衛生セクターとの連携促進などの課題に対する取り組みを DGLAHSと協力して推進することが求められる。

以上のことから、プロジェクト期間終了以降、上述した取り組みが順調に進捗すれば、 上位目標の達成は大いに期待できる。

このほか、プロジェクトを通して確認、期待される正のインパクトとして、①プロジェクト活動を通した学術的成果の創出と検査診断業務への貢献、②家畜疾病マップの作成、③スバン DIC と外部関係機関〔DINAS や B/C タイプ・ラボ、簡易獣医診療所(Center for Animal Health: PUSKESWAN)、酪農家等〕との連携強化、④インドネシア側、日本側若手人材の能力強化、が挙げられる。

本プロジェクトの実施に起因する負のインパクトは、終了時評価時点において確認されない。

(5) 持続性

プロジェクトによって生み出された便益の自立発展、自己展開は終了時評価時点においてやや高いと見込まれる。

政策・制度面に関しては、DGLAHS は家畜疾病対策に対して政策的努力を継続しており、 家畜疾病監視のための情報システムの構築やブルセラ病撲滅に向けたロードマップの作 成などを行っている。終了時評価時点では次期「畜産開発中期計画 2015-2019」のドラフ ト作成中であるが、上位目標となる西ジャワ地域の家畜疾病対策の強化に向けた政策的コ ミットメントは、プロジェクト期間終了後も継続されることが見込まれる。

また、組織・財政面に関しては、プロジェクトは将来の持続性を強く意識し、プロジェクトが主催する研修会や出張を伴う疾病調査においても、日本・インドネシア国側機関双方は明確なコストシェアの下でプロジェクト活動を進めている。また、プロジェクトが技術移転を行った診断技術はスバン DIC の通常業務で使用されるものであり、プロジェクト活動として実施された牛ブルセラ病及び牛流産サーベイランスもスバン DIC の通常業務に組み込まれた形で実施されている。したがって、これらの活動はプロジェクト期間終了後もスバン DIC の予算で継続されることが強く見込まれる。

技術面に関しては、スバン DIC で確立した検査診断技術、サービスには SOP が作成され、ISO の規格に則って質の担保がなされている。スバン DIC を含めて公務員は異動が一定程度あるものの、上記品質管理システムにより技術的持続性は高く維持されることが見込まれる。しかしながら、検査診断技術は日々進歩しており、スバン DIC スタッフも常に

新規技術の獲得に向けた努力を継続するとともに、スタッフの離職・異動対策を含めたスバン DIC への技術の定着に向けた対策を講じることも重要である。また、上位目標達成に向けては、これらの取り組みと並行して DINAS や B/C タイプ・ラボ等の関係機関への啓発活動や技術支援活動を継続することも重要である。

3-3 効果発現に貢献した要因

(1) 計画内容に関すること

本プロジェクトは、2009年に日本の無償資金協力によって建設された施設で実施された技術協力プロジェクトであり、既存の施設設備は本プロジェクトでも最大限活用されている。

また、本プロジェクトでは現地の講師リソースを活用するようにデザインされており、講師リストは適宜アップデートされている。また、プロジェクトで作成したマニュアル2種は過去のJICA技術協力プロジェクトの成果品を活用して作成されている。これらのリソースを効果的かつ効率的に活用したことで、プロジェクト目標を達成するための活動計画内容に大きく貢献した。

(2) 実施プロセスに関すること

プロジェクトで行った検査診断の基本的技術移転や診断体制の整備、関係機関への啓発活動、技術移転活動はスバン DIC の通常業務である。プロジェクトで対象としたブルセラ病及び牛流産に対するアクティブ・サーベイランスについても開始当初より持続性を意識してプロジェクト活動を実施しており、既にスバン DIC の通常業務として実施されているアクティブ・サーベイランス業務のなかに組み込んで実施されている。このことはプロジェクトの持続性を担保するとともに、効率的なプロジェクト活動の実施にも貢献している。

また、関係機関に対する情報提供や啓発活動、技術支援活動(成果 4) はアクティブ・サーベイランス(成果 3) で関係機関と協働した機会でも実施されており、効率性を高めた。

3-4 問題点及び問題を惹起した要因

(1) 計画内容に関すること

計画内容に関するプロジェクトの有効性の阻害要因は終了時評価時点までに確認されていない。

(2) 実施プロセスに関すること

プロジェクトの支援の下で第三国研修に派遣された1名のスタッフが他のDICに異動となった。プロジェクトの投入が成果達成に十分還元されなかったとの観点からはプロジェクトの効率性を若干低下させたと考えるが、成果達成に重大な影響はもたらしていない。

3-5 結論

プロジェクトの技術支援によってスバン DIC の検査診断可能な疾病数は大きく増加し(成果1)、適切な診断サービス(パッシブ・サーベイランス)を行う体制が整備されたとともに、サービス運用能力も強化された(成果2)。また、プロジェクトで対象とした牛ブルセラ病及び牛流産サーベイランスの実施を通して通常業務として実施されているアクティブ・サーベイランス全体にも計画立案から実施、分析、フィードバックまでの一連の実施能力が強化された(成果3)。これと並行し、地域全体の効果的な家畜疾病対策強化に向けた関係機関の連携体制も確

立した(成果 4)。これらの成果に加え、スバン DIC は ISO の認証を取得し、家畜疾病診断サービスの品質管理も国際標準で行われているといえる。よってスバン DIC の家畜疾病診断サービスの質的、量的向上は図られたといえ、プロジェクト目標は終了時評価時点で達成されている。これらの成果を評価 5 項目で分析したところ、妥当性、有効性、効率性及び持続性はいずれも高い、あるいはおおむね高いと評価された。上記の結果を踏まえ、本プロジェクトは予定どおり終了とする。また、インパクトにおいては学術的研究成果の創出や若手人材の育成などの正のインパクトが認められている。

3-6 提言(当該プロジェクトに関する具体的な措置、提案、助言)

(1) 知識、技術の維持向上について

スバン DIC はプロジェクトの実施により検査診断技術やパッシブ・サーベイランス、アクティブ・サーベイランス、啓発活動や技術支援活動にかかわる能力を大きく向上させた。今後もこれらの能力を適切に維持するとともに、新しい知識、技術をさらに獲得するための努力を継続する必要がある。

(2) 病性鑑定システムの強化に向けた関係機関への啓発活動、技術支援活動の継続 地域全体として効果的な家畜疾病対策を実現するには、病性鑑定システムが適切に機能 することが求められる。しかしながら、スバン DIC では持ち込まれる検体に質の問題(不 十分な検体採取部位や不適切な保存方法、不十分な疫学情報)から、病性鑑定を適切に実 施できない事例が認められた。その解決に向けてスバン DIC は新しい SOP の運用を開始 したが、スバン DIC は今後も、適切な病性鑑定の実施に必要な検査材料の入手に向けた関 係機関への啓発活動や技術支援活動を継続的に実施する必要がある。

(3) 人獣共通感染症の清浄化について

ブルセラ病の清浄化には、感染家畜のとう汰のための補償制度の整備や感染していない家畜の導入など多くの課題が残されている。スバン DIC は関係機関による適切な対応の検討に貢献するため、本病の発生状況や感染状況などについて持続的に正確な情報を提供する必要がある。さらに、合同終了時評価チームは、中央政府、地方政府の当局はプロジェクトの成果を適切に活用し、ブルセラ病や狂犬病等の人獣共通感染症の撲滅に向けた強いコミットメントを示すことを提言する。

(4) 検査診断機器及び施設設備の維持管理について

スバン DIC では ISO の要求事項に基づいて、適切なラボ管理、施設管理が実施されている。スバン DIC は今後も継続して劣化を遅らせるための予防的メンテナンスを実施するとともに、特に検査診断機器については更新のための予算確保もあらかじめ検討しておくことが望ましい。

(5) PDM の改訂について

上位目標の指標 1「スバン DIC における家畜疾病診断のための検体数が 2018 年までに 2015 年と比較して 10%増加する。」について、スバン DIC は 2014 年に約 61,000 件の検査を実施しており、施設の処理能力の上限近くまで増加している。このため、西ジャワ地域の効果的、効率的な家畜疾病対策に向け、簡易な試験を B/C タイプ・ラボと分担することなどにより、地域全体としての検査能力の向上を図ることとしている。一方、B/C タイプ・ラボと協働して検査能力を向上するためには、指標 3「西ジャワ地域における、スバン DICの家畜衛生に関する啓発・技術支援活動の数が、2018 年までに 2015 年と比較して 20% 増

加する」に述べられている啓発活動や技術支援活動を適切に行うことが求められる。このため、指標1及び3については一体的に評価することが適当と考えられる。また、評価する検査実績の単位について、同一検体について複数の検査が実施される場合があること、現状においても、検体数としての実績の把握は困難で、検査数として把握・評価していることを考慮し、「検体数」を「検査数」に改める。

上記の点を考慮し、合同評価チームは指標 1 及び指標 3 を統合し、「スバン DIC 及び管轄地域の B/C タイプ・ラボ、家畜衛生センターを含めた家畜疾病診断のための検査実施数が 2018 年までに 2015 年と比較して 10%増加する」を上位目標達成度測定のための新たな指標とすることを提案する。

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

プロジェクトは開始当初より持続性を意識して、一連の活動をスバン DIC の通常業務として組み込む形で実施し、診断能力向上や業務体制改善を進めてきた。特に、プロジェクトがパイロットサイト活動としたブルセラ病及び牛流産に関する調査活動は、スバン DIC が通常業務として実施しているアクティブ・サーベイランスのなかに組み込んで実施された。このことが、プロジェクト及びスバン DIC 双方の予算措置や協働を円滑化するとともに、持続性の担保や効率的なプロジェクト活動の実施に貢献した。

このように、可能な限り先方の業務システムのなかでプロジェクト活動を運営することで、 技術的、財政的持続性が担保されるものと考えられる。ただし、プロジェクトによって新たに 先方業務として開始または継続される必要のあるものに関しては、プロジェクト期間終了まで に必要な人材等も含めた業務のコスト分析を行っておくことにも留意が必要である。

第1章 終了時評価の概要

1-1 調査団派遣の経緯

インドネシア共和国(以下、「インドネシア」と記す)は、畜産業の発展及び生産性向上に対する主要な活動として、長年、家畜疾病対策に取り組んでいる。特に近年、人獣共通感染症を含む動物感染性疾病は社会経済的な損失だけでなくヒトの健康を守る観点からも大きな懸念となっている。そのため、これらの疾病発生に係るサーベイランスシステムの強化が動物・家畜疾病対策には重要である。

インドネシアでは家畜疾病対策のために、家畜疾病診断センター(Disease Investigation Center: DIC)が農業省畜産・動物衛生総局(Directorate General of Livestock & Animal Health Services: DGLAHS)の下、全国に 8 カ所設立されている(メダン DIC、ブキティンギ DIC、ランプン DIC、ワテス DIC、デンパサール DIC、バンジャルバル DIC、マロス DIC、スバン DIC)。 これら DIC は A タイプ・ラボと位置づけられ、それぞれ数州を管轄し、家畜疾病診断を実施している。また、各州及び各県レベルには B タイプ及び C タイプ・ラボが配置されている。 DGLAHS下にある A タイプ・ラボでは家畜疾病調査及び診断を実施し、各州にある B タイプ・ラボ、各県にある C タイプ・ラボでは、それぞれ、州・県が策定する家畜疾病対策による家畜疾病管理を行っている。インドネシアでは 2000 年より地方分権化が進められており、このような状況下でこれらの 3 タイプのラボ間での連携、協働を強化することは、家畜疾病対策を管理するうえで重要である。

わが国は 2009 年に無償資金協力プロジェクト「鳥インフルエンザ等重要家畜疾病診断施設整備計画」により、スバンに DIC 施設を新設し、併せて既存のメダン DIC 及びランプン DIC 施設の一部改修支援を行った。スバン DIC は首都ジャカルタから約 100km 東に位置し、以前はワテス DIC が管轄していたジャカルタ州、西ジャワ州、バンテン州を新たに管轄している。この 3 州はインドネシアでも養鶏業が盛んな地域であるため、家畜疾病対策上、非常に重要な地域となっている。新設されたスバン DIC には 47 名のスタッフ(うち技術スタッフは獣医師 21 名・獣医技術者 16 名)が配置されていたが、これらスタッフの多くは実務経験に乏しく、診断技術も十分でない者が多い。

こうした背景の下、インドネシア政府は将来の西ジャワ地域の効果的な家畜疾病対策実現に向けて、スバン DIC の家畜疾病診断サービスにかかわる組織機能強化を目的とした技術協力プロジェクトの実施をわが国政府に要請した。これを受け、独立行政法人国際協力機構(JICA)は 2011年7月から 2015年7月までの4年間の予定で「家畜衛生ラボ能力向上プロジェクト」(以下、「本プロジェクト」と記す)を開始し、現在派遣中の長期専門家2名と短期専門家(延べ15名)による協力を実施中である。

今回の終了時評価では、2015 年 7 月の事業期間終了を控え、事業全体の活動内容、成果及びプロジェクト目標について評価 5 項目(妥当性、有効性、効率性、インパクト及び持続性)に基づいて評価し、成果やプロジェクト目標達成や事業終了後の持続性担保に向けた提言、並びに今後の類似事業の実施にあたっての教訓を抽出することを目的とする。

1-2 終了時評価の目的

終了時評価の目的は以下に示すとおりである。

- (1) 最新 PDM (Version 2) (付属資料 2) に基づいてプロジェクトの全体的な進捗をレビューし、評価 5 項目の評価基準に従って評価時点でのプロジェクト成果を評価する。
- (2) プロジェクトの成果及び目標に対する促進要因及び阻害要因を特定する。
- (3) 上記の分析結果に基づいてインドネシア側と共同で残りのプロジェクト期間での活動方針について協議する。
- (4) プロジェクト期間終了までのプロジェクト目標の着実な達成に向けた提言を行うとともに、 必要に応じて PDM の見直しを行う。
- (5) 合同終了時評価報告書に調査結果を取りまとめる。

1-3 合同終了時評価チームのメンバー

合同終了時評価チーム(以下、評価チーム)の構成は以下のとおりである。

<日本側>

担当分野	氏	名	所 属	現地派遣期間
団長・総括	要田	正治	JICA 国際協力専門員	2015年5月17日~
				2015年5月27日
家畜疾病診断	中尾	哲也	農林水産省 動物検疫所	2015年5月17日~
			精密検査部 微生物検査課長	2015年5月27日
獣医疫学	山本	健久	農業・食品産業技術総合研究所	2015年5月17日~
			動物衛生研究所 ウイルス・疫学研究領域	2015年5月27日
			(疫学) 主任研究員	
計画管理	廣中	進司	JICA 農村開発部 農業農村開発第一グループ	2015年5月17日~
			第一チーム ジュニア専門員	2015年5月27日
評価分析	井上	洋一	㈱日本開発サービス 調査部	2015年5月7日~
			主任研究員	2015年5月27日

<インドネシア側>

氏 名	所 属	
Dr. Nilma Lubis Senior Veterinary Officer, Sub Directorate of Animal Disease Surv Directorate of Animal Health, DGLAHS		
Dr. M. Farid. AZ	Senior Veterinary Officer, JICA Project Management Unit, DGLAHS	
Dr. Megawaty Iskandar	Veterinary Officer, Sub Directorate of Institutional and Animal Health Resources, Directorate of Animal Health, DGLAHS	
Ms. Yuliana Susanti	Senior Officer, Subdivision Cooperation and Public Relation, Planning Division, DGLAHS	

現地調査は、2015 年 5 月 8 日から 26 日にかけて実施され、サイト視察、インタビュー、プロジェクト報告書等の関連文書レビューを行った(付属資料 1)。

1-4 プロジェクトの枠組み

プロジェクトの実施機関及び関連機関、対象地域、受益者は、以下のとおりである。また、最新 PDM である Version 2 (付属資料 2) に示されるプロジェクトの要約(プロジェクト目標、成果、活動)を以下に示す。

- (1) ターゲット・グループ: スバン DIC の職員
- (2) プロジェクト・サイト: スバン DIC
- (3) 実施機関:農業省 DGLAHS 動物衛生局 (Directorate of Animal Health: DAH)
- (4) 最新の PDM (2013 年 5 月 23 日: Version 2)

上位目標	西ジャワ地域(スバン DIC 管轄地域)の家畜疾病対策が強化される。
プロジェクト目標	スバン DIC の家畜疾病診断サービスの質・量が向上する。
成果	成果1:スバン DIC スタッフが基本的かつ体系的な家畜疾病診断技術を習得す
	る。
	成果2:スバン DIC スタッフの、顧客の立場に立った検体診断サービス (パッ
	シブ・サーベイランス)に係る実施能力が強化される。
	成果3:スバン DIC スタッフのパイロットサイトにおける、疾病調査及び疾病
	対策技術支援(アクティブ・サーベイランス)の実施能力が強化される。
	成果 4: スバン DIC スタッフが、管轄地域内の獣医技術者・獣医師・農家に必
	要な家畜衛生に係る情報提供(ニューズレター、巡回意見交換等)、啓発活動、
	技術支援活動を継続的に実施する。
活動	活動 1
	1-1. スバン DIC スタッフが、スバン DIC の診断技術の現状及びニーズ調査を
	実施する。
	1-2. スバン DIC スタッフが、調査結果に基づき、ラボに必要な診断技術(疾
	病の種類、診断方法、レベル等)及び習得度目標値を設定する。
	1-3. スバン DIC スタッフが、ラボごとに診断技術の技術習得計画を策定する。
	1-4. スバン DIC スタッフが、講師リソース〔日本人専門家、スバン DIC、他
	DIC、インドネシア獣医学研究所(Indonesian Research Centre for
	Veterinary Science: IRCVS)、国立動物医薬品検査所(National Veterinary
	Drug Assay Laboratory: NVDAL)、大学の畜産学科職員〕の候補者リスト
	を作成する。
	1-5. スバン DIC スタッフが、講師リソースから計画された診断技術の移転を
	インドネシア国内、日本、第三国研修を通じて受ける。
	1-6. スバン DIC スタッフが、講師リソースによる診断技術の熟達度試験
	(Proficiency Test 等)を受ける。
	活動 2
	2-1. スバン DIC スタッフが、スバン DIC における診断検体の受領と診断の流

れの現状を分析する。

- 2-2. スバン DIC スタッフが、フィールドからの診断用検体送付の現状を分析 する。
- 2-3. スバン DIC スタッフが、スバン DIC における診断用検体受領と診断の流れの改善策を策定する。
- 2-4. スバン DIC スタッフが、スバン DIC における診断サービスの改善策を実施する。
- 2-5. スバン DIC スタッフが、改善策実施後をモニタリング(検体受領・診断フロー、所要日数、顧客の意見等)し、フィードバックする。

活動 3

- 3-1. スバン DIC スタッフが、畜産振興地域のなかからパイロットサイト選定のための事前現地調査を行う。
- 3-2. スバン DIC スタッフが、疾病調査と対策活動のためのパイロットサイトを選定する。
- 3-3. スバン DIC スタッフが、パイロットサイトの B/C タイプ・ラボと連携して、地域の畜産振興特性を考慮した疾病調査を計画し実施する。
- 3-4. スバン DIC スタッフが、パイロットサイトの調査結果を分析し、提言レポートを作成する。
- 3-5. スバン DIC スタッフが、パイロットサイトにおける活動実施による家畜 衛生状況のモニタリングとフィードバックを行う。

活動 4

- 4-1. スバン DIC スタッフが、スバン DIC の管轄地域 3 州の獣医技術者・獣医師・農家への情報提供、情報交換のために定期刊行ニューズレターを発行する。
- 4-2. スバン DIC スタッフが、パイロットサイトの B/C タイプ・ラボと連携し、 獣医技術者・獣医師・農家との情報交換のために必要な、その他の手段(巡 回意見交換会等)または場づくりの活動を検討し、実施する。
- 4-3. スバン DIC スタッフが、パイロットサイトの獣医技術者・獣医師・農家 に必要な衛生改善の啓発活動・技術支援活動を計画する (他の JICA プロ ジェクトの啓発活動用の成果品を活用する)。
- 4-4. スバン DIC スタッフが、パイロットサイトの B/C タイプ・ラボと連携し、 獣医技術者・獣医師・農家に継続可能な啓発活動・技術支援活動を実施す る。
- 4-5. スバン DIC スタッフが、活動のモニタリングと次にとるべきアクション へのフィードバックを行う。

第2章 終了時評価の方法

終了時評価は「JICA 事業評価ガイドライン」第1版及び第2版(それぞれ2010年6月、2014年5月)に沿って実施された。実績・実施プロセスの確認と5項目評価を行うための調査項目について、何をどのように実施したらよいのか具体的な方法を検討するため、評価設問、必要な情報・データ、情報源、データ収集方法について一覧表で示した評価グリッド(付属資料3-1、3-2)を作成した。

評価チームのメンバーは評価グリッドに基づき、カウンターパート(Counterpart: C/P)や各関係機関、JICA専門家に対して質問票やインタビューを実施し、プロジェクトのレビューを実施した。

調査結果は日本-インドネシア合同で PCM(プロジェクト・サイクル・マネジメント)の常法 に則り、最新の PDM Version 2 に基づいてプロジェクト成果の到達度の確認及び評価 5 項目での 分析を実施し、合同評価報告書を取りまとめた。

本終了時評価に用いた評価5項目の概説を表-1に示す。

表-1 評価5項目の概説

文 · 미 iii o 久 i o iiii o				
評価5項目	概 説			
	プロジェクトの目標(PDM のプロジェクト目標、上位目標)が、受益者のニーズと			
应	合致しているか、援助国側の政策と日本の援助政策との整合性はあるかなど、「援助			
妥当性 	プロジェクトの正当性」を検討する。終了時評価での妥当性評価は、現状・実績に			
	基づいて検証作業を行う。			
	PDM の「プロジェクトの成果」の達成度合いと、それが「プロジェクト目標」の達			
有効性	成にどの程度結びついたかを検討する。終了時評価での妥当性評価は、現状・実績			
	に基づいて検証作業を行う。			
	プロジェクトの「投入」から生み出される「成果」の程度を把握する。各投入のタ			
効率性	イミング、量、質の適切度を検討する。終了時評価での効率性評価は、現状・実績			
	に基づいて検証作業を行う。			
2 3 4 3° 4 1	プロジェクトが実施されたことにより生じる直接・間接的な正負の影響を検討する。			
インパクト	終了時評価でのインパクトは、予測・見込みに基づいて検証作業を行う。			
	援助が終了した後も、プロジェクト実施による便益が持続されるかどうか、自立発			
持続性	展に必要な要素を見極めつつ、プロジェクト終了後の自立発展の見通しを検討する。			
	終了時評価での持続性評価は、予測・見込みに基づいて検証作業を行う。			

第3章 プロジェクトの実績と実施プロセス

3-1 投入

(1) 日本側投入実績

以下に、2014 年 12 月時点のプロジェクトに対する日本側からの投入を示す。詳細は付属 資料 $4\sim9$ を参照のこと。

真作す アモジボジ	
構成	投入
JICA 専門家の派遣	長期専門家:延べ3名(チーフアドバイザー/家畜衛生管理、業務調整/家
	畜衛生広報、獣医診断技術/疫学)(合計 121.8 人/月、プロジェクト期間終
	了時点の見込値)
	短期専門家:延べ 17 名 (病理診断技術、獣医疫学、寄生虫症診断、獣医
	公衆衛生、臨床診断、血清診断、病性鑑定、生化学診断、実験室維持管理)
	(合計 28.1 人/月)
ローカルスタッフ雇用	事務職員:延べ2名、システムエンジニア:1名、フィールド・トレーナ
	ー:1名、ドライバー:延べ4名
資機材の提供	デスクトップ/ノート PC、コピー機、乗用車 (4WD)、冷却微量遠心機、
	CCD カメラ&モニター付顕微鏡等検査診断に必要な機器
本邦研修/第三国研修	本邦研修:17名(人獣共通感染症対策、獣医技術研究、国際獣疫対策上級
	専門家育成、パラメディック獣医診断技術)
	第三国研修:3名〔東南アジア向け発生源における鳥インフルエンザ診断
	(マレーシア): 1 名、タイ国ブルセラ病診断・サーベイランス研修: 2 名〕
その他の活動費	会議等費用負担等: 6,209 万 5,000 IDR (インドネシアルピー)

(2) インドネシア側投入実績

以下に、2014年12月現在のプロジェクトに対するインドネシア側からの投入を示す。詳細については付属資料8及び9を参照のこと。

がはってては自然女性の次のグビジがでこと。			
構成	投入		
C/P 配置	延べ 64 名		
	-農業省 DGLAHS:延べ6名		
	ースバン DIC:延べ58名		
施設及び資機材	スバン DIC 内プロジェクト事務室、机、椅子、雑品目、他		
現地活動費	637 億 755 万 8,600 IDR (2011~2014 年 執行済み 2015 年予算申請額)		

3-2 プロジェクトの実績

(1) プロジェクト活動の実績

成果に係るプロジェクト活動実績を以下に示す。

が、	
成果1:スバン DIC スタッフが基本的かつ体系的な家畜疾病診断技術を習得する。	
活動	達成事項
1-1. スバン DIC スタッフが、ス	・ プロジェクト開始直後より、以下の対象、内容のベースライ
バン DIC の診断技術の現	ン調査を実施した。
状及びニーズ調査を実施	-DIC 内部
する。	診断能力、個々の疾病の診断数、日常業務や設備等の状況
	-DIC 外部

- 地域の畜産業の状況、地方自治体や農業協同組合等 27 施設に対する質問票による調査 (一般情報、疾病疑い家畜からの検体提出、能動的サーベイランス、家畜衛生に関する研修、DICから依頼者への調査結果やコメント等のフィードバック)
- 上記の調査結果に基づいて PDM 指標の目標値等が決定され、 2012 年 3 月 14 日に開催された第 1 回合同調整委員会(Joint Coordination Committee: JCC)で Version 1 として承認された。
- 1-2. スバン DIC スタッフが、調査結果に基づき、ラボに必要な診断技術(疾病の種類、診断方法、レベル等)及び習得度目標値を設定する。
- ・ ベースライン調査の分析結果に基づき、プロジェクト対象サイト及び対象疾病の選定、プロジェクト活動計画の策定が行われ、第1回 JCC で承認された。

また、同調査の分析に基づき、スバン DIC の 8 つのラボごと

- 1-3. スバン DIC スタッフが、ラボごとに診断技術の技術習得計画を策定する。
- に達成すべき技術/サービスが詳細に項目化され、技術向上の ための方法や達成指標、達成時期等を示した「プロジェクト 技術到達目標シート」が作成された。
- 1-4. スバン DIC スタッフが、講師リソース (日本人専門家、スバン DIC、他 DIC、IRCVS、NVDAL、大学の畜産学科職員)の候補者リストを作成する。
- ・ 同シートの作成は 2012 年第1 四半期に実施され、第3 四半期までにすべてのラボで完成した。

・ JICA 短期専門家はプロジェクト活動計画 (PO) に従って計画

され、必要な時期に必要な期間派遣された。終了時評価時点

- までに延べ17名の短期専門家が派遣された(延べ842日、28.1人/月)。 ・ これに加え、各分野でインドネシア国内の講師リストが2012
- ・ これに加え、各分野でインドネシア国内の講師リストか 2012 年第 1 四半期までに作成され、プロジェクトの研修等に活用 された。
- ・ インドネシアの国内講師リソースは多くの機関から選定(主に大学教授)され、研修を通じて派遣元の機関との関係も構築されている。
- ・ 講師リストは適宜アップデートされている。
- 1-5. スバン DIC スタッフが、講師リソースから計画された診断技術の移転をインドネシア国内、日本、第三国研修を通じて受ける。
- ・ 終了時評価調査時点で合計 16 名の C/P が日本の機関(動物衛生研究所、北海道大学、帯広畜産大学)で「獣医学技術研究」、「人獣共通感染症対策」、「パラメディック獣医学診断技術」、「国際獣疫対策上級専門家育成」のテーマで研修を受けている(終了時評価時点で 1 名が研修中、プロジェクト期間終了時点での見込み人/月は 103.5)。
- 第三国研修は、1名がマレーシアにおいて「東南アジア向け発生源における鳥インフルエンザ診断」(2011年10月、0.8人/月)、2名がタイにて「ブルセラ病診断・サーベイランス研修」(2012年6月、合計0.6人/月)に参加した。
- ・ 国内研修は、合計 41 の研修にスバン DIC 職員や B タイプ・ラ ボ職員、地方自治体職員などプロジェクト関係者が多数参加 した。
- ・ なお、プロジェクトは JICA 専門家及びスバン DIC 職員が発表 者となるセミナー・会議を 65 回開催し、発表タイトル数は 133 である。

1-6. スバン DIC スタッフが、講師リソースによる診断技術の熟達度試験 (Proficiency Test 等) を受ける。

- 2013 年まで国際獣疫事務局(World Organization for Animal Health: OIE)が認証したオーストラリア動物衛生研究所 (Australian Animal Health Laboratory: AAHL)による Proficiency Test、及びインドネシア国内のラボの平準化を目的 とした独自の検査規格の2種類が存在していた。
- ・ 農業大臣は 2012 年にワテス DIC を鳥インフルエンザの国家リファラルラボと指定し、ワテス DIC が 2013 年より検査の制度保証メカニズムを運営している。
- ・スバン DIC では、他の DIC や NVDAL などの検査施設間の平準化を目的とした Proficiency/比較試験がブルセラ病、HPAI、 狂犬病などについて延べ 103 回実施されている。
- なお、ISO 認証(成果 1 の達成度を参照)に伴い、毎年の Proficiency Test (または他 DIC との診断結果比較)が義務づけ られたため、今後確実に継続される見込みである。

成果 2: スバン DIC スタッフの、顧客の立場に立った検体診断サービス (パッシブ・サーベイランス) に係る実施能力が強化される。

活動達成事項

- 2-1. スバン DIC スタッフが、スバン DIC における診断検体の受領と診断の流れの現状を分析する。
- 2-2. スバン DIC スタッフが、フィールドからの診断用検体送付の現状を分析する。
- 2-3. スバン DIC スタッフが、スバン DIC における診断用 検体受領と診断の流れの改善策を策定する。
- 2-4. スバン DIC スタッフが、ス バン DIC における診断サ ービスの改善策を実施す る。

- ・ 2011 年第 4 四半期から 2012 年第 1 四半期にかけて実施された ベースライン調査により、スバン DIC の検体の流れ、診断及 び診断用検体送付の現状が調査、分析された。
- ・ スバン DIC の各ラボで課題は異なるものの、成果 1 で確認された新規技術の獲得や検査技術の向上の必要性のほかに、検査実施に必要な機材、器具の整備や業務の効率化、機器メンテナンスの必要性などの課題が明確にされた。
- ・ また、搬入される検体の質(採取部位の不足、検体量の不足、 不適切な保存方法、疫学情報の不足等)の問題も確認された。
- ・ 2011 年第 4 四半期から 2012 年第 1 四半期にかけて、スバン DIC 全体で検体受領と検査診断の流れに関する改善策を取り まとめた。
- ・ 2012 年 3 月に実施された第 1 回 JCC 以降、スバン DIC は上記 計画に基づいて報告システムを開発するなど、継続的に検査 診断サービスの改善に取り組んでいる。
- ・終了時評価時点では、各ラボのチーフがおおむね適切な最終 診断を行える能力を備えていることが JICA 専門家により確認 されている。また、2014 年にはスバン DIC は ISO17025 の認 定を受けており、検査施設としての管理体制が国際的な規格 に準じていることが証明されている。
- ・ 上記のとおり DIC 内部の検体診断サービス体制は大きく向上 したが、終了時評価調査時点でも検体の質や依頼検体に付随 する疫学情報の記載が不十分な場合も多く、今後も引き続き B/C タイプ・ラボの職員も含む依頼元への啓発・教育が必要で ある。

- 善策実施後をモニタリン グ(検体受領・診断フロー、 所要日数、顧客の意見等) し、フィードバックする。
- 2-5. スバン DIC スタッフが、改 | ・ スバン DIC は ISO9001 及び ISO17025 規格の要求事項の基づ き、検体診断サービス体制のモニタリングが定期的に実施さ れている。
 - ・ これに加え、スバン DIC は毎年顧客満足度調査を実施してお り、顧客の立場に沿ったサービスの向上に努めている。

成果3:スバン DIC スタッフのパイロットサイトにおける、疾病調査及び疾病対策技術支援(アク ティブ・サーベイランス)の実施能力が強化される。

活動

達成事項

- 3-1. スバン DIC スタッフが、畜 産振興地域の中からパイ ロットサイト選定のため の事前現地調査を行う。
- 3-2. スバン DIC スタッフが、疾 病調査と対策活動のため のパイロットサイトを選 定する。
- ・ 2011 年第4四半期から2012年第1四半期にかけて実施された ベースライン調査により、パイロットサイト選定のための基 礎情報を収集した。
- ・ 国家的優先疾病と指定された 5 つの疾病〔狂犬病、高病原性 鳥インフルエンザ (High-Pathogenic Avian Influenza: HPAI)、 ブルセラ病、炭疽、豚コレラ〕のうち、罹患率が高く対策が 十分でない牛ブルセラ病を対象疾病として選定した。特にス バン DIC の所在地である西ジャワ州では乳牛数が多く、高い 罹患率が見込まれているものの、正確なサーベイランスデー タは得られていなかった。ジャカルタ首都特別州では東ジャ カルタ地域で補体結合反応試験 (Complement Fixation Test: CFT) の陽性率が高い〔15.3%(25/163)〕というデータが得ら れていることを考慮し、ここをパイロットサイトに選定した。 バンテン州ではブルセラ病の報告数はゼロであったことか ら、ブルセラ病の清浄性の確認が必要性とされた。
- ・ また、2014 年からは牛ブルセラ病に関連して牛流産サーベイ ランスを開始した。牛流産サーベイランスはバンテン州の水 牛と西ジャワ州レンバン地区の乳牛を対象としていたが、西 ジャワ州政府の要請によりパンガレン県でも実施することと した。
- イロットサイトのB/Cタイ プ・ラボと連携して、地域 の畜産振興特性を考慮し た疾病調査を計画し実施 する。
- 3-3. スバン DIC スタッフが、パ ・ プロジェクト開始後、獣医疫学分野の JICA 短期専門家を中心 としてスバン DIC の疫学ラボの現状と問題点を把握し、サー ベイランス地域の選定方法、サンプリング手法、データ解析 手法に関する技術移転を行った。その後、2012年1月から2 月にかけて、細菌診断担当の JICA 長期専門家がブルセラを分 離・同定するマニュアルを作成し、選択培地の作製、ブルセ ラ・アボルタスの培養を開始した。
 - ・ 牛ブルセラ病について、2012年4月から7月にかけて技術移 転された「実用的な疫学の概念」、「疫学的的解析を目的とし た野外調査の方法」、「疫学的手法によるデータ解析方法」を 基礎とし、牛ブルセラ病サーベイランスを実施した。調査し た 5.400 頭の血清についてローズベンガル凝集試験によるス クリーニングを行った結果、抗体陽性率は3.2%(173/5,400) であった。
 - ・ 2013 年から実施された乳牛の牛ブルセラ病サーベイランスの 結果は以下のとおりである。

-DKI ジャカルタ

東ジャカルタ県の酪農コロニーで B タイプ・ラボと協働し、 全頭の個体識別体制の構築とブルセラ病調査を実施したと ころ、1,567 頭中 128 頭(8.2%)が陽性であった。

- 西ジャワ州

ブルセラ病サーベイランスを実施し、県ごとの有病率を推定した。州全域 433 農場のブルセラ抗体保有率は約 4%と推定された。

ーバンテン州

水牛飼養農家への質問票調査及びブルセラ病調査を実施したところ、調査した 1,955 頭のすべてが陰性であった。一方で、バンテン州で水牛を飼育している農家の約 20%で流産が発生していることが明らかとなった。なお、バンテン州で本格的なブルセラ病サーベイランスを実施したのは、これが初めてである。

- ・2014年3月から7月にかけて、DKI ジャカルタ、西ジャワ州、バンテン州の3州で牛及び水牛8,026頭のブルセラ病サーベイランスを実施した結果、抗体保有率は0.57%であった。抗体保有率は29県中23県で0.0%であったが、スメダン県で6.8%、バンドン県で4.2%、東ジャカルタ県で3.7%と、有病率に偏りがあることが確認された。
- ・ 牛流産サーベイランスは 2014 年 9 月から 11 月にかけて西ジャワ州パンガレン地区及びレンバン地区で実施された。スバン DIC の疫学ラボが JICA 専門家の助言を受けながら、アクティブ・サーベイランスの計画策定、調査票の作成、データ解析を主導的に行い、細菌ラボ(ブルセラ、サルモネラ、カンピロバクター)、ウイルスラボ(アルボウイルス)、寄生虫ラボ(血中及び糞便中の寄生虫)、病理ラボが参加、実施しており、ブルセラを中心とする細菌、ウイルス、寄生虫の流産への影響を調査した。主な調査結果は以下のとおりである。

ーブルセラ病

CFT での血清中のブルセラ抗体陽性率は 6.3% (760 検体中48 検体)であった。また、膣ぬぐい液 50 検体から分離したブルセラを疑う株の 1 つが生化学的性状検査と PCR 検査でブルセラ・アボルタスであることが確認され、2014 年にスバン DIC で過去の疑い検体から確認された 2 例を併せ、合計 3 頭からのブルセラ・アボルタスを確認した。

- -牛の早、流、死産の一因となるアルボウイルスについて、 526 血清検体中 383 検体 (72.8%) でアルボウイルスの一種 であるアカバネウイルスに対する抗体陽性を示した。また、 中和反応を用いた抗体保有率と抗体価を測定した。
- ・ なお、スバン DIC と本プロジェクトとの共同作業の1つとして、HPAIを中心としたスバン DIC のサーベイランス事業におけるサルモネラ分離のための糞便採取を継続し、分離したサルモネラの血清型別を行っている。さらに、鶏糞便に加えて

	病鶏も採取し、病理組織学的検査と細菌学的検査を継続して
	いる。その結果、スバン DIC において初めて、鶏からマイコ
	プラズマを分離した (2012 年 4 月)。
3-4. スバン DIC スタッフが、パ	・ プロジェクトは各州のパイロットサイトにおいて関係者〔州・
イロットサイトの調査結	県政府事務所 (Provincial/District Office : DINAS)、B タイプ・
果を分析し、提言レポート	ラボ、酪農協等〕や酪農家を対象として適宜会議やワークシ
を作成する。	ョップを開催し、サーベイランス結果の共有を行うとともに
	今後のサーベイランス計画や対策について協議した。バンテ
	ン州の疾病リスク分析結果、ジャカルタ州の個体識別体制構
	築についても、各種報告書や会議で示した。
	・ プロジェクト全体としても、管内調整会議等を毎年実施し、
	分析した調査結果を関係機関に提示している。
	・ ただし、アクティブ・サーベイランスの包括的な分析は終了
	時評価時点で継続中であり、最終的な提言レポートは疫学ラ
	ボスタッフによる日本での解析結果も踏まえ作成する予定で
	あり、完成は 2015 年 10 月頃となる見込みである。
3-5. スバン DIC スタッフが、パ	・ 活動 3-4 に記載したとおり、サーベイランスの結果は適宜関係
イロットサイトにおける	者に共有されている。
活動実施による家畜衛生	・ また、家畜衛生状況のモニタリングを目的に、家畜疾病マッ
状況のモニタリングとフ	プを毎年作成し関係機関に配付している。同マップは B/C タ
ィードバックを行う。	イプ・ラボや簡易獣医診療所(Center for Animal Health:
	PUSKESWAN) の検査実績もスバン DIC の実績に統合されて
	いる。また、検査数、陽性数、検査地点も把握できる。

成果 4: スバン DIC スタッフが、管轄地域内の獣医技術者・獣医師・農家に必要な家畜衛生に係る情報提供 (ニューズレター、巡回意見交換等)、啓発活動、技術支援活動を継続的に実施する。

動	達成事項

4-1. スバン DIC スタッフが、スバン DIC の管轄地域 3 州の獣医技術者・獣医師・農家への情報提供、情報交換のために定期刊行ニューズレターを発行する。

活

- 2010年10月及び2012年2月にプロジェクト紹介パンフレットをそれぞれ500部、1,000部作成し、中央レベルの関係機関、州・県の畜産局、農協、農家等に配付した(付属資料10)。
- ・ニューズレターの代替えとして、インターネットへのアクセスが可能である獣医技術者、獣医師等向けに 2011 年 12 月にスバン DIC のホームページを立ち上げ、毎月セミナー開催情報、管内家畜疾病発生状況などの内容の情報を発信している。ホームページの活用の事例として、DINAS や B タイプ・ラボは DIC が毎年示す疾病マップを活用して、翌年度のサーベイランス計画を立てている。また、診断可能項目や価格の確認等にもホームページは利用されている。今後はホームページ上で診断依頼・結果確認をできるようにするほか、技術関連情報をより充実させるよう、疫学ラボが中心となり計画が進められている(完成はプロジェクト期間終了後の見込み)。なお、ニューズレターは JICA 専門家が中心となって、2013年10月に1回発行されている。

- ・2012年2月に、プロジェクトはB/Cタイプ・ラボや酪農家を対象とした家畜疾病啓発に関するインドネシア語のパンフレット8種類を各1,000部作成し、中央レベルの関係機関、州・県の畜産局、農協に配付した。2013年3月には同パンフレットの改訂版を作成し、同様に配付している。また、これらのパンフレットはスバンDICが実施するアクティブ・サーベイランスの機会にも畜産農家等に配付されている。
- ・ プロジェクト及びスバン DIC 紹介のカレンダーをインドネシ ア側予算にて 100 部作成し、関係機関に配付した (2012 年 1 月、2013 年 1 月、2014 年 1 月、2015 年 1 月)。
- ・ 2013 年 2 月に「BSE 診断のための牛脳サンプリング手法」の 技術紹介ビデオを 40 部作成し、州・県畜産局(食肉処理場)、 国立・州立関係機関へ配付した。
- ・ 2013 年 7 月には、西ジャワ州で 2008~2011 年にかけて実施された「乳牛生産病対策改善計画プロジェクト」が作成したマニュアルを改訂し、「乳房炎コントロールマニュアル」を作成、関係機関に 20 部配付した。
- ・プロジェクトは「タイ及び周辺国における家畜疾病防除計画 プロジェクト (2001~2006年)」及び「ウガンダ国家畜疾病診 断・管理体制強化計画プロジェクト (2010~2014年)」を参考 に、2015年3月に「診断フローチャートマニュアルーインド ネシアにおける重要家畜疾病のための参考書-」(英文)を作 成した。終了時評価時点では英語からインドネシア語へスバン DIC が作業中であり、作業が終了次第、関係機関へ配付する予定である (50 部)。
- ・ その他、年報や家畜疾病マップも作成し、関係者に配付して いる。
- 4-2. スバン DIC スタッフが、パイロットサイトの B/C タイプ・ラボと連携し、獣医技術者・獣医師・農家との情報交換のために必要な、その他の手段(巡回意見交換会等)または場づくりの活動を検討し、実施する。
- 2011年9月より管内年次調整会議を毎年2回行い、関係機関 〔中央政府(DGLAHS、動物検疫所、家畜衛生研究所、 NVDAL)、州(DINAS、Bタイプ・ラボ)、県(DINAS、Cタイプ・ラボ、PUSKESWAN)〕を集めて啓発活動・技術支援活動計画の策定と評価を行う体制とした。
- ・ B/C タイプ・ラボや PUSKESWAN、酪農協等を対象とする研修会も 2013 年 6 月以降実施されている。C/P が講師となった研修会・セミナーは終了時評価までに合計 7 回実施されており、参加者は合計 171 名であった。
- 4-3. スバン DIC スタッフが、パイロットサイトの獣医技術者・獣医師・農家に必要な衛生改善の啓発活動・技術支援活動を計画する。 (他の JICA プロジェクトの啓発活動用の成果品を活用する。)
- ・スバン DIC は 2012 年に研修者宿泊棟を建設し、B/C タイプ・ ラボや PUSKESWAN 獣医師、獣医技術者に対する数多くの診 断技術研修を実施している。
- また、活動 4-1 で示したとおり、ホームページやニューズレター、パンフレットの配付などを通して啓発活動を実施している。
- ・ 家畜衛生状況のモニタリングを目的に、家畜疾病マップを毎年作成し関係機関に配付している。詳細は活動 3-5 を参照のこと。

4-4. スバン DIC スタッフが、パ
イロットサイトの B/C タイ
プ・ラボと連携し、獣医技
術者・獣医師・農家に継続
可能な啓発活動・技術支援
活動を実施する。

- ・ インドネシア政府主催の家畜衛生展示会にブースを出展し、 スバン DIC の業務について広報活動を行った(2012年9月・ バンドン、2013年10月・パダン、2014年6月・マラン)。
- ・家畜農家に対してはサーベイランスの機会に啓発活動を実施している。しかしながら、農家に対する啓発活動や技術支援は、県以下の地方政府畜産部局の役割であり、DIC や州の B タイプ・ラボが直接実施できない現状がある。そのため、彼らを通した間接的な農家支援にとどまるが、県・郡の DINAS によるアクティブ・サーベイランス時の農家選定及び仲介、DIC の診断結果フィードバックに基づいた農家指導やワクチン接種等を行っている。
- ・これらの活動に加え、活動 1-5 で示したとおり、プロジェクトは JICA 専門家及びスバン DIC 職員が発表者となるセミナー・会議 (65 回開催し、発表タイトル数は 133) を通して、啓発活動、技術支援活動を実施している (付属資料 11)。また、家畜疾病サーベイランス指針に係る農業大臣公布検討会議 (2011 年) や全国家畜衛生技術・学術会議 (2012 年) など、インドネシアの中央政府レベルでの会議等にも JICA 専門家、DIC スタッフが参加し、意見交換やプロジェクト関連成果の共有を行っている。
- ・ なお、他の JICA プロジェクトの啓発活動用成果品の活用状況 については、活動 4-1 を参照のこと。
- 4-5. スバン DIC スタッフが、活動のモニタリングと次にとるべきアクションへのフィードバックを行う。
- ・ 関係機関を集めた調整会議を年 2 回実施し、計画と評価を行っている。

(2) 成果の達成

1) 成果1

成果1の指標の達成度を以下に示す。

成果 1:スバン DIC スタッフが基本的かつ体系的な家畜疾病診断技術を習得する。	
指標	達成度
1-1. スバン DIC の対象 8 ラボ	・ 中間レビュー(2013年5月)までにシートに設定された診断技
の診断技術習得度が、	術・サービスにかかわる技術移転はおおむね終了していたが、
2013 年 6 月までにラボご	DIC スタッフの技術は習熟途上であるとされていた。
とに設定された「プロジ	・ 終了時評価時点ではさらなる技術移転を行うとともにスタッフ
ェクト技術到達目標シー	の習熟度も向上し、移転された技術はおおむね望ましいレベル
ト」の目標値に達する。	まで向上した。

プロジェクトの開始後、技術移転する診断に必要な検査・診断機器、設備、材料等が整備された。「プロジェクト技術到達目標シート」に記載された技術・サービスの技術移転は中間レビュー時点(2013年5月)までにおおむね終了している。それ以降はOJT(実地訓練)や上記したセミナー等を通して技術・サービスの質が向上し、診断に要する時間も短縮された。スバンDICでの検査精度が向上したことは、Proficiency Test 結果待ちでも説明できる。また、プロジェクト開

始前の 2010 年では診断できる疾病の種類は 13 疾病のみであったが、終了時評価調査時点(2015 年5月)では予定した41疾病(75の診断技術)に対する検査診断を自立的に運営できるレベル に達している(付属資料 18 を参照)。これらの技術移転を通して検査技術や運用が標準化され、 終了時評価調査時点で検査診断プロトコル [標準操作手順書 (Standard Operation Procedure : SOP)] 58 種類、マニュアル類 3 種類、技術資料 20 種類、様式 6 種類、その他資料 4 種類が整備された。

上述のとおり、スバン DIC では測定技術それぞれに作成された SOP に沿って標準化された試 験/検査が実施される体制が整えられている。移転された検査診断技術は 75 種類であり、プロジ エクト期間終了後も経験を積む必要のある項目もあるが、スバン DIC は 2014 年に国際標準化機 構(ISO)より ISO9001(品質マネジメント規格)の認証及び ISO17025(試験所の能力に関する 規格)の認定を受けていることから、スバン DIC は国家規格や国際規格に準拠した試験方法で、 十分な技量を有する試験員により正確な結果が出せる試験所であり、その品質が担保されたもの と解釈できる。また、ISO 規格に準拠する形で国内外の機関による Proficiency Test を定期的に実 施することが規定されていることから、外部精度保証システムも適切に整備されたといえる。施 設設備等のメンテナンスのための JICA 専門家も派遣され、作成されたマニュアル⁴に基づいた管 理が実施される体制となっている。

これらのことから、スバン DIC では基本的かつ体系的な家畜疾病診断技術が確立されたといえ ることから、終了時評価時点において成果1は達成されたと考えられる。

2) 成果 2

成果2の指標の達成度を以下に示す。

│成果 2:スバン DIC スタッフの、顧客の立場に立った検体診断サービス(パッシブ・サーベイラン

	, , , , , , , , , , , , , , , , , , , ,
ス)に係る実施能力が強化され	L3.
指標	達成度
2-1. スバン DIC の獣医スタッフ 1 名以上が、検体の診断において各ラボの試験結果を踏まえた最終診断ができるようになったことをプロジェクトに認定される。	・中間レビュー時点までは成果 1 にかかわる基本的診断技術移転が中心であったため、診断サービス部長が 1 名で最終診断を行っていた(診断結果に基づいたコメントは 12 名の獣医スタッフが月替わりで担当)。 ・終了時評価時点では、各ラボのチーフが Diagnostician (診断担当)として月替わりで最終診断を担当する体制となっている。7 名のチーフとも、おおむね適切な最終診断ができていることが病性鑑定 (Comprehensive Diagnosis) の JICA 短期専門家により認定された。
2-2. スバン DIC の各ラボのチーフが、ラボの試験結果を踏まえた適切なコメントをフィードバックできるようになる。	7名のラボチーフはアクティブ・サーベイランス等のプロジェクト活動を通して現場の畜産業の実態に関する理解が深まり、検査結果のフィードバックも、診断結果に基づいたコメントもより具体的になっている。

ベースライン調査では、検査診断の基本的技術の獲得や向上(成果 1)に加えて、スバン DIC 内外の検体フローや検査診断サービス運用の標準化・効率化等、病性鑑定システム改善のため課 題が明らかにされた。これに対し、プロジェクトは 2011 年より検体受領から診断の流れに関す る改善策の推進、報告システムの開発など、継続的にサービスの改善に取り組んできた。成果 1

⁴ DICメダン、DICランプンも対象としたマニュアルである。

に示したとおり、プロジェクトの努力によってスバン DIC 内の診断体制は標準化され、ISO17025 の認定を受けたことからも、検査所として適切な検査診断サービスが国際的に標準化された体制で実施されていると認められる。

また、上記指標の達成度でも示したとおり、中間レビュー時点では診断サービス部長1名による最終診断体制であったが、成果1での検査診断の基本的技術移転、成果3でのアクティブ・サーベイランス等の活動を通して7名のラボチーフの診断結果に基づいた具体的なコメントや適切な最終判断を行える能力を獲得していることが、JICA専門家により認められている。

このように、スバン DIC 内では診断体制が整備されたことにより、顧客の立場に立った検体診断サービスにかかわる実施能力は向上したといえる。したがって、終了時評価時点において成果2は達成されたと考えられる。

しかしながら、プロジェクト枠組み外ではあるが、B/C タイプ・ラボや PUSKESWAN (DINAS が直接の依頼者となる)、畜産農家などの依頼者による検体採取や保存、送付方法に不適切なケース [患畜に関する疫学情報等が不足している、送付される家畜の臓器の数(種類)が少なくて診断できない、臓器が凍結されていて病理組織学的診断ができない、臓器がホルマリン漬けにされていて微生物の検査ができないなど〕も多く、病性鑑定のみならず検査そのものができない場合が多いことが認められていた。このような状況に対し、スバン DIC は病性鑑定を行う条件を満たさない検体は依頼者に返送するとともに、検体採取部位や量、保存方法等を指導するようなSOP を 2015 年 1 月に承認し、運用を開始している。

3) 成果3

成果3の指標の達成度を以下に示す。

成果3:スバンDICスタッフのパイロットサイトにおける、疾病調査及び疾病対策技術支援(アクティブ・サーベイランス)の実施能力が強化される。

ティブ・サーベイランス)の実施能力が強化される。	
指標	達成度
3-1. スバン DIC スタッフによって、アクティブ・サーベイランスが計画・実施・分析・フィードバックの枠組みに基づいて毎年実施される。	 スバン DIC では、プロジェクト対象疾病、通常業務全体として、 年度初めにアクティブ・サーベイランス計画を作成している。 プロジェクト開始前は診断サービス部長が疾病調査の計画立案・実施の指揮をとっていたが、プロジェクト開始後はすべての獣医スタッフ及びパラメディックがアクティブ・サーベイランスに参加する体制となり、活動結果の分析と翌年の計画立案への反映について関係者とともに毎年議論されるようになった。
3-2. スバン DIC の各ラボのチーフが、パイロットサイトの疾病調査結果に基づいた家畜疾病対策の提言を作成できるようになる。	・ プロジェクト開始前は疾病調査結果に基づく提言は行われていなかったが、アクティブ・サーベイランスは年間 100 回以上実施されるようになり、各ラボのチーフを含む獣医スタッフが調査責任者となって、調査結果に基づく提言をその都度現場にフィードバックするようになった。

スバン DIC ではプロジェクトで対象としている牛ブルセラ病及び牛流産に対してアクティブ・サーベイランスを実施している。これに加え、スバン DIC では通常業務として鳥インフルエンザ(Avian Influenza: AI)、狂犬病、豚コレラ、寄生虫症、炭疽、出血性敗血症、海外悪性伝染病(牛海綿状脳症、口蹄疫、牛伝染性鼻気管炎等)、繁殖障害、畜産食品(肉・卵・牛乳)など

年間 10~12 種類のアクティブ・サーベイランスを実施し、1 回のサーベイランスで対象とする畜種は 1 種類であるが、1 頭の家畜から複数種のサンプルを採取し、複数の対象疾病に対するサーベイランスとしている。また、獣医公衆衛生学ラボは、肉、卵、牛乳等の家畜製品に対するサイーベイランスを実施している。

プロジェクトでは牛ブルセラ病及び牛流産をパイロットサイトにおけるアクティブ・サーベイランスの対象疾病としているが、プロジェクト開始当初は疫学ラボには疫学や調査手法、解析手法に関する知識・経験は十分でなく、効果的・効率的なサーベイランスの実施と、それに伴う疫学的根拠の十分なデータ解析とはなっていなかった。かかる状況のもと、JICA専門家は2012年のサーベイランス実施に先立ってサーベイランス地域の選定方法、サンプリング手法、データ解析手法に関する技術移転を行った。疫学ラボスタッフは、JICA専門家の支援を受けながら、主体的にサンプリングの方法、調査票の作成、得たデータの解析方法等、サーベイランス実施計画を作成している。実際のサーベイランス活動や解析も疫学ラボが中心的な役割を果たしている。また、指標3-2で示したとおり、スバンDICでは年間100回以上のアクティブ・サーベイランスが実施されており、その都度適切な提言がフィードバックされていることから、スバンDICでは効果的、効率的なアクティブ・サーベイランスが運用管理されているといえる。

スバン DIC の持続性を念頭に、プロジェクトではプロジェクトの対象疾患である牛ブルセラ病及び牛流産サーベイランスを、スバン DIC の通常業務として実施されるアクティブ・サーベイランスに組み込んでいる。上記指標の達成度にも示したとおり、サーベイランスにはすべての獣医スタッフ、パラメディックが参加する体制となっており、プロジェクト対象疾病のサーベイランスの実施を通じて他の 10~12 疾病のサーベイランス実施運営能力にも正の影響があったとスバン DIC のスタッフのインタビューで聞き取られている。2015 年 5 月からは DGLAHS が主導する牛繁殖障害のアクティブ・サーベイランスが開始されており、本プロジェクトで得られた知識、技能は有効に活用される見込みである。また、プロジェクトの牛ブルセラ病及び牛流産サーベイランスの実施を通じて、DINAS や B/C タイプ・ラボ、酪農協のスタッフの防疫意識やサーベイランスにかかわる技術にも一定程度の向上が認められたとともに、スバン DIC との連携、協力体制も強化された。連携に関する一例として、2014 年にレンバンで実施された第 2 回、第 3 回牛流産サーベイランスには DIC スタッフと JICA 専門家は同行せず、DINAS と酪農協スタッフのみで実施されたが、陽性検体についてはスバン DIC で確認試験が実施されている。

このように、疫学ラボが中心となって実施されたプロジェクトのアクティブ・サーベイランスを切り口として、スバン DIC で実施するアクティブ・サーベイランス全体の能力向上が図られ、関係機関との連携の下で効果的、効率的なアクティブ・サーベイランスが実施できるようになった。このことから、終了時評価時点での成果3は達成されたと考えられる。

4) 成果 4

成果4の指標の達成度を以下に示す。

成果 4:スバン DIC スタッフが、管轄地域内の獣医技術者・獣医師・農家に必要な家畜衛生に係る情報提供 (ニューズレター、巡回意見交換等)、啓発活動、技術支援活動を継続的に実施する。

 情報提供(ニューズレター、巡	(回意見交換等)、啓発活動、技術支援活動を継続的に実施する。
指標	達成度
4-1. スバン DIC スタッフによ	・ プロジェクト開始前は、スバン DIC はニューズレター等による
って、管轄地域の獣医技	情報提供等は実施していなかった。
術者・獣医師・農家を対	・ プロジェクトはニューズレターの代替えとして 2011 年 12 月に
象としたニューズレター	ホームページを立ち上げ、毎月ニュース等の情報発信を行って
が、2012年6月以降、年	いる。インターネットへのアクセスのない対象に向けて紙媒体
2 回定期発行されるよう	でも、スバン DIC 組織紹介や家畜疾病の啓発パンフ(10 種類)、
になる。	年報、家畜疾病マップ等を発行し、関係者に配付している。そ
	の他、スバン DIC 紹介ビデオやカレンダー、マニュアル等を作
	成し、関係機関に配付している(詳細は活動 4-1 を参照)。
4-2. スバン DIC の各ラボのチ	・ 2011 年 9 月より管内年次調整会議を毎年 2 回行い、関係機関を
ーフが、パイロットサイ	集めて啓発活動・技術支援活動計画の策定と評価を行う体制と
トの獣医技術者・獣医	した。活動 4-2 で示したとおり、B/C タイプ・ラボや
師・農家に対する啓発活	PUSKESWAN、酪農協等を対象とする研修会も 2013 年 6 月以降
動・技術支援活動の計画	実施されている。C/P が講師となった研修会・セミナーは終了
を、2013 年 12 月以降、	時評価までに合計7回実施されており、参加者は合計171名で
毎年策定できるようにな	あった。JICA 専門家が講師となる研修も実施されている。
る。	また、アクティブ・サーベイランスはさまざまな対象疾病に対
	して年間合計 100 回以上、計画に沿って実施されており、スバ
	ン DIC スタッフはフィールド活動の機会に地域の獣医技術者、
	獣医師、農家等に対する啓発活動、技術支援活動を継続的に実
	施している。
4-3. 上記 4-2 で計画された活	・ 予算等の問題により年度途中に計画を修正することはあるが、
動の実施率が、年間で	基本的には毎年ほぼ 100%実施されている。
90%以上となる。	

プロジェクト開始前は管轄地域内の獣医技術者・獣医師に対し DIC スタッフによる家畜衛生に係る情報提供 (ニューズレター、巡回意見交換等)、啓発活動、技術支援活動を能動的に行っていなかった。プロジェクト開始後は、成果 4 のホームページやインドネシア語の家畜疾病啓発用パンフレット等を通して、それらの活動が開始されている。また、年 2 回の調整会議で啓発活動、技術支援活動の計画が策定されており、これらの活動が継続的に実施される体制が整えられている。

農家に対する啓発活動や技術支援は、県以下の地方政府畜産部局の役割であり、DIC や州の B タイプ・ラボが直接実施できない現状がある。そのため、彼らを通した間接的な農家支援にとどまるが、年間 100 回以上実施されているアクティブ・サーベイランスの機会をとらえ、スバン DIC スタッフは可能な範囲で啓発活動、技術支援活動を実施している。また、DKI ジャカルタ、西ジャワ州、バンテン州には合計 41 の県・市があるが、スバン DIC のモニタリングのカバー率はプロジェクト開始前の 78%(32/41)から 2014 年には 100%(41/41)に増加している。

このように、スバン DIC では獣医技術者・獣医師・農家に必要な家畜衛生に係る情報提供、啓発活動、技術支援活動を継続する体制が整備され、成果 1~成果 3 の活動を通してスバン DIC スタッフがそれらの活動を実施する能力が備えられた。したがって、終了時評価時点での成果 4 は

達成されたと考えられる。

しかしながら、成果2の達成度で示したとおり、スバン DIC での病性鑑定のための検体の問題(採取部位、保存方法等)により正確な診断ができないケースが散見されている。これらの問題はプロジェクトの枠組み外の問題であり、成果4の活動で診断依頼元に対する技術支援活動も限界があることから、スバン DIC はプロジェクト期間終了後も根気よく活動を継続する必要性が強く示唆される。

(3) プロジェクト目標の達成度

プロジェクト目標の指標の達成度を以下に示す。

ノロンエクト目標の指標の	
	家畜疾病診断サービスの質・量が向上する。
指 標	達成度
1. スバン DIC における年間家畜	・ JICA 専門家による技術移転が進むにつれて検査実施数、診
疾病診断数・診断疾病の種類	断サービス提供可能な疾病の種類が大幅に増加した。
が、プロジェクト終了時点で	・ 2014 年の検査実施数は 61,156 件、実際に診断された疾病の
35,000 検体、16 種類以上とな	種類は 32 種類であり、指標の目標値を大幅に超えており、
る。	スバン DIC の検体受け入れ能力の上限に近いレベルに達し
	ている。
2. スバン DIC の検体診断サービ	・ 2011 年に実施されたベースライン調査結果にて、診断結果
スにおいて、プロジェクトで	のフィードバックに要する時間は1週間程度の場合が多く、
定めた日数内で診断結果を顧	3週間以上の場合も2割程度ある状況であることが明らかに
客にフィードバックできるよ	なった。診断の種類によって異なるものの診断結果のフィー
うになる。	ドバックは標準的な日数を大きく超えるものであった。
	・ プロジェクトは検体受領・診断フローの改善や診断技術移転に
	取り組み、7名のラボチーフが適切な最終診断を行う体制が整
	えられた。これらのことにより、各疾病で定められた標準日数
	内に診断結果が顧客にフィードバックされている。細菌培養や
	病理組織診断では2週間程度を要するが、その他の血清診断や
	寄生虫症検査は2日間程度で結果を通知している。
3. スバン DIC スタッフがパイロ	・ 牛ブルセラ病及び牛流産に対して、地域特性を考慮したパイ
ットサイトにおいて、地域特	ロットサイト活動が計画され、それぞれ 2012 年、2014 年か
性を考慮した家畜疾病調査の	らアクティブ・サーベイランスが実施されている。計画・実
計画・立案、実施、モニタリ	施・モニタリング・フィードバックは、会議やワークショッ
ング、フィードバックを1年	プ等の開催を通じて、毎年実施されている(2012年:8回、
に2回/サイト以上実施するよ	2013年:22回、2014年:17回)。
うになる。	・ スバン DIC は通常業務としてのアクティブ・サーベイラン
	ス、プロジェクト活動としてのアクティブ・サーベイランス
	にかかわらず、調査結果に基づいた提言を現場にフィードバ
	ックしている。
4. スバン DIC の利用者〔州・県	・ スバン DIC 顧客満足度調査結果(「満足」+「ほぼ満足」):
政府事務所(DINAS)の獣医	2011年87.4%、2014年94.8%
技術者・獣医師・農家〕のう	
ち調査対象者の80%が「診断	
サービスがプロジェクト実施	
前より向上した」と回答する。	

2011 年のプロジェクト開始後、スバン DIC で必要な検査・診断機器、設備、材料等が整備されたとともに、JICA 専門家や外部講師による実地訓練、本邦研修や第三国研修によってスタッフの知識、技術は大きく向上し、診断可能な疾病の数、検査実施数も高い精度を維持しながら増加している(成果 1)。これには、成果 2 の活動で実施した業務フローの改善(検体受領からフィードバックまでの流れの標準化やラボ診断報告システムの構築など)や診断結果に基づいた適切な提言に関する能力強化による貢献も大きい。

成果3では取り組みの必要性の高い牛ブルセラ病及び牛流産に対するアクティブ・サーベイランスをプロジェクトの対象疾病として選定し、パイロットサイトの現状や問題点を明らかにした。また、スバン DIC では疫学ラボが中心となって、多くのラボがアクティブ・サーベイランスに参加する体制を構築し、サーベイランスの計画立案から実施、解析・評価の一連の活動を実施する能力が向上し、他の通常業務として実施されているアクティブ・サーベイランスにも正の影響が認められている。アクティブ・サーベイランスを通して DINAS や B/C タイプ・ラボ、酪農協などの関係機関との連携も強化され、業務の分担なども徐々に進展してきている。

他方、プロジェクトでは成果4の活動として計画的に啓発活動や技術支援活動を行う体制が整備されるとともに、ホームページやポスター、パンフレットなども多く作成されている。

Year 2010 2011 2012 2013 2014 Number oftests performed 14,875 32,016 47,466 50,544 61,157 Number of samples N/A N/A 10,392 9,841 N/D Passive received N/A N/A 19,555 41,052 N/D Active 22 32 Kinds of diagnosable diseases 15 22 31

表一2 Performance of DIC Subang in Diagnostic Services

出所:スバンDIC

また、スバン DIC は国際基準に則った検査診断にかかわる品質管理、試験所運営を実現するための努力を継続しており、2013 年に ISO9001 の認証及び 2014 年には ISO17025 の認定を受けている。このことは、スバン DIC ではプロジェクト期間終了後も ISO 規格に準じた検査診断にかかわる品質管理や適切な試験所の運営がなされることを意味している。他方、診断依頼元による不適切な検体採取・処理、DINAS や B/C タイプ・ラボ、農協等とのさらなる連携や業務分担、技術移転活動のカバー率拡大などプロジェクトの枠組み外の課題も発現した。これに対し、スバンDIC は病性鑑定を適切に行うための新たな取り組みを 2015 年 1 月より開始している(成果 2 の達成度を参照)。しかしながら、検査コストの増加の対応策等も考慮されているが、新しい取り組みであることから、今後も継続して新システムが適切に機能するか注視する必要がある。これと並行して、スバン DIC はこれまでの活動を着実に継続するとともに、DINAS、B/C タイプ・ラボ等の関係機関のさらなる能力強化も将来の西ジャワ地域の家畜疾病対策強化には必要である。以上のことから、スバン DIC の家畜疾病診断サービスの質・量は向上したと考えられたため、終了時評価調査時点でプロジェクト目標は高いレベルで達成されていると考えられる。

3-3 実施プロセスの検証

(1) プロジェクト・マネジメントと関係者間のコミュニケーション

プロジェクト開始後は JICA 専門家の支援により定例会議が発足し、はじめの数カ月間は JICA 専門家も参加していたが、その後は月例会議として継続されている。プロジェクト活動 のマネジメントとして個別の会議開催を頻繁には行っていないが、プロジェクト活動に応じ て適宜関係部署等との会議を開催し、活動の計画策定、モニタリング、評価はおおむね適切 に実施され、年に1回実施されるJCCで関係者全体に共有されている。日常的な専門家の活 動報告やプロジェクトの進捗は JICA 専門家の作成する月例報告書で DGLAHS 及びスバン DIC のすべてのラボに共有されている。また、スバン DIC 外の関係者(DGLAHS、DINAS、 B/C タイプ・ラボ、酪農協など)とは 2011 年 9 月以降半期ごとに管内調整会議が実施されて おり、JICA 専門家も参加している。また、終了時評価までに延べ 17 名の短期専門家がスバ ン DIC に派遣されており、着任時の活動計画の打合せや離任時の報告会が DGLAHS (終了 時評価時点 32 回)及びスバン DIC で実施されており、離任後も必要に応じて email 等のコ ミュニケーションは継続されている。JICA 専門家は開発パートナー会議にこれまで 5 回出席 し、他の機関とプロジェクトの進捗や成果について共有している。これらの会議機会やアク ティブ・サーベイランスを協働で実施したことなどにより、 スバン DIC 内外の関係者のコミ ュニケーションは良好に維持され、プロジェクト・マネジメントとしても適切であったと考 えられる。

他方、派遣された JICA 短期専門家の約 2/3 は海外での業務経験が乏しい若手専門家であった。英語によるコミュニケーションに苦慮する場合もあったが、スバン DIC 内での技術移転はおおむね適切に実施された。スバン DIC 外の関係者との英語でのコミュニケーションが困難な場合もあったが、適宜、プロジェクトの業務調整員(JICA 長期専門家)が通訳を行った。なお、プロジェクトでは人材育成の観点から、スバン DIC スタッフによるセミナー等でのプレゼンテーションを英語で実施するよう推進するなどの取り組みを継続している。

(2) オーナーシップ及び自立性

インドネシア側 C/P 機関は実施機関、関係機関とも本プロジェクトに対して強いオーナーシップを発揮している。具体的には、本邦研修や JICA 専門家による実地訓練以降の活動はインドネシア側機関主導で実施されており、JICA 専門家(長期及び短期専門家)が側面支援を行いながら、必要に応じて技術的支援を行っている。

インドネシア側関係機関もスバン DIC の機能強化を重視し、プロジェクト開始後はスバン DIC の予算は 2010 年の約 56 億 IDR から 2015 年は約 3 倍の 144 億 IDR に増額している。また、プロジェクトは持続性を念頭に、ブルセラ病サーベイランス等のプロジェクト活動はスバン DIC の通常業務に組み込んで実施してきた。プロジェクトが主催する研修会や出張を伴う疾病調査においても、DIC 側が JICA 側で負担できない旅費、日当、会議費などの経費を負担することにより共同開催という形で実施している。試薬等消耗品の購入もおおむねインドネシア側機関の負担で購入されており、2011 年から 2015 年までのインドネシア側負担率は約 82%である。さらに、インドネシア側負担で研修参加者用宿舎、公衆衛生ラボ、発電機小屋、研修棟の建設、鶏舎の増設が行われた。

このように、スバン DIC はプロジェクト期間を通して主体的にプロジェクト活動を実施しており、インドネシア側の高い財政的コミットメントも示された。

第4章 評価結果

4-1 妥当性

以下に示す理由から、プロジェクトの妥当性は終了時評価時点で高く維持されている。

(1) インドネシアにおける家畜・動物衛生に関する政策及びターゲット・グループのニーズ、 日本の援助方針とプロジェクト目標の一致性

2010 年 10 月に実施された事前評価ではインドネシアの家畜・動物衛生に関する政策及びターゲット・グループのニーズ、日本の援助政策とプロジェクト目標が合致していることが確認されているが、その後本プロジェクトの妥当性を損ねるような政策の変更やニーズの変化等は認められず、その妥当性は終了時評価時点においても維持されている。

具体的には、詳細計画策定調査及び中間レビューで確認されたとおり、「畜産開発中期計画 2015-2019」において、地方分権化が進められるなか、国家規格となるような家畜衛生プログラムの新システム構築に向けた取り組みを行うことが重要な課題の 1 つとされている。本プロジェクトでは西ジャワ地域の家畜・動物衛生を担うスバン DIC の機能強化をプロジェクト目標として支援し、プロジェクト活動を通してスバン DIC の検査機能だけでなく、パッシブ・サーベイランス、アクティブ・サーベイランスを強化するとともに、DINAS や B/C タイプ・ラボなどの関係機関との連携強化、能力向上を支援していることから、インドネシアの政策とプロジェクト目標の一致性は高く維持されていると考えられる。

2015年以降の次期政策は作成中であるが、インドネシアの畜産開発のなかの家畜・動物疾病対策の重要性は維持されていることが DGLAHS との面談時に確認された。2013年には統合家畜衛生情報システム(Integrated Animal Health Information System: iSIKHNAS)の運用を開始、2014年には本プロジェクトのアクティブ・サーベイランスの対象疾患であるブルセラ病に対して、2025年までの撲滅に向けたロードマップを発表しており、効果的な家畜疾病対策に向けた政策的努力を行っている。

他方、インドネシアは 2005 年 7 月に HPAI のヒト感染例が確認されて以降、2012 年 8 月 10 日時点において世界で最も多い 191 の感染例(うち 159 の死亡例)(保健省及び WHO による公表情報)が確認されており、現在も感染例と死亡例の報告が続いている。HPAI ヒト感染の拡大は感染力の強いウイルス(新型インフルエンザ)への変異を引き起こし、インドネシア国内のみならず世界中に多大な感染者と死者を出す可能性が危惧される。そのため、HPAI ヒト感染の早期検知・早期対応により、新型インフルエンザによる社会的影響を最小限に抑制することが、インドネシア国内のみならず、国際社会においても強く求められている。HPAI は人獣共通感染症であり、効果的な感染制御のためにはヒト感染だけではなく、家畜・動物に対するサーベイランスの実施と早期封じ込めが必須である。

本プロジェクトは地域の家畜衛生対策の一端を担う DIC の機能強化を支援するものであり、ブルセラ病及び牛流産サーベイランスの実施能力強化を通して HPAI を含む重要感染症サーベイランスの実施能力強化をめざすものである (ブルセラ病も国家優先疾病の1つである)。JICA のインドネシア共和国国別分析ペーパー (2012 年) において「感染症等の地球規模課題への対応能力向上に係る支援を重視する」ことが明記されていることから、プロジェクト目標は日本の援助政策との整合性も維持されているとともに、地球規模課題対応との観

点での国際的要求に適うものである。

(2) 実施方法の適切性

1) 本プロジェクトで採用した支援アプローチの適切性

本プロジェクトでは、スバン DIC の検査技術の拡大、強化(成果 1) だけでなく、DIC として果たすべき機能であるパッシブ・サーベイランス(成果 2) 及びアクティブ・サーベイランス(成果 3) の実施体制強化を支援している。これらの取り組みはスバン DIC の家畜疾病診断サービスの質的、量的向上をめざすプロジェクト目標達成に必要な項目を網羅しており、理論的な破綻もなく、目標達成への成果としてのロジックは成立している。他方、西ジャワ地域の家畜疾病対策の強化(上位目標)に向けては、DGLAHSや DINAS、B/C タイプ・ラボ、地域の酪農協等の能力強化やスバン DIC との連携が必要である。これを念頭に、プロジェクトは成果 4 で外部関係者に対する情報提供や啓発活動、技術支援活動を継続的に実施できる体制整備をプロジェクト活動として PDM に設定していることから、プロジェクトで採用した支援アプローチは非常に高い。

2) ジェンダーや民族、社会的階層、環境等に対する配慮 本プロジェクトを実施するうえで、ジェンダーや民族、社会的階層、環境等に対して特別な配慮が必要となる活動はない。

4-2 有効性

以下の理由から、プロジェクトの有効性はおおむね高い。

(1) プロジェクト目標の達成見込み

成果及びプロジェクト目標の達成度でも示したとおり、プロジェクトの実施によりスバン DIC の検査・診断機器や必要な設備が整備され、JICA 専門家の技術移転により 41 疾病に対する診断技術がおおむね確立している (成果 1)。成果 2 では検体診断サービス (パッシブ・サーベイランス) を適切に行うための体制整備やスタッフの能力強化が図られ (成果 2)、プロジェクトで対象とした牛ブルセラ病及び牛流産サーベイランスの実施を通して通常業務として実施されているアクティブ・サーベイランス全体の実施能力が強化される (成果 3)とともに、スバン DIC 内部のラボ間の連携強化やフィールド活動の機会を活用した関係者への啓発活動や技術支援活動も効果的に実施された。また、将来の西ジャワ地域での効果的な家畜疾病対策に向け、DINAS や B/C タイプ・ラボ、酪農協等の関係者に対する啓発活動、技術支援活動を実施する体制もおおむね確立した (成果 4)といえる。これらの成果によってスバン DIC の家畜疾病診断サービスの質的、量的向上は図られた (プロジェクト目標)といえ、各成果、プロジェクト目標測定のための指標もおおむね満たされた。スバン DIC は ISO9001 (品質マネジメントシステム)の認証取得及び ISO17025 (試験所の能力に関する規格)の認定を受けたことでこれらの達成事項の品質も担保されたと考えられることから、終了時評価時点でプロジェクト目標はおおむね達成されたといえる。

プロジェクト活動を通してスバン DIC スタッフ個々の能力は大きく向上し、検査業務だけでなく疾病監視業務、啓発・技術移転業務の質を落とさずに年間検査数を大幅に伸ばしてきた。また、プロジェクト活動を通して学術的成果も得られ、インドネシア・日本国側双方の

努力によって望ましい人材育成が図られたと考えられる。しかしながら、スバン DIC は若い検査施設であり、獣医師及び獣医技術スタッフの年齢の中央値も終了時評価時点でそれぞれ37歳及び32.5歳である。したがって、プロジェクト期間終了後も継続して新規技術・知識の獲得に向けた努力が継続されることが望まれる。特に成果1に関する検査診断技術の習得に関して、スバン DIC は予定したすべての疾病の検査診断サービスを提供できるようになっているが、簡易試験キットや酵素抗体法(Enzyme-Linked Immunosorbent Assay: ELISA)法を用いた比較的簡易な抗体検査のみである疾病もある。いくつかの疾病に関しては病原体の分離同定ができないものもあり、正確な診断、病性鑑定にはさらなる検査技術の習得や診断学にかかわると知識・経験の蓄積も必要となり、今後の課題として整理される。

他方、成果2の達成度で示したとおり、適切な病性鑑定を行うための検体の質(採取部位の不足や不適切な保存方法、疫学情報の不足等)に関する課題があったが、2015年1月よりスバンDICでは運用上の対策を講じている。適切な病性鑑定システムの運用は将来の適切な家畜疾病対策に必要であることから、本件は「インパクト」の項で検討する。

- (2) 成果及びプロジェクト目標達成のための外部条件
 - 1) 成果達成のための外部条件「技術移転されたスタッフが、プロジェクト期間中に異動にならない」の現状

終了時評価時点までに第三国研修を受けたスタッフ(獣医師)のうち、1 名が外部へ異動となった。また、中間レビューまではスバン DIC 全体としての人員不足により、数名がラボと総務部との兼務となっていたケースがみられたが、現在は人員の増加もあって問題はおおむね解消している。また、プロジェクトは終了時評価までに診断セミナーを合計 65回開催し、133回のプレゼンテーションを行っている。これにより移転された技術の共有に向けた努力は継続され、確立した診断技術に対する SOP の整備、ISO9001 規格に準じた品質マネジメントを行っていることにより、スバン DIC スタッフの離職・異動による成果達成への影響は最小限にとどめられた。

2) プロジェクト目標達成のための外部条件「プロジェクト効果を維持するのに十分な予算・人員が、スバン DIC に継続的に割り当てられる」の現状

上述のとおり、スバン DIC 全体として人材不足があるものの、プロジェクトによる技術移転により多くの検査を実施できる人材数が増え、プロジェクト開始当初からスバン DIC での検査件数は大きく増加したが、品質の保証された検査結果を提供できている。また、予算に関してもプロジェクト開始後に徐々に増加し、終了時評価調査時点では開始時のおよそ 3 倍となっており、試薬等を含む消耗品購入経費は、ほぼスバン DIC の経費により賄われている。

3) プロジェクト目標達成のための外部条件「家畜疾病対策に関する事業がインドネシア政府により政策的・制度的に継続される」の現状

妥当性の項で示したとおり、プロジェクト期間を通して成果やプロジェクト目標達成に 影響を及ぼすようなインドネシアにおける家畜疾病対策にかかわる政策的・制度的な変更 等はなかった。

(3) 有効性への促進要因

1) プロジェクト活動を通した学術的成果

日常業務を通じて学術研究を行い、終了時評価までに6報のスバンDICスタッフが筆頭著者である論文が審査のある国際誌に掲載されている。このような研究を通して、スバンDICスタッフは仮説の立案、研究方法の決定、データ収集と解析、解釈を行い、論文として取りまとめる経験を得た。このことはインドネシアの感染症対策に資するものであるとともに、アクティブ・サーベイランスの効果的な実施(計画立案から結果の取りまとめまで)に貢献したと考えられる。

2) インドネシア側 C/P の技術・知識獲得に対する意欲

スバン DIC 職員は獣医師(Veterinarian)、獣医技術者(Paravets)のほか、総務部門等を含めると総勢約 80 名であり、そのほとんどは新規採用の職員である。しかしながら、彼らは 80 倍の競争率をクリアして採用になったスタッフであり、新規技術の習得や新たな知識の獲得に対する意欲は非常に高い。よって、スバン DIC には優秀な C/P 人材が確保されていたといえる。特に獣医技術者は経験の浅い職員が多く、プロジェクト開始時は限られた疾病に対して比較的簡易な検査を実施できる程度であったが、4 年間という限られた期間で検査診断を行える疾患数を大きく伸ばし、それに伴い診断数も年間 6 万回を上回る。アクティブ・サーベイランスについても、プロジェクト開始前はやみくもにサンプリングを行っていたところを終了時評価時点では計画策定から結果の取りまとめまでの一連の作業を自立的に実施できるようになっている。このことはプロジェクトの有効性を大きく高めたと考えられる。

(4) 有効性に対する阻害要因

有効性に対する阻害要因は、プロジェクト期間を通して観察されなかった。

4-3 効率性

プロジェクトの投入が成果達成に転化されない事例があるが、プロジェクトの効率性はおおむ ね高い。

(1) プロジェクト活動の進捗管理

プロジェクト開始後、活動に必要な機器、機材の調達、設置が行われ、これと並行して対象地域の家畜衛生対策の実情やスバン DIC の業務運用システム、検査機能等にかかわるベースライン調査が実施された。調査結果に基づき、各ラボで 2015 年までに獲得すべき技術・サービスが詳細に規定された「プロジェクト技術到達目標シート」が作成され、同シートに沿って技術移転そのものは JICA 専門家よりおおむね計画どおり実施、中間レビュー時点までにおおむね終了している。中間レビュー以降は日常業務を通した技術定着が図られ、アクティブ・サーベイランスや関係機関への情報提供や啓発活動、技術移転活動が順調に実施された。

プロジェクト開始以降、JICA 専門家のアドバイスに基づき、DIC 全体の業務を管理する月 例会議が実施されている。また、プロジェクト活動としての会議は定期的に実施されていな いが、必要に応じた会議の実施や、プロジェクト月例報告書の共有等を通じて情報共有や進 捗管理が実施されている。

(2) 提供された機器及び材料の有効利用

実施される試験や診断の頻度により差があるものの、プロジェクトにより供与された検査機器、機材等は有効に活用されている。これらの機器等は ISO の規格に則って日常的なメンテナンスが適切に実施されている。施設設備に関しても JICA 短期専門家が派遣され、作成されたマニュアルに基づき、ISO の規格に合致したメンテナンスが実施されている。ただし、一部の機器(組織切片作成のためのミクロトーム及びガスクロマトグラフィー)は修理が必要な状況である。他方、現在は施設、機器等も比較的新しいが、今後、それらのライフスパンを適切に維持するために、適切な予防的メンテナンスを継続するとともに、更新の予算等も考慮する必要がある。

(3) 本邦研修及び第三国研修で獲得した知識・技能の有効利用

終了時評価までに合計 17 名のインドネシア人 C/P が本邦研修に派遣され、多くの知識、技能を獲得し、スバン DIC でのプロジェクト活動、日常業務に有効に活用している。

他方、本邦研修やスバン DIC 内での実地訓練で獲得した知識・技術はセミナー等や OJT を通じてスバン DIC 内外の関係者に共有され、確立した技術は SOP を作成するなどスバン DIC での定着が図られている。

上記の結果より、投入の質・量・タイミングは適切であったと考えられる。

(4) 効率性に対する促進要因

1) 既存資源の有効活用

本プロジェクトは、2009年に日本の無償資金協力によって建設された施設で実施された 技術協力プロジェクトであり、既存の施設設備は本プロジェクトでも最大限活用されている。

また、本プロジェクトでは現地の講師リソースを活用するようにデザインされており、講師リストは適宜アップデートされている。また、プロジェクトで作成したマニュアル 2 種は過去の JICA 技術協力プロジェクトの成果品を活用して作成されている (活動 4-1 を参照)。

2) スバン DIC の通常業務を意識したプロジェクト活動の実施

プロジェクトで行った検査診断の基本的技術移転や診断体制の整備、関係機関への啓発活動、技術移転活動はスバン DIC の通常業務である。プロジェクトで対象としたブルセラ病及び牛流産に対するアクティブ・サーベイランスについても開始当初より持続性を意識してプロジェクト活動を実施しており、既にスバン DIC の通常業務として実施されているアクティブ・サーベイランス業務のなかに組み込んで実施されている。このことはプロジェクトの持続性を担保するとともに、効率的なプロジェクト活動の実施にも貢献している。また、関係機関に対する情報提供や啓発活動、技術支援活動(成果 4)はアクティブ・サーベイランス(成果 3)で関係機関と協働した機会でも実施されており、効率性を高めている。

3) プロジェクト活動の費用分担

インドネシア側機関の本プロジェクトに対するオーナーシップは高く、特に大きな財政 的コミットメントが得られている。このことが、インドネシア側機関の主体的なプロジェ クト活動の実施に加えて、共同事業としての理想的な経費負担に大きく貢献していると考 えられる。

(5) 効率性に対する阻害要因

上記「本邦研修及び第三国研修で獲得した知識・技能の有効利用」で示したとおり、プロジェクトの支援の下で第三国研修に派遣された1名のスタッフが他のDICに異動となった。プロジェクトの投入が成果達成に十分還元されなかったとの観点からはプロジェクトの効率性を若干低下させたと考えるが、成果達成に重大な影響はもたらしていない。

(6) その他

派遣された JICA 短期専門家は海外での業務経験が必ずしも多くない若手の人材もおり、 スバン DIC でも英語でのコミュニケーションを十分に行えない若手スタッフがいた。これに より英語による技術移転やプレゼンテーションに苦慮するケースもあった。しかしながら、 双方の努力によって最終的には必要な技術移転も行われ、成果達成を大きく阻害することは なかった。

4-4 インパクト

プロジェクトの実施によって、以下に示す正のインパクトが確認または期待されている。

(1) 上位目標達成の可能性

これまで示してきたとおり、スバン DIC は診断機能(診断可能な疾病数及び検査方法の増加)の強化が実現し、パッシブ・サーベイランスの機能も強化された。検査診断サービスの品質や検査施設としての適切性は ISO の認証、認定を受けたことで国際的にも担保されたといえる。また、地域全体として家畜疾病対策を効果的に行うためには外部関係者の能力強化も必須であるが、スバン DIC では啓発活動や技術支援活動を継続的に実施する体制が整備され、プロジェクトの活動を通して連携体制も強化されたといえる。

しかしながら、成果 2 の達成度でも示したとおり、プロジェクトの努力によってスバン DIC の診断体制はおおむね確立したといえるが、持ち込まれる検体の質の問題(必要な疫学情報の入手や検体採取部位の不足、不適切な検体の保存状態など)により、病性鑑定を適切に行えない場合も少なくなかった。このような状況に対し、スバン DIC は病性鑑定を行う条件を満たさない検体は依頼者に返送するとともに、検体採取部位や量、保存方法等を指導するような SOP を 2015 年 1 月に承認し、運用を開始している。検査数増加によるクライアントの検査費用負担増が懸念されるが、死亡例については、費用負担が困難な場合は DINAS 経由でスバン DIC に死亡例報告を行うことで、スバン DIC の調査活動としてサンプル採取と検査が行われるため、クライアントの費用負担の問題を回避しているとのことである。終了時評価までの約 4 カ月間でこの対応策に大きな問題は生じていないが、今後も引き続きシステムが効果的に機能するかを注視するとともに、外部の関係機関に対する情報共有や啓発

活動、技術支援活動を地道に継続していくことが求められる。

また、プロジェクトでの検査診断法に関する技術移転が進むにつれて、スバン DIC での診断数は 2010 年の約 15,000 件から 2014 年には約 61,000 件と大きく増加した。これはスバン DIC としての検体処理能力としてはほぼ上限であると考えられる。プロジェクト期間終了後は上位目標達成に向けてパッシブ・サーベイランスでの病性鑑定実施件数の増加や関係機関への啓発活動・技術支援活動の強化が必要となるが、スバン DIC でのこれ以上の業務量増加は困難である。他方、プロジェクト活動を通して B/C タイプ・ラボのスタッフの能力も一定程度向上し、主要な家畜疾病に対する簡易な検査はおおむね適切に実施できる。調整会議等で既に業務分担が協議され始めており、実際にアクティブ・サーベイランスをスバン DIC の支援なしに実施するなどの成果も得られている。プロジェクト期間終了後も関係機関との効率的な業務分担がより一層進められることが望ましい。

他方、「有効性」の項でも示したとおり、スバン DIC スタッフの能力強化はおおむね期待する程度に強化されたといえる。しかしながら、獣医畜産学、検査診断学等は日進月歩で進歩する。プロジェクト期間は JICA 専門家からの直接指導や email 等で指導を受ける機会があったが、プロジェクト期間終了後は最新の技術に触れる機会は限定的となる可能性も否めない。スバン DIC はプロジェクト期間終了後も継続的なスタッフの研修を実施する計画をすることとしているが、インターネット等も活用して常に最新の情報、技術に触れておくことが望ましい。また、家畜疾病には AI をはじめとして多くの人獣共通感染症があることから、効果的な家畜疾病対策には公衆衛生セクターとの効果的な連携、協働が必要である。

(2) その他の正のインパクト

1) プロジェクト活動を通した学術的成果の創出と検査診断業務への貢献

スバン DIC はプロジェクト開始以降の 2013 年に果たすべき組織機能として研究機能が追加され、感染症対策に資する研究の実施や学位取得を推進しており、2015 年 3 月現在で 6 名のスタッフが大学院の修士課程、博士課程に進学している。また、プロジェクト活動を通していくつかの学術的成果を上げている。具体的には、インドネシアで初めて牛からのクリプトスポリジウムの分離とマウスへの実験感染の世界で 3 番目の成功例、インドネシアで初めてのアカバネウイルスの分離、抗バベシア病薬スクリーニングのための蛍光検出法の評価5など、学術的に重要な成果も得られており、国際学術誌にも発表されている。なお、これらの学術的な成果は DIC での業務に直接的に資するものであり、検査所としての機能を一層強化するものである。一例を挙げれば、DIC スバンでアカバネウイルスの分離が成功したことにより、このウイルスを用いた中和反応による牛の抗体保有状況の調査が可能となった。このような学術研究は西ジャワ州のみならず、インドネシア全体の家畜衛生に資するものであり、プロジェクト期間終了後もこのような取り組みが継続されることが望ましい。

2) 家畜疾病マップの作成

プロジェクト開始前の家畜疾病発生状況に関する疫学的データは、スバン DIC だけでなく B/C タイプ・ラボや動物検疫事務所も所有しており、調査対象の重複などそれぞれのデ

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⁵ 本邦研修の参加者が日本の大学で実施した研究成果

ータの信頼性も十分確保されていなかった。プロジェクト開始後はスバン DIC 管轄地域内のデータ集計様式等が標準化され、スバン DIC に集約されている。これにより家畜疾病マップの信頼性は向上し、同マップに基づいて DINAS などは活動計画を作成していることからも、今後より効果的、効率的な家畜疾病対策が実施されることが見込まれる。

3) スバン DIC と外部関係機関 (DINAS や B/C タイプ・ラボ、PUSKESWAN、酪農家等) との連携強化

アクティブ・サーベイランスや啓発活動・技術支援活動などのプロジェクト活動を協働で実施したことにより、スバン DIC と外部関係機関の協力体制が構築された。プロジェクトはスバン DIC の機能強化に重点が置かれたが、将来の効果的な家畜疾病対策を実現するためには、関係機関の能力強化、連携強化が不可欠であることから、プロジェクトを通した連携強化は将来の家畜疾病対策に正の影響をもたらすことが期待できる。終了時評価時点でも、プロジェクトが支援して発足した年2回の調整会議によりアクティブ・サーベイランスの分担調整が適切に行われており、以前のような調査対象の重複等はなくなっている。また、啓発活動や技術支援活動についても関係機関の予算の分担等も効果的に実施されており、現時点でも効果的、効率的な感染症対策活動への正のインパクトが認められる。

4) インドネシア側、日本側若手人材の能力強化

プロジェクトではプレゼンテーションを英語で行うよう支援するなど、インドネシア人 C/P の英語能力向上を推奨しており、特に若手人材の英語能力の向上が図られた。これによりインターネット等を活用した学術論文などへのアクセスが容易になり、将来の能力向上に貢献するものと期待される。また、JICA 短期専門家として派遣された日本人若手人材も、海外での業務経験を獲得することにより、日本にない疾病に対処する技術者としての能力向上も期待できる。

(3) 負のインパクト

本事業の実施に起因する負のインパクトは、終了時評価時点において確認されない。

4-5 持続性

プロジェクトによって生み出された便益の自立発展、自己展開は終了時評価時点においても一 定程度見込まれる。

(1) 政策的、制度的側面

「妥当性」の項で示したとおり、DGLAHS は家畜疾病対策に対して政策的努力を継続しており、家畜疾病監視のための情報システムの構築やブルセラ病撲滅に向けたロードマップの作成などを行っている。終了時評価時点では次期「畜産開発中期計画 2015-2019」のドラフト作成中であるが、DGLAHS での面談では、畜産開発のなかの家畜疾病対策の重要性は維持されていることが示された。また、農業省はスバン DIC の研修機関としての機能も期待し、独自予算で研修員のためのドミトリーを建設している。このように、上位目標となる西ジャワ地域の家畜疾病対策の強化に向けた政策的コミットメントは、プロジェクト期間終了後も継続されることが見込まれる。

他方、プロジェクトではアクティブ・サーベイランスの対象疾患としてブルセラ病を選択

し、パイロットサイトの調査により有病率を明らかにしている。ブルセラ病の清浄化については、感染家畜のとう汰のための補償制度の整備や清浄地域以外からの家畜の導入制限など多くの課題があるが、スバン DIC が本病の発生状況や感染状況などについて持続的に正確な情報を提供することにより、関係機関による適切な対応の検討に貢献することが期待できる。

(2) 財政的側面

「有効性」の項でも示したとおり、プロジェクトは将来の持続性を強く意識し、プロジェクトが主催する研修会や出張を伴う疾病調査においても、日本・インドネシア国側機関双方は明確なコストシェアの下でプロジェクト活動を進めている。また、プロジェクトが技術移転を行った診断技術はスバン DIC の通常業務で使用されるものであり、プロジェクト活動として実施された牛ブルセラ病及び牛流産サーベイランスもスバン DIC の通常業務に組み込まれた形で実施されている。したがって、これらの活動はプロジェクト期間終了後もスバンDIC の予算で継続されることが強く見込まれる。試薬等の消耗品購入の 80%以上がスバンDIC の予算で賄われていることや、スバン DIC に割り当てられる予算がプロジェクト開始前から約3倍に増加していることからも、財政的持続性は期待できる。

また、スバン DIC を中心として DINAS や B/C タイプ・ラボ、PUSKESWAN 等の関係機関 との連携も進められている。調整会議で費用分担も含めた活動計画が協議されていることからも、スバン DIC だけではなく、上位目標達成に連携が必要な関係機関の財政的持続性も一定程度期待できる。

(3) 技術的側面

「有効性」で示したとおり、スバン DIC で確立した検査診断技術、サービスには SOP が作成され、ISO の規格に則って質の担保がなされている。スバン DIC を含めて公務員は異動が一定程度あるものの、上記品質管理システムにより技術的持続性は高く維持されることが見込まれる。しかしながら、検査診断技術は日々進歩しており、スバン DIC スタッフも常に新規技術の獲得に向けた努力を継続するとともに、スタッフの離職・異動対策を含めたスバン DIC への技術の定着に向けた対策を講じることも重要である。

他方、「インパクト」の項で示したとおり、スバン DIC はパッシブ・サーベイランスでの病性鑑定を適切に実施するための運用上の取り組みを開始したところである。これにより病性鑑定に必要な検体が適切に採取、保存されることが見込まれるが、同時に B/C タイプ・ラボや PUSKESWAN の獣医師等への技術支援活動も地道に継続していくことが必要である。スバン DIC との面談では啓発活動、技術支援活動をプロジェクト期間終了後も継続することを表明しているが、家畜のオーナーである酪農家等への啓発活動は DINAS が担当する。特に専門的知識の乏しい酪農家等の知識を向上させ、態度・行動を変容させるには長い年月と努力を要し、広範囲にわたる管轄地域の酪農家をカバーするには、DINAS は地道な努力を継続することが求められる。スバン DIC や B/C タイプ・ラボもこれまで同様、DINAS に対して必要な技術的支援を継続することが望ましい。

なお、スバン DIC は 5 年ごとに各ラボの技術習得計画を作成することとしており、終了時評価時点では次期計画を策定しているところである。

(4) 総合的持続性

終了時評価時点でプロジェクト期間終了後の持続性を予測するには限界があるが、本プロジェクトの持続性は一定程度見込まれる。

4-6 結論

プロジェクトの技術支援によってスバン DIC の検査診断可能な疾病数は大きく増加し(成果 1)、適切な診断サービス (パッシブ・サーベイランス)を行う体制が整備されたとともに、サービス 運用能力も強化された (成果 2)。また、プロジェクトで対象とした牛ブルセラ病及び牛流産サーベイランスの実施を通して通常業務として実施されているアクティブ・サーベイランス全体にも 計画立案から実施、分析、フィードバックまでの一連の実施能力が強化された (成果 3)。これと 並行し、地域全体の効果的な家畜疾病対策強化に向けた関係機関の連携体制も確立した (成果 4)。 これらの成果に加え、スバン DIC は ISO の認証を取得し、家畜疾病診断サービスの品質管理も国際標準で行われているといえる。よってスバン DIC の家畜疾病診断サービスの質的、量的向上は 図られたといえ、プロジェクト目標は終了時評価時点で達成されている。

これらの成果を評価 5 項目で分析したところ、妥当性、有効性、効率性及び持続性はいずれも高い、あるいはおおむね高いと評価された。上記の結果を踏まえ、本プロジェクトは予定どおり終了とする。また、インパクトにおいては学術的研究成果の創出や若手人材の育成などの正のインパクトが認められた。

他方、インパクトに関連して、上位目標である効果的な家畜疾病対策の実施の実現可能性は一定程度見込めるものの、その実現をより強固なものとするために、合同評価チームは第5章で関係機関に向けていくつかの提言を行う。

第5章 提言と教訓

5-1 提言

(1) 知識、技術の維持向上について

スバン DIC はプロジェクトの実施により検査診断技術やパッシブ・サーベイランス、アクティブ・サーベイランス、啓発活動や技術支援活動にかかわる能力を大きく向上させた。今後もこれらの能力を適切に維持するとともに、新しい知識、技術をさらに獲得するための努力を継続する必要がある。

(2) 病性鑑定システムの強化に向けた関係機関への啓発活動、技術支援活動の継続

地域全体として効果的な家畜疾病対策を実現するには、病性鑑定システムが適切に機能することが求められる。しかしながら、スバン DIC では持ち込まれる検体に質の問題(不十分な検体採取部位や不適切な保存方法、不十分な疫学情報)から、病性鑑定を適切に実施できない事例が認められた。その解決に向けてスバン DIC は新しい SOP の運用を開始したが、スバン DIC は今後も、適切な病性鑑定の実施に必要な検査材料の入手に向けた関係機関への啓発活動や技術支援活動を継続的に実施する必要がある。

(3) 人獣共通感染症の清浄化について

ブルセラ病の清浄化には、感染家畜のとう汰のための補償制度の整備や感染していない家畜の導入など多くの課題が残されている。スバン DIC は関係機関による適切な対応の検討に貢献するため、本病の発生状況や感染状況などについて持続的に正確な情報を提供する必要がある。さらに、合同終了時評価チームは、中央政府、地方政府の当局はプロジェクトの成果を適切に活用し、ブルセラ病や狂犬病等の人獣共通感染症の撲滅に向けた強いコミットメントを示すことを提言する。

(4) 検査診断機器及び施設設備の維持管理について

スバンDICではISOの要求事項に基づいて、適切なラボ管理、施設管理が実施されている。 スバン DIC は今後も継続して劣化を遅らせるための予防的メンテナンスを実施するととも に、特に検査診断機器については更新のための予算確保もあらかじめ検討しておくことが望 ましい。

(5) PDM の改訂について

上位目標の指標 1「スバン DIC における家畜疾病診断のための検体数が 2018 年までに 2015 年と比較して 10%増加する。」について、スバン DIC は 2014 年に約 61,000 件の検査を実施しており、施設の処理能力の上限近くまで増加している。このため、西ジャワ地域の効果的、効率的な家畜疾病対策に向け、簡易な試験を B/C タイプ・ラボと分担することなどにより、地域全体としての検査能力の向上を図ることとしている。一方、B/C タイプ・ラボと協働して検査能力を向上するためには、指標 3「西ジャワ地域における、スバン DIC の家畜衛生に関する啓発・技術支援活動の数が、2018 年までに 2015 年と比較して 20%増加する」に述べられている啓発活動や技術支援活動を適切に行うことが求められる。このため、指標 1 及び

3 については一体的に評価することが適当と考えられる。また、評価する検査実績の単位について、同一検体について複数の検査が実施される場合があること、現状においても、検体数としての実績の把握は困難で、検査数として把握・評価していることを考慮し、「検体数」を「検査数」に改める。

上記の点を考慮し、合同評価チームは指標 1 及び指標 3 を統合し、「スバン DIC 及び管轄 地域の B/C タイプ・ラボ、家畜衛生センターを含めた家畜疾病診断のための検査実施数が 2018 年までに 2015 年と比較して 10%増加する」を上位目標達成度測定のための新たな指標 とすることを提案する(付属資料 16、17 を参照)。

5-2 教訓

プロジェクトは開始当初より持続性を意識して、一連の活動をスバン DIC の通常業務として組み込む形で実施し、診断能力向上や業務体制改善を進めてきた。特に、プロジェクトがパイロットサイト活動としたブルセラ病及び牛流産に関する調査活動は、スバン DIC が通常業務として実施しているアクティブ・サーベイランスのなかに組み込んで実施された。このことが、プロジェクト及びスバン DIC 双方の予算措置や協働を円滑化するとともに、持続性の担保や効率的なプロジェクト活動の実施に貢献した。

このように、可能な限り先方の業務システムのなかでプロジェクト活動を運営することで、技術的、財政的持続性が担保されるものと考えられる。ただし、プロジェクトによって新たに先方業務として開始または継続される必要のあるものに関しては、プロジェクト期間終了までに必要な人材等も含めた業務のコスト分析を行っておくことにも留意が必要である。

付属 資料

- 1. 終了時評価調査の日程
- 2. PDM Version 2 (2013年5月28日版)
- 3. 評価グリッド
- 3-1 実施プロセスの検証
- 3-2 評価5項目
- 4. 専門家派遣実績
- 5. カウンターパート配置
- 6. カウンターパート研修実績
- 7. プロジェクト供与機材
- 8. ローカルコスト負担
- 9. インドネシア側による土地、建物、オフィス、設備の供与
- 10. プロジェクト成果物一覧
- 11. セミナー開催・発表実績
- 12. プロジェクトの実施体制
- 13. スバンDICの組織体制
- 14. PDMに設定された指標の達成状況
- 15. POに沿った活動実績及び達成度
- 16. PDM指標改定に関する提案
- 17. PDM改訂版(Version 3)(案)
- 18. スバンDICで提供される診断可能な疾病及び診断技術一覧
- 19. Minutes of Meeting (M/M)



Schedule of The Terminal Evaluation

Annex 1

As of 25, May 2015

						,	As of 25, May 2015	
			JICA	l .	Japanese Member	5		
Da	te	JICA Leader	Planning & Management	Veterinary Epidemiology	Livestock Disease Diagnosis	Evaluation & Analysis	Hotel	
7-May	Thu					Move from Tokyo to Jakarta	Jakarta	
						8:30 - 9:00 Visit to JICA Office		
8-May	Fri					9:00 - 10:30 TV Meeting	Jakarta	
						11:00 - 14:00 Meeting with JICA Expert		
9-May	Sat			/		Documentation	Jakarta	
10-May	Sun			1	68888	Documentation	Jakarta	
	Mon					10:00 - 11:00 Interview with DGLAHS		
11-May						13:00 - 14:00 Interview with 8 type Labo (Jakarta Province)	Subang	
						14:00 - 19:00 Move from Jakarta to Subang		
12-May	Tue		8:00 - 16:00 Interview with DIC Subang (Center President / Executives / Maintenance Staffs / Respective Laboratory Staffs.)					
42 Mau					-	8:00 - 12:00 Interview with DIC Suban (Respective Laboratory	Cubasa	
13-May	Wed 13:00 - 16:00 Site visit of DIC Suban		Subang					
14-May	Thu	5 8 8 9 5		99999	6000000	9:00 - 17:00 Move from Suban to Serang (Banten Province)	Serang	
				,	A semantic	9:00 - 10:00 Interview with DINAS Banten		
15-May	Fri				VA A A A A A A A A A A A A A A A A A A	11:00 - 12:00 Interview with B type Labo (Banten)	Jakarta	
						13:00 - 16:00 Move From Serang (Banten Province) to Jakarta		
16-May	Sat			8 2 75 8 8	8 8 2 2 5	Decumentation	Jakarta	
17-May	Sun	Move from Tokyo to	Jakarta			Documentation	Jakarta	
		8:30 - 10:00 Visit to	DGLAHS Visit to JIC	A Office				
18-May	Mon	10:00 - 11:30 Interv	view to the Head of D	IS Subang ; Ms.Lilie	k Indrayani		Jakarta	
		17:30 - 18:00 Visit to	o JICA Indonesia Offi	ice				
40 14	T	8:00 - 12:30 Move fr	rom Jakarta to Subar	9			8	
19-May	Tue	13:00 - 16:00 Intervi	iew with DIC Subang	(Center President /	Executives / Respec	ctive Laboratory Staffs.)	Subang	
		8:00 - 10:00 Move f	from Subang to Lemi	oang (West Jawa Pro	ovince)			
		9:30 - 11:00 Intervie	w with KPSBU Lemb	ang (Dairy Coopera	tive)			
20-May	Wed	11:00 - 12:30 Site Visit to dairy farmers(2 farmers:Mr.Ermin/ Mr. Diki)					Subang	
		14:00 - 15:00 Interview with B type Labo (West Jawa Province)						
		15:00 - 17:00 Move	from Lembang (Wes	t Jawa Province) to	Subang			
21-May	Thu	8:00 - 12:00 Tour of	DIC Subang facilitie	s & Interview with DI	C Subang researche	rs.	Subang	
	1110	13:00 - 15:30 Check	the contents of the	terminal evaluation r	eport within JICA Eva	aluational Team	Cobails	
22-May	Fri	8:00 - 11:30 Joint re	view team meeting (Prepare draft of JTE	R)		Jakarta	
		14:00 - 19:00 Move	from Subang to Jaka	rta			44.144	
23-May	Sat	Documentation					Jakarta	
24-May	Sun	Documentation					Jakarta	
25-May	Mon	9:00 - 15:00 Joint review team meeting (Prepare final draft of JTER and M/M)						
g	15:00 - 16:00 Signing on the JTER						Jakarta	
		9:00 - 12:00 JCC (S	igning on M/M)					
26-May	Tue	14:00 - 15:00 Repor	rt to JICA Office				Airplane	
		21:25 Leave from Ja	akarta					
27-May	Wed	Arrive in Tokyo						

Project Name

Project on Capacity Development of Animal Health Laboratory Staff of Diseases Investigation Center (DIC) Subang Four (4) years, July 17, 2011 – July 16, 2015 Target Group Project Duration

DIC Subang Project Site

Directorate of Animal Health DGLAHS-MoA and JICA Implementing Agency

Annex 2

Date: May 28, 2013 Version 2

Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal Measures for animal disease control in West	1 Number of test samples for animal disease diagnoses at DIC Subang in West Java region increases 10% by the year of 2018 in comparison with the number in 2015.	1 Monitoring Report	·
Java region (Jurisdictional area of DIC Subang) are strengthened.	2 Number of district where the animal disease control is monitored by DIC Subang amounts to all district required in West Java region by the year of 2018.	2 Monitoring Report	
	3 Number of awareness and technical support activity concerning animal health conducted by DIC Subang in West Java region goes up 20% by the year of 2018 in comparison with the number in 2015.	3 Monitoring Report, Survey on target groups in West Java region by DIC Subang (Terminal evaluation survey and final survey)	
Project Purpose The quality and quantity of animal disease	1 The number and the kind of animal disease diagnosis at DIC Subang becomes more than 35,000 samples in a year and 16 kind at the end of the Project.	1 Monitoring Reports	The measures and policies concerning of animal disease control
diagnosis service at DIC Subang are improved.	2 The feedbacks of diagnosis (Passive Surveillance) to the customers are returned promptly in prescribed days set by the Project.	2 Diagnosis records at DIC Subang	will be implemented by the government of Indonesia continuously.
	3 The DIC Subang staff are ready to conduct Active Surveillance (Planning, Implementing, Monitoring and Feedback the results to next survey) on animal health considering with livestock / poultry industry promotion in the pilot sites more than 2 times/site in a year.	Observation at the time of mid-term review and terminal evaluation. Monitoring Reports, The results of	Enough budget and personnel are allocated to DIC Subang for sustaining outcomes of
	4 80% of inquired customers (stakeholders such as DINAS staff, Field vets, and Farmers) recognizes improvement of diagnosis services of DIC Subang by the end of the Project.	questionnaire survey on users at the time of mid-term review and terminal evaluation (questionnaire survey to be done by the project monitoring activity 2-5).	the Project.
Outputs Output 1 The DIC Subang staff obtain basic and systematic diagnosis for animal diseases.	1-1 The technical levels acquired on diagnostic tests in each laboratory (8 laboratories) of DIC Subang attain to the target levels set up in the "Project Technical Target Sheet" by June 2013.	1-1 The results of examination by the Project	The staff of DIC Subang who have been transferred techniques by the Project are not
Output 2 The capacity to provide the customer oriented diagnosis services (Passive Surveillance) of	2-1 More than one staff in DIC Subang are certified by the Project he/she is able to make a final diagnosis based on the result of tests in each laboratory.	2-1 Records of comments for diagnosis results	transferred to other office during the Project period.
DIC Subang staff is strengthened.	2-2 Each laboratory chief in DIC Subang he/she is able to make an appropriate comments based on the result of tests in each laboratory.	2-2 The results of certification by the Project	

Output 3

The capacity to conduct the surveys and the technical support of animal disease control (Active Surveillance) in the pilot sites of DIC Subang staff is strengthened.

Output 4

The DIC Subang staff conduct the continuous technical support activities for laboratory workers, field vets and farmers, including information exchange, awareness on animal health improvement in the pilot sites.

- **3-1** Active surveillances on animal health are conducted annually with a framework (Planning, Implementing, Analyzing and feedback) by the staff of DIC Subang.
- **3-2** Each laboratory chief in DIC Subang are able to make recommendations of animal disease control in the pilot sites for the veterinary officers and laboratory workers.
- 4-1 DIC Subang (Vet. Information section) issues periodical Newsletter of animal health 2 times a year for laboratory workers, field vets and farmers in the three provinces by June 2012.
- **4-2** Each laboratory chief in DIC Subang is able to make annual plan of technical support activities to the laboratory workers, field vets and farmers in the pilot site by December 2013.
- 4-3 Achievement rate of annual activity plan (set in 4-2) becomes more than 90% in the pilot site.

- 3-1 Record of surveys
- 3-2 Records of Recommendations for animal disease control measures
- 4-1 Records of issued Newsletter
- 4-2 The plan and records of awareness and technical support activities
- 4-3 The plan and records of awareness and technical support activities

Inputs

Activities

Output 1

1-1

The Staff of DIC Subang surveys the current capacities and needs in the diagnostic techniques at DIC Subang.

Based on the results of the survey, the staff of DIC Subang sets the necessary diagnostic techniques (kind of disease, diagnostic method etc.) and target levels of the techniques for each laboratory.

1-3

The staff of DIC Subang makes the plan of mastering diagnostic techniques for each laboratory in DIC Subang.

1.4

The staff of DIC Subang makes the list of trainer resources, for example, staff of other DICs, IRCVS, NVDAL, Vet Faculty of university, foreign experts etc.

1-5

The staff of DIC Subang learns the planned diagnostic techniques from the resources trainers through training in Indonesia. Japan or third country.

4 6

The staff of DIC Subang receives the diagnostic capability evaluation (including the proficiency tests) by resource trainers about the transferred diagnostic tests.

Output 2

2-1

The staff of DIC Subang analyzes the current situation of sample flow and examinations at DIC Subang.

~-Z

The staff of DIC Subang analyzes the current situation of sample submission from the fields.

2-3

The staff of DIC Subang makes the plan of improved sample flow and examination system at DIC Subang. (Measures for the sample senders will be planed in Output 4)

2-4

The staff of DIC Subang conducts the improved diagnostic services.

2-5

The staff of DIC Subang monitors the improved diagnostic services (sample reception, diagnostic flow and customer's comment etc.) and conducts the feed-back to the system.

Indonesian side

- 1. Assignment of counterpart personnel
- Salary, Travel expense, accommodation cost and daily allowance of counterpart personnel
- 3. Project office space and communication device etc.
- Budget for operational cost for the Project implementation (electricity etc.)
- Procurement of Reagents and consumables.

Japanese side

- 1. Dispatch of Experts
- (1) Long-term Experts:
- Chief Advisor / Animal Health Administration
- Project Coordinator / Animal Health Information
- Veterinary Diagnosis / Epidemiology (assigned in half period of the project)
- (2) Short-term experts: from Japan or from third country

 Relevant experts in specific subjects of

Relevant experts in specific subjects of animal health will be dispatched, when necessity arises, for the smooth implementation of the Project within the framework of the Project. Sufficient budget to conduct the necessary diagnosis is secured by Indonesian side.

Output 3

3-1

The staff of DIC Subang conducts preliminary surveys to select pilot site(s) from livestock / poultry industry promoted areas.

3-2

The staff of DIC Subang specifies the pilot site and some animal diseases for the surveys and control.

3-3

The staff of DIC Subang plans and conducts the surveys on animal health considering the specificity of promoted livestock / poultry sectors in the pilot site through cooperation with B/C type laboratories.

3-4

The staff of DIC Subang analyses the results of surveys and develops the recommendation reports to the authorities for the improvement of animal health situation.

3-5

The staff of DIC Subang organizes and conducts the monitoring of the animal health improvement for the follow-up of recommended activities and the feed-back.

Output 4

4-1

The DIC Subang issues periodical Newsletters to provide and exchange information on animal health for laboratory workers, field vets and farmers in the 3 provinces of West Java region.

4-2

The staff of DIC Subang examines and conducts necessary measures of information exchange (on site meetings, etc.) for veterinary officers, laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type laboratories.

4-:

The staff of DIC Subang makes plans of sustainable activities of awareness and technical supports for improvement of animal health and production, which are necessary for laboratory workers, field vets and farmers in the pilot site. (Utilize other JICA projects outcomes such as a Flip-chart for dairy farmers.)

4-4

The staff of DIC Subang conducts sustainable activities of awareness and technical support for the laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type laboratories.

4.5

The staff of DIC Subang organizes and conducts the monitoring and the feed-back of the results to the next actions.

- Counterparts training in Japan or in third country
- 3. Provision of machinery / equipment
- Budget for operational cost for the Project implementation

Pre-Conditions

Annex 3-1

[Verification of Implementation Process] The Project on Capacity Development of Animal Health Laboratory

	cason of impicinentation	Evaluation Classification		Necessary data and		Means of
Evaluation Tem	lla jor	Small	Criteria	Information	Data Source	Verification
	70,104	ORAL I		4111.02.111		
Probab	Overall Goal	Whether "Measures for animal disease control in West Java region (Jurisdictional area of DIC Subang) are strengthened" is logically correct as the Overall Goal.	Verification of logical relationship	Verification by the Evaluation Team	Project documents Views of related players	① Document review ② Interview
ility of ac		Whether it is expected that the benefit/outcomes derived from the Project is autonomously deployed or disseminated to non-targeted areas after the termination of the Project.	Verification of sustainability	Information indicating their sustainability	① Project documents ② JICA Experts, C/P	Document review Questionnaire Interview
Probability of achievement of the Project	DIC Subang are improved' is expected to be achieved by the end of the project period.		Degree of achievement of Objectively Verifiable Indicators (OVIs) Comprehensive analysis	Achievements of OVIs Views of related player	Project documents IICA Experts, C/P	① Document review ② Questionnaire ③ Interview
ect	Outputs	Whether the Output 1 of "The DIC Subang staff obtains basic and systematic diagnosis for animal diseases" is achieved or expected to be achieved by the end of the project period.	Degree of achievement of OVIs	Achievements of OVIs Views of related players	Project documents JICA Experts, C/P	Document review Questionnaire Interview
		Whether the Output 2 of "The capacity to provide the customer oriented diagnosis services (Passive Surveillance) of DIC Subang staff is strengthened" is achieved or expected to be achieved by the end of the project period.		Achievements of OVIs Views of related players	Project documents JICA Experts, C/P	Document review Questionnaire Interview
		Whether the Output 3 of "The capacity to conduct the surveys and the technical support of animal disease control (Active Surveillance) in the pilot sites of DIC Subang staff is strengthened" is achieved or expected to be achieved by the end of the project period.		Achievements of OVIs Views of related players	① Project documents ② JICA Experts, C/P	Document review Questionnaire Interview
		Whether the Output 4 of "The DIC Subang staff conduct the continuous technical support activities for laboratory workers, field vets and farmers, including information exchange, awareness on animal health improvement in the pilot sites" is achieved or expected to be achieved by the end of the project period.		Achievements of OVIs Views of related players	① Project documents ② JICA Experts, C/P	Document review Questionnaire Interview
Inputs	Inputs from the Japan Side	Whether JICA Experts were dispatched as scheduled.	Comparison of plan with actual result	Results of Input	① Input records ② Project reports	Document review
ats		Whether equipment for project activities was provided as planned.		Results of Input (incl. Information for status of utilization)	Input records Project reports	Document review Direct observation
		Whether C/Ps' training in Japan and/or third countries were implemented as planned.		Results of acceptance of trainees	Input records Project reports	Document review
		Whether local cost from JICA side were implemented as scheduled.		Budget and implementation result	Input records Project reports	Document review
	Inputs from the Indonesian Side	Whether C/Ps were appropriately allocated enough to implement project activities.	Comparison of plan with actual result	Achievement of Input Views of related players	① Input records ② JICA Experts, C/P	Document review Interview
		Whether office space for JICA experts was provided.		Achievement of Input	Input records JICA Experts, C/P	Document review Interview
		Whether local cost from Indonesian side were implemented appropriately.		Achievement of Input Views of related players	① Input records ② JICA Experts, C/P	Document review Interview

[Verification of Implementation Process] The Project on Capacity Development of Animal Health Laboratory

1	cation of implementation	Process The Project on Capacity Development of Animal Health Laboratory Evaluation Classification		Necessary data and		Means of
Eralustsen item	Major	Small	Criteria	Information	Data Source	Verification
لنــــا	majui [DIMIT	L	THOIMETON		
	Planned activities	Whether the project activities were implemented as scheduled.	Comparison of plan with actual result	Accomplishment of project activities	Project reports	Document review Questionnaire
Implementation Process		Whether the PDM was updated in accordance with surroundings of the Project under the agreement amongst relevant parties.		Vicissitude of PDMs and its reasons for modification	Meeting minutes of the Joint Policy/Steering Committee (JCC)	① Document Review ② Questionnaire ③ Interview
on Pro	Technical transfer	Whether methods and/or approaches of technical transfer were appropriate.		Methods and contents of technical transfer	Project reports JICA Experts, C/P	Document review Interview
cess	Management system	Who, how and how often the progress of the Project was monitored, and consequent findings were reflected to the operation of the Project.		Progress monitoring system Feedback system	Project reports JICA Experts	① Document review ② Questionnaire
		How the decision-making process for modification of the project activities, assignment of personnel, etc. was.		Process for decision-making	① Project reports ② JICA Experts	Document review Questionnaire
		How the communication and cooperative relationship amongst players in the Project was.		JCC and other meeting	Project reports Views of related players	① Document review ② Questionnaire
		Whether Project information was effectively shared.		JCC and/or other meetings	Project reports Views of related players	Document review Questionnaire
	Ownership and Autonomy	How ownership and autonomy of implementing bodies including C/Ps and beneficiaries were.		Contribution, attitude, etc. for the project activities.	Project reports Views of related players	Document review Questionnaire Interview
	中間レビュー時の 提言へのフォロー	[Recommendations 1] Longer assignment of C/Ps to appropriate position in DIC Subang during the project period		Countermeasures taken by the Project and current status	Information from parties and/or persons	① Questionnaire ② Interview
	アップ状況	[Recommendations 2] Systematical collaboration among DIC Subang, provincial and district DINAS including B/C-type Lab		Countermeasures taken by the Project and current status	Information from parties and/or persons	① Questionnaire ② Interview
		[Recommendations 3] Application of new methods introduced by the Project should be referred to the national manual		Countermeasures taken by the Project and current status	Information from parties and/or persons concerned	① Questionnaire ② Interview
		[Recommendations 4] □ Revision of OVIs of PDM		Countermeasures taken by the Project and current status	Information from parties and/or persons concerned	① Questionnaire ② Interview
		[Recommendations 5] Implementation of Laboratory Management		Countermeasures taken by the Project and current status	Information from parties and/or persons concerned	① Questionnaire ② Interview
	Problems on implementation process	Whether there were obstacles or problems for the implementation of the project activities.		Contributing and inhibitory factors	Project reports Views of related players	Document review Questionnaire Interview

Evaluation Grids

Annex 3-2

[Five Evaluation Criteria] The Project on Capacity Development of Animal Health Laboratory

Five			ation Classification	Criteria	Necessary data and	Data Source	Means of Verification
Criteria	Major	Middle	Small		Information	[Data Bource	11100015 01 1011110001001
		· · · · · · · · · · · · · · · · · · ·		,			
Relevance	Priority	Consistency of the Project Purpose with policies for livestock and animal health in Indonesia		Consistency verification	National policies	Document for livestock and animal health-related policies Directorate General of Livestock and Animal Health Services, the Ministry of Ministry of Agriculture (DGLAHS-MOA)	Document review Interview
		Priority of the strengthening of for livestock and animal health	`animal disease diagnosis services in Type-A labs in the policies in Indonesia		National policies	Document for livestock and animal health-related policies DGLAHS-MOA	① Document review ② Interview
		Consistency with Japan's ODA policies and JICA's aid	Relativity with prioritized area in Japan's ODA policies		Prioritized area in Japan's ODA policies for Indonesia	Japan's ODA policies for Indonesia	Document review
			Relativity with prioritized area in JICA's aid policies		Place of agricultural assistance in the JICA's aid policies	Position Paper, Thematic Guidelines, Rolling Plan, etc.	Document review
	Necessity	Relevance of target group	Consistency of needs of target group with the Project Purpose		① Experiences /performances of C/Ps ② Competency of DIC Subang for testing/diagnostic service provision	Project documents ICA Experts, C/P	Document review Interview Direct Observation
	Appropriateness of implementation	Appropriateness of adoption of for the control of livestock and	assistance approach to strengthen the function of DIC Subang animal diseases		Background and/or process for selection of assistance approach	JICA ex-ante evaluation report JICA Experts, C/P	Document review Questionnaire Interview
	method	Special consideration	Special assiduities for gender issues, social grades, environment, ethnic groups, etc.		Views of related players	JICA Experts JICA HQ	Document review Questionnaire
		Japan's technical superiority			Japan's Assistance experiences for livestock and animal health area Skills and experiences of experts	Project documents IICA HQ IICA Experts	① Document review ② Interview
Effectiveness	Achievements	Status of the achievements of Outputs	Status of the achievements of OVIs for Outputs		Status of achievements of OVIs Project activities and its accomplishments	Project documents JICA Experts, C/P	① Document review ② Interview

[Five Evaluation Criteria] The Project on Capacity Development of Animal Health Laboratory

Five			ntion Classification	Criteria	Necessary data and	Data Source	Means of Verification	
Criteria	Major	Middle Small		Circia	Information	Data Source	Tricuis of Vermention	
			<output 1=""> Whether the DIC Subang staff obtains basic and systematic diagnosis for animal diseases</output>	Comprehensive confirmation of actual status	Outputs other than the scope of the project activities	① Project reports ② JICA Experts, C/P	① Document review ② Interview ③ Direct observation	
			<output 2=""> Whether the capacity to provide the customer oriented diagnosis services (Passive Surveillance) of DIC Subang staff is strengthened.</output>		Outputs other than the scope of the project activities	① Project reports ② JICA Experts, C/P	Document review Interview Direct observation	
		<output 3=""> Whether the capacity to conduct the surveys and the techni support of animal disease control (Active Surveillance) in t pilot sites of DIC Subang staff is strengthened</output>		Outputs other than the scope of the project activities	Project reports JICA Experts, C/P	Document review Interview Direct observation		
			<output 4=""> Whether the DIC Subang staff conducts the continuous technical support activities for laboratory workers, field vets and farmers, including information exchange, awareness on animal health improvement in the pilot sites.</output>		Outputs other than the scope of the project activities	Project reports JICA Experts, C/P	① Document review ② Interview ③ Direct observation	
		Probability of the achievement of the Project Purpose	Whether the quality and quantity of animal disease diagnosis service at DIC Subang is or is expected to be strengthened to an expected extent.	Systematic judgment	Status of achievements of OVIs Outputs other than the scope of the project activities	① Project reports ② JICA Experts, C/P	Document review Interview Direct observation	
		Whether the Project Purpose was attained as a result of the achievements of Outputs	Whether there was no logical error from the aspect of cause-and-effect relationship.	Verification of logical relationship	Verification by Evaluation Team	① Project documents ② JICA Experts, C/P	Document review Questionnaire Interview	
		,	Whether there was any other effective approaches for the achievement of the Project Purpose	Verification of implementation approaches	Verification by Evaluation Team Views of related parties	① Project documents ② JICA Experts, C/P	① Document review ② Questionnaire ③ Interview	
	Contributing and hindering factors	Appropriateness of the important assumptions	Whether important assumptions are appropriate from aspects of current situation.	Confirmation current situation	Verification by Evaluation Team	Project documents JICA Experts, C/P	Document review Interview	
			Whether important assumptions are appropriate from aspects of current situation and logical relationship	Verification of logical relationship	Verification by Evaluation Team	① Project document ② JICA Experts, C/P	① Document review ② Interview	
		Whether important assumptions are fulfilled,	Confirmation of the current status of "Sufficient budget to conduct the necessary diagnosis is secured by the Indonesian side".		Budget allocation of the Indonesian side to the Project	Project documents JICA Experts, C/P	① Document review ② Questionnaire ③ Interview	
			Confirmation of the current status of " The staffs of DIC Subang who have been transferred techniques by the Project are not transferred to other office during the Project period".		Turnover of C/Ps	Project documents JICA Experts, C/P	① Document review ② Questionnaire ③ Interview	
			Other expected and/or unexpected external factors		Other expected and/or unexpected external factors	JICA Experts, C/P Project documents	Interview Questionnaire Document review	

[Five Evaluation Criteria] The Project on Capacity Development of Animal Health Laboratory

Five			tion Classification	Criteria	Necessary data and	Data Source	Means of Verification
Criteria	Major	Middle	Small	Cincin	Information	Data Source	. Micans of Verification
Efficiency	Time resource	Whether Outputs were attained	as scheduled.		Progress control of the project activities	Project documents Views of related players	Document review Questionnaire Interview
cy	Quality, quantity and timing of inputs	Whether quality, quantity and timing of inputs were appropriate.	Whether the number and period, areas of expertise and timing of dispatch of JICA expert were appropriate.	Comparison of results and plan	Record of dispatch of experts Attitude and performance of experts	Input records Project documents ICA Experts, C/P	① Document review ② Questionnaire ③ Interview
		Whether equipment and materials provided by the Proje appropriately utilized for achieving Outputs.			Record of equipment provision Utilization status of equipment	① Input records ② JICA Experts, C/P	Document review Questionnaire Direct observation Interview
			Whether equipment and materials provided by the Project are appropriately utilized for achieving Outputs.		Utilization status of materials Input records and operational status	① Project reports ② Input records	Document review Questionnaire Direct observation
			Whether timing, contents and duration of training in Japan and/or third countries were appropriate, and how the training contributed for the achievement of Outputs.		Acceptance of trainees Views of related parties	① Input records ② Trainees ③ JICA Experts	Document review Questionnaire Interview
			Whether timing, contents, duration follow-up of on-site trainings were appropriate.		Records of on-site trainings Accomplishments of trainings	① Project documents ② JICA Experts, C/P	Document review Questionnaire Interview
			Whether the overseas activities costs from Japanese side has been appropriately implemented.		Overseas activities cost from Japan side	① Input records ② JICA Experts	Document review Interview
			Whether allocation of Indonesian C/Ps and budget for the Project were appropriate.		Allocation of C/P personnel and local costs from Indonesia side	① Input records② JICA Experts, C/P	Document review Questionnaire Interview
	Collaboration with existing resources	Utilization of Japanese resources	Whether recommendations and/or points of note at the JCC and/or the Project Assistance Commission in Japan contributed for the achievement of Outputs.		Accomplishment of the project activities	① Project documents ② JICA Experts	Document review Questionnaire Interview
			Whether there was any collaboration with other Japanese resources contributed for the achievement of Outputs.		Accomplishment of the project activities	Project documents JICA Experts	Document review Questionnaire
		Collaboration with other development partners	Whether there were any collaboration with other development partners contributed for the achievement of Outputs.		Benefits derived from collaborative activities with other development partners.	Project documents JICA Experts Other development partners	Document review Questionnaire
	Contributing and hindering factors	Whether there were any contrib	uting factors to efficiency.		Views of related parties	① Project documents ② JICA Experts, C/P	Document review Interview
		Whether there were any hinderi	ng factors to efficiency.		Views of related parties	① Project documents ② JICA Experts, C/P	① Document review ② Interview

[Five Evaluation Criteria] The Project on Capacity Development of Animal Health Laboratory

Five Evaluation Classification

Five		ne Project on Capacity Development o Evalua	ation Classification	Necessary data and			
Criteria	Major	Middle	Small	Criteria	Information	Data Source	Means of Verification
Impact	Cause-and-effect relationship	(OVIs for Overall Goal will be	,	Verification of logical relationship	Policies related to livestock and animal health, etc.	Policies related to livestock and animal health Verification by Evaluation Team	Document review
:	Probability of achievement of the Overall Goal		disease control in West Java region (Jurisdictional area of DIC desired level, by Indonesian self-help endeavor in 3 to 5 years	Exploration based on the current status	Degree of achievement of the Project Purpose Verification of Sustainability	Project documents Views of related players	Document review Questionnaire Interview
		Hindering factors for the achievement of the Overall Goal	Whether the important assumption of "The measures and policies concerning of animal disease control will be implemented by the government of Indonesia continuously" is appropriate at the time of the Terminal Evaluation, and expected to be fulfilled in 3 to 5 years time after the end of the project period.	Verification of logical relationship	Possibility of unfulfillness of the assumption	Views of related players Verification by Evaluation Team	① Document review ② Interview
			Whether the important assumption of "Enough budget and personnel are allocated to DIC Subang for sustaining outcomes of the Project" is appropriate at the time of the Terminal Evaluation, and expected to be fulfilled in 3 to 5 years time after the end of the project period.	Verification of logical relationship	Possibility of unfulfillness of the assumption	Views of related players Verification by Evaluation Team	Document review Interview
			Whether other hindering factor for the achievement of Overall Goal are envisaged.		Other necessary information	Views of related players Verification by Evaluation Team	① Document review ② Interview
	Other impacts	whether there are any positive and/or negative impacts confirmed and/or expected to be generated other than Overall Goal	Positive impacts		Other necessary information	Project reports IJCA Experts, C/P Views of related players	Document review Questionnaire Interview
			Negative impacts		Other necessary information	Project reports IICA Experts, C/P Views of related players	Document review Questionnaire Interview
Sustainability	Probability of maintaining the benefits derived	Political and institutional aspects	Whether policies related to livestock and animal health would be maintained and/or enhanced in Indonesia.		Policies related to livestock and animal health in Indonesia	DGLAHS-MOA JICA Experts, C/P Views of related players	① Questionnaire ② Interview
ability	from the Project				Policies related to livestock and animal health in Indonesia Disposition and policies of DGLAHS-MOA	DGLAHS-MOA JICA Experts, C/P Views of related players	① Questionnaire ② Interview
		Financial aspect	Whether the budget and human recourse allocation for maintaining activities will be secured.		Policies to livestock and animal health and budget allocation	DGLAHS-MOA JICA Experts, C/P Views of related players	① Questionnaire ② Interview

If ive Evaluation Criteria The Project on Canacity Development of Animal Health Laboratory

Five		Evalua	ation Classification	Criteria	Necessary data and	Data Source	Means of Verification	
Criteria	Major	Middle	Small	CIRCIA	Information	Data Source	ivicans of vermeation	
			Whether the budget and personnel for the enhancement of the benefit will be allocated.		Policies and budget allocation	① DGHALS-MOA ② JICA Experts, C/P	① Questionnaire ② Interview	
						 Views of related players 		
	Technical aspect		Whether the improved capacities of DIC Subang in diagnosis service provision for livestock and animals will be maintained and enhanced autonomously after the end of the project period.		Possibility of continuation of monitoring activity Opportunities to update technical skills	Project reports JICA Experts, C/P Views of related players	Document review Questionnaire Interview	
	And the second s		Whether personnel for the deployment of the benefits are natured.		Administrative ability for deployment of the benefits	Project reports JICA Experts, C/P Views of related players	Document review Questionnaire Interview	
		Contributing and hindering factors	Whether the important assumptions for sustaining the benefits will be maintained.		Views of related players	Project reports JICA Experts	① Document review ② Interview	
			Whether countermeasures against contributing and hindering factors for sustainability were discussed by the Project and C/Ps.		Views of related players	Project reports JICA Experts	① Document review ② Interview	
	Comprehensive	Whether the comprehensive sustainability is secured or not, in the view of above-mentioned			Analytical evaluation by	① Project documents	① Document review	
	sustainability aspects.				the Evaluation Team	② JICA Experts, C/P ③ Views of related players	② Interview	

Annex 4

(1)	Dispatch	of Ex	perts
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(lo	ng-term)			2011	2012	2013	2014	2015
No	Names	Field	Term of assignment	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 1 2 3	4 5 6 7
1	Dr. KISHIMA Masato	Chief Advisor / Animal Health Administration	2011.7.17 - 2015.7.16					
2	Mr. MAEDA Yasuyuki	Coordinator / Animal Health Information	2011.7.17 - 2015.7.16					
3		Veterinary Diagnosis / Epidemiology	2011.7.17 - 2013.7.16					The second secon

(she	ort-term)					2011						2012			Τ			2013	3			T			201-				2	015
	Names	Field	Term of assignment	7 8	9 1	0 11 1	2 1	2 3	4 5	6 7	7 8	9 10 1	1 12	1 2 :	3 4	5 6	7 8	9 10	0 11	12 1	2 :	4	5 6	7 8	9 1	0 11 1	12 l	2 3		
1	Dr. SHIBAHARA Tomoyuki (1)	Pathological Diagnosis	2011.7.24 - 2011.9.16						>								-								200000000000000000000000000000000000000				WATER TOWNSON	
2	Dr. KOBAYASHI Sota (1)	Veterinary Epidemiology	2011.10.31 - 2011.11.12	-																										
3	Dr. MATSUBAYASHI Makoto	Diagnosis of Parasitic Disease	2011.11.7 - 2011.12.17															-												
4	Dr. MIKAMI Osamu	Pathological Diagnosis	2012.2.8 - 2012.4.26																						_					
5	Dr. KOBAYASHI Sota (2)	Veterinary Epidemiology	2012.5.27 - 2012.7.21	į									A																	
6	Dr. FUJISAKI Kozo	Diagnosis of Parasitic Discase	2012.10.7 - 2012.12.1		1													No. American						***						
7	Dr. SHIBAHARA Tomoyuki (2)	Pathological Diagnosis	2013,1,20 - 2013,3,16	*																				THE CONTRACTOR AND						
8	Mr. MIYAMOTO Toru (1)	Veterinary Public Health	2013,2,24 - 2013,4,20														A A A A A A A A A A A A A A A A A A A	THE STREET NAMES AND ADDRESS.												
9	Dr. ANRI Akira	Clinical Diagnosis	2013.6.9 - 2013. 8.3				VA. 1 111,000											A Company of Company						To be desired the second second						
10	Dr. SHIRAFUJI Hiroaki	Serologici Diagnosis	2014.1.12 - 2014.3.20				Annual of the Annual of									200 12 44			A											
11	Mr. MIYAMOTO Toru (2)	Veterinary Public Health	2014.3.2 - 2014.3.22				-									-														
12	Dr. KOBAYASHI Sota (3)	Veterinary Epidemiology	2014.3.9 - 2014.4.12			3	1			LA AMEL			- www w						and drawers and a second											
13	Mr. OKADA Motohiro (1)	Laboratory Facility Maintenance	2014.8.24 - 2014.9.2					***************************************	***************************************													***************************************								
14	Dr. TAGUCHI Masaji	Comprehensive Diagnosis	2014.8.24 - 2015,1,24				A		Anna Anna			The Thirt Ask Street																		
15	Mr. OKADA Motohiro (2)	Laboratory Facility Maintenance	2014.11.16~2014.12.2										Andrew Market																and the same	
16	Mr. OKADA Motohiro (3)	Laboratory Facility Maintenance	2015,1,18 - 2015,1,30										-					-												
17	Dr. TAKAHASHI Yuji	Biochemical Diagnosis	2015.1.18 - 2015.3.14																					THE REAL PROPERTY.						

(2) Results of Experts' Activities

	ong-term)			
N	Names	Field	Organization	Results of Activity
	Dr. KISHIMA Masato	Chief Advisor / Animal Health Administration	National Institute of Animal Health, Japan	< As a Chief Advisor > Started the seminar in DIC Subang, 2) Made report meeting at DGLAHS at the end of the period of short-term experts, 3) Made an action plan in pilot sites, 4) Made a study of how to collect diagnostic material, 5) Advised on the efficient operation of active surveillance, 6) Third-country training in Thailand, 7) Attended meetings < As a Expert of Bacteriology > Introduction of the basic concepts for the implementation of diagnosis of animal diseases and surveillance, 2) Isolation and identification of pathogenic agents from the specimens collected from the field, 3) Isolation of bacteria and mycoplasmas from organs of chicken collected from the field continuously, 4) System for the storage and management of isolated bacteria strains, 5) Introduction and manufacture of materials, required for the diagnosis of bacterial diseases of livestock
	Dr. KOIKE Ikuo	Veterinary Diagnosis / Epidemiology	Unaffiliated	< Techniques related to the diagnosis of viral disease > Transfer the diagnostic techniques of viral disease, 2) Transfer the techniques of isolation and identification of virus from the diagnostic samples
	Mr. MAEDA Yasuyuki	Coordinator / Animal Health Information	JICA	Coordination to implement the project > 1) Administration, 2) Budget management & procurement, 3) Accounting, 4) Equipment provision, 5) Management of Project progress, 6) Coordination of Project Monthly & Quarterly report, 7) Arrangement for short-term expert dispatch, 8) Arrangement for counterpart training in Japan and third country, 9) Arrangement and coordination of diagnostic seminar in DIC Subang, 10) Other arrangement, 11) Coordination of inhouse diagnostic seminar, 12) Coordination with related organization, 13) Establishment of internet environment & Web site of DIC Subang, 14) Making project leaflet, 15) Project baseline survey, - Research on the current diagnostic situation, -Research on the field disease situation, - Training demand of the stakeholders

	iort-term)			
No	Names	Field	Organization	Results of Activity
1	Dr. SHIBAHARA Tomoyuki (1)	Pathological Diagnosis	National Institute of Animal Health, Japan	< Necropsy, basic theory of histopathology, making and observation method of tissue sections (HE staining) > Handling of animals, 2) Method of blood collection, 3) Autopsy techniques, 4) Sampling, 5) Macroscopical photography, 6) Recording, Trimming, 8) Tissue processing, 9) Embedding, 10) Making sections, 11) HE staining, Special stains (Gram stain, acid-fast stain, stained Grocott's stain), 13) Immunohistochemistry (avian influenza), 14) Mounting, 15) Using a microscope, 16) Microscopical photography, 17) Creating a presentation, 18) Methods of the output, 19) Presentation, 20) Writing a paper
2	Dr. KOBAYASHI Sota (1)	Veterinary Epidemiology	National Institute of Animal Health, Japan	< Introduction and survey to select the pilot site candidate farm by epidemiological technique > Investigation of needs in epidemiology lab - Environment of pilot site - Facility / capacity in the lab - Technical issues, 2) Setting up of the grand design on the activities for coming years cooperating with team members, 3) Role of epi lab so far, 4) Member's needs, 5) Surveillance in future, 6) Experience of data analyses, 7) Next action for brucellosis, 8) Principle of epidemiology, 9) Evaluation of diagnostic tests, 10) "R" was installed in the PC in epi lab, 11) Some basic data analyses, 12) Reference documents to start self-learning, 13) Paper reading started, 14) Sample size for the prevalence estimation, 15) Random sampling technique by spreadsheet
3	Dr. MATSUBAYASHI Makoto	Diagnosis of Parasitic Disease	National Institute of Animal Health, Japan	< Techniques to examine cryptosporidium parasites in the feces and making paper for international journal > 1) Floating methods using sugar for the diagnosis of intestinal parasite, 2) Sedimentation methods, 3) Floating methods using NaCl, 4) Identification for Nematoda and Cestoda eggs, 5) Detection and identification of protozoan oocysts, 6) Iodine staining of protozoan cysts and its identification, 7) Counting number of oocysts, cysts, and eggs of parasites, 8) Taking pictures of oocysts, cysts, and eggs of parasites, 9) Measuring of oocysts, cysts, and eggs of parasites in diameter, 10) Immunefluorescent staining using specific monoclonal antibody, 11) Identification of Trematoda eggs, 12) Histopathologocal diagnosis of intestine infected with protozoa, 13) Collecting samples in livestock fields, 14) Summarization of sample information
4	Dr. MIKAMI Osamu	Pathological Diagnosis	National Institute of Animal Health, Japan	< Introduction of special staining methods such as specific immune staining method and observation techniques of tissue sections > 1) IHC (specific detection of influenza A virus in chicken), 2) Gram staining (Hucker-Conn method), 3) Ziehl-Neelsen staining, 4) Löffler's methylene blue staining, 5) PAS reaction, 6) Masson's trichrome staining, 7) Berlin blue staining, 8) Rapid embedding method, 9) Decalcification method (preparation of bone sample), 10) Necropsy procedure, 11) Sampling procedure for histopathological examination, 12) Sampling procedure for BSE examination, 13) Trimming procedure for brain (mammal and chicken), 14) Embedding, 15) Sectioning, 16) H&E staining (adjustment of automatic stainer), 17) Knowledge necessary to histopathological diagnosis, 18) Basics of presentation

No	Names	Field	Organization	Results of Activity
5	Dr. KOBAYASHI Sota (2)	Veterinary Epidemiology	National Institute of Animal Health, Japan	< Training and the transfer of the basic theory of epidemiology, Seminar on veterinary epidemiology, Data collection system on brucellosis surveillance, Sampling methods and procedures, Data analyzing method, Pilot site activity planning> Trasnferring techniques in epidemiology, - Knowledge & techniques, - Collection of the prior information, - Data analysis on the specific software (SPSS & R) Support on planning and implementation of the activities for the pilot sites, - Database preparation - Activity plan in Banten & Jakarta, - Drafting questionnaire for Banten province, 3) Training course on veterinary epidemiology and data analysis for the participants from all DICs and B/C type labs in West Java area (2 weeks)
6	Dr. FUJISAKI Kozo	Diagnosis of Parasitic Disease	Unaffiliated	< Diagnostic techniques on Theileria disease and chicken Leucocytozoonosis, Observation of protozoa in the blood smear, Detection of antibodies, Anatomy of mites for the sample preparation of PCR method> Diagnostic techniques of leucocytozoonosis in chicken by Gienna staining of blood smears and serological methods, 2) Collection of blood from chicken for determination of leucocytozoon parasites in the blood and the presence of antibodies, 3) Diagnostic techniques of theileriasis in cattle by Gienna staining of blood smears and PCR technique, 4) Dissection of ticks under dissecting microscope for preparation of specimens for PCR.
7	Dr. SHIBAHARA Tomoyuki (2)	Pathological Diagnosis	National Institute of Animal Health, Japan	< Improvement of theory and techniques related to the pathological diagnosis: HE staining and immunostaining, Special staining and positive control production for immunohistochemical staining, Sample collection method for BSE diagnosis > 1) Diagnostic criteria (OIE standard), 2) Handling of animals, 3) Autopsy techniques (cattle, goat, pig), 4) Sampling, 5) Macroscopical photography, 6) Recording, 7) Trimming, 8) Improved tissue processing, 9) Embedding 10) Making sections, 11) HE staining, 12) Special stains (Improved Gram stain and acid-fast stain), 13) Immunohistochemistry (e.g. Salmonellosis, infectious bronchitis), 14) Method for producing the positive control (e.g. Salmonella O4, O9 and Avian influenza), 15) Mounting (AEC), 16) Using a microscope, 17)Microscopical photography, 18) Creating a presentation, 19) Methods of the output, 20) Presentation, 21) Writing a paper (Indonesian Journal of veterinary pathology (IJVP) (Jurnal Patologi Veteriner Indonesia)), 22) Method of creating manuals
8	Mr. MIYAMOTO Toru (1)	Veterinary Public Health	National Institute of Animal Health, Japan	< Analytical techniques of residual pesticides and antibiotics in livestock products using high-performance liquid chromatography (HPLC)> Basic theory of Chromatography, 2) Basic theory and basic operating procedure of HPLC, 3) Basic theory and basic operating procedure of GC, 4) Basic techniques for analysis of pesticides and antibiotics, 5) Analytical method for quinolone antibiotics in animal products using HPLC, 6) Analytical method for organochlorine pesticides in animal products using GC, 7) Validation method for analysis, 8) How to arrange data and to make reports, 9) How to make presentation
9	Dr. ANRI Akira	Clinical Diagnosis	Unaffiliated	< Transffering techniques of bacteria culture in milk that is necessary to mastitis control of cattle > 1) Survey of current status and issues of mastitis control measures in the pilot site, 2) Transfer of bacteria examination techniques in milk necessary for mastitis control, 3) Conducting seminars on mastitis control for dairy farmers, 4) Making "Manual of mastitis control for cattle" (Indonesian)
10	Dr. SHIRAFUJI Hiroaki	Serologicl Diagnosis	National Institute of Animal Health, Japan	< Culture techniques of cell lines, isolation of arboviruses, identification of virus by genetic test, antibody testing by neutralization test > 1) Cell culture, 2) Virus isolation, 3) Virus isolation and identification, 4) Antibody test (neutralization test), 5) Pilot surveillance of arbovirus, 6) Seminar on arbovirus infection
11	Mr. MIYAMOTO Toru (2)	Veterinary Public Health	National Institute of Animal Health, Japan	< Transfer the detection technique of hormone (Trenbolone) remaining in the beef and cattle liver > 1) Aquiring techniques of analysis of the residual hormone (Trenbolone) using HPLC, 2) Verification and improvement of measuring techniques and protocols
12	Dr. KOBAYASHI Sota (3)	Veterinary Epidemiology	National Institute of Animal Health, Japan	< Transfer the Epidemiological concepts, theory method, Brucellosis surveillance and abortion surveillance, sampling method, Data collection and analyzing method> Analysis of risk factors on feeding management related to abortion occurrence of buffalo in Banten, 2) Formulated the abortion surveillance plan for the dairy cooperatives in West Java, 3) Hierarchy structure of diagnostic reporting system of DIC Subang, 4) Statistical analysis techniques
13	Mr. OKADA Motohiro (1)	Laboratory Facility Maintenance	Nihon Sekkei, Inc.	Investigation of current situation of Laboratory Facility Maintenance in DIC Subang, Medan and Lampung > Confirmation of maintenance staff (educational background and experience), 2) Situation of equipent management, 3) Implementation status of fumigation, 4) Exchange status of HEPA filters, 5) Utilization status of manuals and drawing, 6) Confirmation of issues reported b the project
14	Dr. TAGUCHI Masaji	Comprehensive Diagnosis	Unaffiliated	< Technical transfer of conprehensive diagnosis especially for the viral disease> cell culture techniques, virus isolation and neutralization test, 2) Implementation of abortion surveillance in terms of the viral disease, 3) Arbovirus isolation, 4) Akabane virus neutralization test, 5) Research on prevalence of Akabahe virus antibody in West Java Province, 6) Reccomendations on comprehensive diagnosis in DIC Subang

No Names	Field	Organization	Results of Activity
15 Mr. OKADA Motohiro (2)	Laboratory Facility Maintenance	Nihon Sekkei, Inc.	< Conduct training on Laboratory Facility Maintenance in DIC Subang, DIC Medan and DIC Lampung (Air conditioning, Automatic control system, Fumigation and HEPA exchange) > Adjustment of air volume balance in BSL Lab, 2) Formalin fumigation, 3) Exchange of HEPA filter, 4) Training by contractors, 5) Training by manufacturers
16 Mr. OKADA Motohiro (3)	Laboratory Facility Maintenance	Nihon Sekkei, Inc.	< Conduct training on Laboratory Facility Maintenance in DIC Subang, DIC Medan and DIC Lampung (Air conditioning, Water supply and drainage, Water treatment system and Generator) > Training and repairing of the air conditioner, 2) Failure check and training on wastewater treatment system, 3) General training on plumbing system, 4) Improvement of air filters in Poultry House, 5) Checking failure of ATS equipment, 6) Award the Training Certification, 7) Hearing of training outcomes
17 Dr. TAKAHASHI Yuji	Biochemical Diagnosis	National Institute of Animal Health, Japan	< Transfer the techniques of Biochemical diagnosis > 1) Transfer the biochemical diagnostic technique using a spectrophotometer and ELISA reader, 2) The mesuring method of serum component (Albumin, ASAT (GOT), Bilirubin, Cholesterol, Gamma-GT, NEFA, β-Hydroxybutyrate (Ketone body), Ca, Mg, P, method of measuring Urea), 3) Application of biochemical diagnostic techniques in abortion surveillance of cattle

5. カウンターパート配置

Assignment of Counterpart

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No	Name of Counterpart	Position /	Field in charge	Term of A	kssignment			2011				201	-			201					914		201		Remark
	raint at country part	Organization	T KEEL SHE CHARLES	From	To	7 2	9 3	o 11 12	1 2	[3] 4	\$ 5 6 § 1	. R ajı	16(1)	2 3 4	3 6	2 [8 [9]I	e n c	1 2 3	4] 5 6	1 3	a jugara	a[1[2]3	4 5 6	6 1	***********
1	Dr. Prabowo Ropatiyo Caturroso, DVM, Ph.D	Director General: Directorate General of Livestock and Animal Health Services (DGLAHS), Ministry of Agriculture	Project Director	2011,7.17	2011.12.31					+			- -					#						$\frac{1}{2}$	Moved
2	Dr. Ir Syukur Iwantoro, MS, MBA	Director General Directorate General of Livestock and Animal Health Services (DGLAHS), Ministry of Agriculture	Project Director	2012.1.1																					
3	Dr. Pudjiatmoko, Ph.D	Director: Directorate of Animal Health (DAII), DGLAHS	Project Manager	2011.7.17		0/2						H								i			H	\mathbb{H}	
4	Dr. Budiantono, DVM, M.Sc	Head: Disease Surveillance Sub- Directorate, DAH	Deputy Project Manager	2011.7.17	2012 1.31					-														\mathbb{H}	Moved (BPMSOH)
5	Dr. Widjajanti, DVM	Head/Disease Surveillance Sub- Directorate, DAH	Deputy Project Manager	2012.21	2012 7.31			H													H		H		Moved (DGLAHS)
6	Dr. Muhammad Syibli, DVM	Head: Disease Surveillance Sub- Directorate, DAH	Deputy Project Manager	2012.8.24	•		H	11	-	H													H	- -	
7	Dr. Muhammad Syibli, DVM	Director DIC Subang	Deputy Project Manager	2011.7.17	2012.8.23									Ĭ.	L.						$\left\ \cdot \right\ $	Ш			Movel (DGLAHS)
8	Dr. Liliek Indrayani, DVM	Director: DIC Subang	Deputy Project Manager	2012.8.24			H	11		Ħ															
9	Dr Sodirun, DVM., MV Sc	Coordinator of Virology Laboratory, Head Section of Veterinary Services	Veterinarius (Virology)	2011.7.17																			1	-	***************************************
10	Dr. Trian Mahawan	Coordinator of Virology Laboratory	Veterinarian (Virology)	2011.7.17	-																		\blacksquare	71	
11	Dr. Yuliyanti	Staff of Vicology Laboratory	Veterinanan (Virology)	2011 7 17	-																			- -	
12	Dr. Suryo Purnomo Edi	Staff of Scrology Laboratory	Veterinarian (Virology)	2011.7.17																	H		H	-	Iraduste school 2014 9-2016 8)
13	Dr. Niken Resputi Maharani	Staff of Virology Laboratory	Vaterinarian (Virology)	2014.3	-	H	H	H	H		H												H	\mathbb{H}	
14	Mr. Atif Ibrahim	Staff of Scrology Laboratory	Paramedic	2011.7.17																			H	\mathbb{H}	
15	Mr. Sulyan Taflazani, Amd	Staff of Vitology Laboratory	Paramedic	2014.6	-	F	dame.	100	H	H			10			\mathbb{H}							H	\mathbb{H}	
16	Dr. Putut Eko Wibowo	Coordinator of Virology Laboratory, Head of Veterinary Services Section	Veterinarian (Epidemiology)	2011 7.17																			П	\mathbb{I}	
17	Dr. Satriyo Setyo Utumo	Staff of Epidemiology Laboratory	Veterinarian (Epidemiology)	2011 7.17																	H		1		
18	Dr. Aprizal Panus	Staff of Epidemiology Laboratory (Transferred from Serology Lab in 2014)	Veterinarian (Virology)	2911.717	-) radioste school 2011 (2-2014 15)
19	Dr. Witnahum Sodik	Staff of Epidemiology Laboratory	Vetermarian (Epidemiology)	2011.7-17	2013.10.30												N N		\mathbb{H}	Ш		H	Н	+	Moved (Pusvetna)
20	Dr. Agus Hattadi	Chief of Animal Experimental Lab (Transferred from Admin in 2014)	Veterinarian	2011.7.17																			H	#	
21	Mr. Firman Duk K	Staff of Epidemiology Laboratory	Paramedie	2011.9.1		~																H		-	University 2014 9-2016 81
22	Ms. Selviyanti Nurusiia	Staff of Epidemiology Laboratory (Transferred from Administration in 2013)	Paramedic	2013 2 1																			1		
23	Mr Ipat Hikmatul Isro	Staff of Epidemiology Laboratory (Transferred from Virology Lab in 2014)	Paramedie	2011 7 17	+																				
24	Mr. Redi Permana, S.Kom	Staff of Epidemiology Laboratory	Contract	2012.1				+															Ш	\pm	
25	Dr. Suharno	Coordinator of Parasitology Laboratory	Veterinarian (Parasitology)	2011.7.17	-																			1	
26	Dr Sylvia Maharani Ananta, M.Se	Staff of Parasitology Laboratory	Vetermarian (Parasitology)	2011.7 17	2013.3.1										- -		1								Noval 2013.) (DGLAHS)
27	Dr. Isrok Malikus Suli	Staff of Parasitology Laboratory (Transferred from Biotech Lab in 2012)	Veterinarian (Parasitology)	2011.7.17															200						Staduste achoril (2014 1-2016 1)
28	Ms. Fith Diah Anggreim	Staff of Parasitology Laboratory (Transferred from Virology Lab in 2015)	Paramedic	2011.7.17																			\prod		l Service - No.
29	Mr Dudi Widi, Amd	Staff of Parasitology Laboratory	Patamedic																				壯	- -{	Linversity (2014.9- 2015,8)
30	Mr Tasmaya	Staff of Parasitology Laboratory	Paramedic	2013.8		-	-	+- -		Service of Paris		+											\coprod	- -	

No		Position /		Term of A	Assignment	T	2011		T	2012		Т	2013		1	2814	1	2015	I
	Name of Counterpart	Organization	Field in charge	From	To	7 8 9 10	11 12	1 2 2	1 3 6 7	E 9 16 ² 1	12 1 2 3	1 5 6	7 8 9 10 1	njej i 2 3	45 6 2	# 9(1E II)	\$[1]2]3	1 5 6	Remurk
31	Ms. Ratna Medani	Staff of Parasitology Laboratory	Солтраст	2012 (1										ALL STATES	
32	Ms. Veni Alvenia	Staff of Parasitology Laboratory	Contract	2014	<u> </u>					+++		1						+	
33	Dr Rince Monta Bular Bular	Head of Administration (Transferred from Bacterfology in 2012)	Vetennarian (Baceteriology)	2011 7.17	2014.10.17														Moved 2014 to (DGLAHS)
34	Dr. Ali Rahmawan	Coordinator of Bacteriology Laboratory	Vetermarian (Baceteriology)	2011 7.17	٠.						++					1111		H	-
35	Dr. Bagyaningtyas A.	Staff of Bacteriology Laboratory	Veterinarian (Baceteriology)	201191	-														
36	Ms. Euis Sitt Martamah	Staff of Hacteriology Laboratory	Paramedic	2011 7 17										##		4		1	
37	Ms. Dewi Pramesti	Staff of Hacteriology Laboratory (Transferred from Finance in 2015)	Paramedic	2011.7.17	•														
38	Dr. Tri Juwanto	Coordinator of Pathology Laboratory	Veterinarian (Pathology)	2011.7.17	•														
39	Dr. Rinto Sukoco	Staff of Pathology Laboratory (Transferred from Virology in 2012)	Veterinarian (Pathology)	2011.7.17	•														
40	Mr. Eka Mahpudin	Staff of Pathology Laboratory	Patamedic	2011.7.17	٠													1	University (20149-2015 t)
41	Mr. Dani Pratama	Staff of Pathology Laboratory	Contract	2014.1			Sanda Sanda	11										\mathbb{H}	
42	Dr. Aji Barbora Niasono	Coordinator of Public Health Laboratory	Veterinarian (Public Health)	2011.717															
43	Dr. Puttik Allamanda	Staff of Public Health Laboratory	Vetennarian (Public Health)	2011.717	•														
11	Mr. Dudi Iskandar	Staff of Public Health Laboratory	Paramedic	2011.7.17						1									
45	Mr. Guswanto	Staff of Public Health Laboratory	Paramedic	2011 7.17															Grahase school (2014 (9.52)79)
46	Ms. Fenti Widiasuci	Staff of Public Health Laboratory	Paramedie	2011 9.1	<u> </u>													Ш	
47	Mr. Adi Hidayai	Staff of Public Health Laboratory (Transferred from Parautology Lab- in 2014)	Paramedic	201191															
48	Dr. Sunarno	Staff of Biotechnology Laboratory	Veterinarian (Biotechnology)	2011.7.17											1				
49	Ms. Titin Haryati, M.Bit	Staff of Biotechnology Laboratory	Paramedic	2011.7.17	2013.3.15														Moved 2013 3 (BCTPTH Begon)
50	Ms. Fitriani	Staff of Biotechnology Laboratory	l'aramedic	2013.8	-					and the second									
51	Mr Lukman	Staff of Biotechnology Laboratory	Peramedic	2011.7.17	-					i ii					1)				
52	Mr Komar	Staff of Administration	Paramedic	2011.7 17														41.1	
53	Mr. Hartono	Staff of Administration	Administration	2011.7.17															
ᅿ	Mr Yaya Sunagi	Staff of Administration	Administration	2011.7.17	-														
55	Mr. Sarwadi, Amd	Staff of Administration	Maintenance	2011 7.17															
56	Mr. Lukman Hakim	Staff of Maintenance Division	Maintenance	20[1.7.]7															
57	Mr Eko Baryono, Amd	Staff of Administration	Paramedie	2014-6	-			11		and the second			HH	Ш				Walter Account	
58	Ms. Eni Trimumngssh	Staff of Finance Division	Paramedic	2011.717	-													Ш	
59	Ms. Nunung Nurhasana.	Staff of Finance Division	Administration	2011.7.17	•													H	
60	Ms. Kartika, SE	Staff of Finance Division	Administration	2011 7.17												411	Ħ		Graduste school (2014 9-2017 8)
61	Ms. And.	Staff of Finance Division (Transferred from Maintenance in 2014)	Maintenance	2011717	,														
	Mr Luki, Amd.	Coordinator of maintenance Division	Maintenance	2009.1	-														11.10.10.10.10.00
63	Mr Vendn	Staff of Maintenance Division	Centract	2013.1	•														
64	Mr. Iyan Supian	Staff of Maintenance Division	Contract	2009.1														Н	
$\overline{}$		1	·		 		·		• • • • •										

T: Number of Trainer	t T: Mumber of local trainer	

		nterpart Training	_					T: Number of Trainer, LT: N	nonber of local tr	nines						Aı	ıne	ex	6
No.	Lo	unterpart Training in Japa Name of Counterpart	Field in charge	Name of training Course	Term of	Training To	Supporting Organization	Remarks	7 1 9 16	l.1	Z912 4 5 6 7 2 9 10 11 12 1	2[3]4]	20[3 9 [10][1] 12 1] .	2 1 1	5 6 7	2014 t 9 16	11 12 1 2		2015 5 6 7
1	Dτ.		Stati of Epidemiology Laboratory, DIC Subang	Zoonosis Control in Japan	2011.8.15	2011.9.15	ЛСА	Hokkasdo Uraversity							111		$\overline{\Pi}$		
2	Dr.	Ali Rahmawan	Staff of Bactenology Laboratory, DIC Subana	Zoorsous Control in Japan	2011 א. 15	2011.9 15	лса	Hokkaido University										10000	
3	Dr.	Rinto Sukoco	Staff of Pathology Laboratory, DIC Subang	Research on Veterinary Technology in Japan	2010.3 16	2011.10-15	лса	NIAH							i				
4	Dr.	Isrok Malikus Sufi	Staff of Biotechnology Laboratory, DIC Subang	Research on Veterinary Technology in Japan	2010.3.16	2011.10-15	ЛСА	NIAH											
5	Dr.	Bagyaningtyas Anggorowah	Head of Bacteriology Laboratory, DIC Subang	Research on Vetermany Technology in Japan	2012.3.27	2012, 10,27	ЛСА	NIAH											
6	Dr.	Trian Mahawan	Staff of Virology Laboratory, DIC Subang	Zeomosta Control in Japan	2012.8.12	2012.9.13	ЛСА	Hokkaido University											
7	Mr.	Afif Ibrahm	Staff of Virology Laboratory, DIC Subang	Zoonous Control in Japan	2012.8.12	2012.9.13	лса	Hokkaido University											
8	Mc.	Guswanto	Staff of Public Health Laboratory, DIC Nubang	Advanced Research Course on International Animal Health	2012 10:22	2013.8.24	ЛСА	Obilitio University of Agriculture and V.M.											
9	Dr	Suryo Purnomo Edi	Staff of Serology Laboratory, DIC Subang	Research on Vetermary Technology in Japan	2013.3 27	2013 10.30	ЛСА	NIAH							i				
10	Dr.	Puttik Allamanda	Staff of Public Health Laboratory, DIC Subarst	Advanced Reseasch Course on International Animal Health	2013 10.22	2014.8.22	ЛСА	Obihiro University of Agriculture and V.M.			30.00								
11	A§r.	Eka Mahpudin	Staff of Pathology Laboratory, DIC Subang	Training on Veterinary Diagnosis for Paramedica	2014.2.2	2014.4.26	JICA	NIAH											
12	Ms.	Euis Siti Marianiah	Head of Bactetiology Laboratory, DIC Subang	Training on Veterinary Diagnosis for Paramedics	2014.2.2	2014.4.26	JICA	NIAH	ļ		An justice a								
13	Dr.	Sultamo	Staff of Parantology Laboratory, DIC Subang	Research on Veterinary Technology in Japan	2014 3 27	2014 10 30	JICA	NIAH			* Auto Property of the Control of th							Ш	
14	Mr	Afif Ibrahim	Staff of Vitology Laboratory, DIC Subang	Training on Veterinary Diagrams for Paramedics	2015 1.18	2015.4 11	ЛСА	NIAH											
15	Mr.	Lukman	Staff of Biotechnology Laboratory, DIC Subang	Training on Vetenmary Desgrands for Paramedies	2015.1.18	2015.4 11	ЛСА	NIAII											
16	Dr	Aprizal Panus	Staff of Epidennology Laboratory, DIC Subang	Research on Veterinary Technology in Japan	2015.3 29	2015 (0.31	ЛСА	NIAH											

-{2) C	ounterpart Training in Indo	nesia and Third country																									
<u></u>		Name of Counterpart	Field in charge	Name of training Course	Term of	Training	Supporting	Remarks		2611				20	12					2013				20	44			2015
I.	٩	Name of Counterpart	FRIG IN CHAIGE	takine bi training Course	From	Ta	Organization	residat 63	7 8 9	18 11	2 2 2	3 6	5 61	1 1 9	10 13 1	2 1 2	3 4	5 6	7 2	9 10 11	12 1 2	2 3 4	5 6	7 5 9	36 11 12	1 213	3 41	5 6 :
Π,	Dr	Survo Purnomo Edi		Diagnosts of Avian Influenta at Source in	2011.10.7	2011.10.31	Dard Country Training							Π	- 1		H		\top	Ti	ΠT	7 1	$\Pi\Pi$	777	П	1 T T	T	TT
	12.75			Southeast Asia Region in Malaysia	2011.20.7	2011.10.31	Programme (TCTE)							11.		<u></u>	<u> </u>	111		111	1							
- 1		Alt Rahmawan	Staff of Bacteriology Laboratory, DIC	Training on diagnosts & surveillance of	2012 5 29	2012.6.7	JICA			1 1	111	1			-11	1 !	П					11'	111	411	ı I I	1 1 1		1 !
1	1827	Att Kanmawan		Brucellosis in Thailand		2012/07	JICK							Ш.,			LI	1_1_Ĺ				'_ا_ل_ل				1_1_1		
- 17		3.F. 3 43 33	Staff of Epidennoogy Laboratory, DIC	Training on diagnosis & surveillance of	2012.5.29	2012.6.7	JICA			ļ		1		H	Ιi		П										П	
- 1 :	ı Jıx	Witnahum Sodik		Brecelloss in Thadand	2012.5.29	2012.0.7	DICK			1 1 1	1 1 1			1 1	- 1 1	1	i I	1 1	- i i	111	1 1	11 1	111		ı I I	111	1	1 1

(3) Seminars, Workshops or Trainings conducted in Indonesia (More than 2 days)

No	Name of Traince	Vraue	Name of training Course	Term of	Training	Supporting	Remarks			2011				:	2012					:	:013				2	014			2015	
				Freeza	Τo	Organization		7.	9 20	0 11 1:	2 1 2	3 4	5 6	7 1	9 16 1	5 12 t	2	3 4	5 6	7 2	15 55	12 1 2	2 3 4	5 6	7 = 9	36 11	12 1	2 5 1	1 5 6	7
1	all DICs in Indonesia, NVDAL, RIVS, CVBB	DIC Subang	Annual Meeting of Parasitology Laboratory in Subang	2011.9.1	2011.9.4	Indonesian Government				П		П							II	П						П		\prod	\prod	
2	Dr.Putut, Dr.Aji	Head Section of Veterinary Information, DIC Subang	Training on Zoonosis Disease and Bio- safety (Jakarta)	2011.9.8	2011.9.9	Indonesian Government		ì																			Ì			Ĺ
3	staff in DIC Subang and 3 provinces	Ciater, Subang	Coordination Meeting of Animal Health	2011 9 12	2011.9.13	Indonesian Government	T 59, LT 7 (Prof.Drh. Setyawan Budhiarta, MPH, Ph.D., et al.)	es en wemen					and																	
4	staff of Parasitology lab in all DICs	DIC Subang	Meeting for Improvement of competence of Parasitology Laboratory	2011.10.27	201 (.10.30	Indonesian Government	T 40, LT I (Dr.Dth.Umi Cahyaningsih, MS)												a minuti mia madai 'm a											ļ
5	staff of DIC Subang and DINAS	Bandung	Coordination Meeting of Animal Health and Veterinary Public Health in DIC Subang corverage area	2011.11.7	2011.11.9	Indenesian Government	T 75, LT 4 (Drh. Kuma Achgadi, MS, et al.)						1																	_
6	staff in DIC Subang and 3 provinces	Ciater, Subang	Coordination Meeting of Veterinary Public Health	2011.12.13	2011.12.14	Indonesian Government	T-40, LT 5 (Drh. Endang Ekowati, et al.)																							i
	all staff in DIC Subang and participant in DIC coverage area	DIC Subang	Annual meeting of Subang DIC and Stakeholder in DIC coverage area	2011.12.19	2011.12.21	Indonesian Government, IICA																								i
8	all staff in DIC Subang	DIC Subang	Biosafety Training in DIC Subang	2011.12.26	2011 12:28	Indonesian Government																								
9	all staff in DIC Subang	DIC Subang	In-house Training Workshop on principles & Practices Biosafety	2012.1.9	2012 1.10	Indonesian Government				1,111,111																				

No	Name of Counterpart	Field is charge	Name of training Course	Term of	Training To	Supporting Organization	Remarks	71.		2011	2) 1 2 ?	1 11 4	1617	20		19! 1 3	111	1414	£ 1 •	2012		dan sa				014 (14) (13)	12 t 2		2015
10		DIC Subang	Veterinary Pathology Workshop and	2012 3 25	2012.3 31	Indonesian	T 70, LT 5 (Dth.DMN Dhanna,	1	171	1"			1	***	IU II		H	3 6	Ħ	9 10	9 11 12	111	-11	7	117	16 11	12 1 2	H	3161
·	Or. Isrok and Dr.Aji	Balı	National Scientific Meeting XI Asia Pacific Bioxafety Confference &	2012 4:24	2012.4.27	Government Indonesian Government, RCA	M.Se., Ph.D, et al.)	\dagger					\vdash	\top	Tİ		$\dagger \dagger$	Ħ	H		$\dagger \dagger$			1	$\dagger \dagger$	\Box	11	H	\dagger
12 (F. Sodirun and 40 Participant from Animal Health Centers	C(ster, Subang	Workshop Coordination Meeting with field staff in DIC Coverage	2012.5.14	2012.5 (5	Indonesian Government, RCA	T 50, LT 7 (Prof. Dr. Drh. Iman Supriantos, et al.)	H	i			Ħ					\parallel			\parallel				+			+		+
,, ,	Puskeswan)	DIC Subang	Training of human resource improvement for field and laboratory staff in DIC Subang coverage area	2012.5.22	2012.5.25	Indonesian Government	T 39, LT 4 (Drh. Susan M Noor, et al.)	-					İ			Ì								-			\parallel		\parallel
14	ill DICs in Indonesia and DINAS Animal Health Services	DIC Subang	Laboratory Competency Improvement meeting for Biotechnology laboratory	2012.5.29	2012.5 31	Indonesian Government	T 35, LT 2 (Dr. Dih. IGN Mahardika and Dih. Adjie, M.Si.)																						
15	Or. Satriyo, Dr. Sodik and 20 sarticipants from other DICs & 3/C types labs	DIC Subang	Subang (Dr Kobayashi)	2012.6.18	2012.6.29	лса						}															-		
	Dr.Sodirun, Dr.Rinto, Dr.Suryo, Dr iunarno, Dr. Isrok, Dr.Kocke	Yogyakarta	Rapat Teknis dan Pertemuan Ilmiah Kesehatan Hewan	2012.6 20	2012.6.22	DGLASS		Π	П	П				П	П	T	П	П	П	П	П		П	Π	П	П	Π	П	П
	dl staff in DIC Subang	DIC Subang	In-house Training Identification and Deepening of SNI/IEC 17025:2008	2012.9.17	2012.9.19	ladonessza Government, RCA																	ANADOMINANA DI MANADA DE ANADA						
	taff from DIC Subang, HIB .embang, BET Cipelang and BP2HK	DIC Subang	Parasitology seminar lectured by Dr. Fujisaki	2012.10.12	2012.10.12	яса			П	П				П		П	T	H	П	17	Π		7	П	T				\top
[]	d staff in DIC Subang	DIC Subang	In-house Training for SNI LISO 9001:2008	2012 10 29	2012.11.1	Indonescan Government, BCA	T 47, LT 1 (Mr. Rohmat Sitohang, MM)														П								
	all staff in DIC Subang and cartecipants in DIC coverage area	Bandung	Annual Coordination Meeting of Animal Health and Veteriner Public Health	2012.11.7	2012.11.9	Indonesian Government, JICA																	-	-					-
21	ll DICs in Indonesia and DINAS Animal Health Services	DIC Subang	In-house Training Control and Prevention of BSE and FMD in Indonesia	2013.2.19	2013.2.20	Indonesian Government, JICA	- Notes and the second																						, , , , , , , , , , , , , , , , , , ,
22 1	Animal Health Services of Hanten Province and Districts, B type lab, Dr Putut, Dr. Ali, Dr.Satriyo	Scrang	Workshop for Brucellosis surveillance in Banten province	2013-4.1	2013.4.2	Provincial Government, Indonesian Government, JICA]					Щ	0.50						Ц			-			Ш		***************************************
	toff in DIC Subang, B type labs, other DICs	DIC Subang	Infol.ab Workshop	2013.7 22	2013.7.26	Indonesian Government, JICA	T 41, LT 1 (Dr. Soegibanho, DVM, Ph.D)								sono contrato de la contrato del la contrato de la														
24 1	fall in DIC Subang and DINAS, 3 type labs, Dairy coorperatives, 3BPTUSPB, BBPMSOH, BIB	DIC Subang	ffCA Short-term Expert's servinar - Current Concept and Practice on Maxitus Control (Dr Auri)	2013.6.14	2013.6.14	лса	T-40		and other safe						-														
	taff in DIC Subang and 3 rovinces	Ciater, Subang	Annual Coordination Meeting for Assimal Health, Public Health and Animal Health Center in Bogor	2013.9.17	2013.9.19	Indonesian Government, JICA	T 170, LT 2 (drh. M. Azhar, Prof. Dr. dsh. 1 Wayan Teguh Wibawan)		-						Annual Paris														-
26	Il staff in DIC Subang	DIC Subang	Training of Internal Audit for ISO 9001	2013.10.23	2013.10.25	Indonesian Government, JICA	T-40, LT 2 (Drh. Sn Birstang Kusumowinahyu, M.Si, Ir.nef Syawaladi)		20.4	ANY THEORY WOMEN'S ANY							Andrews of the second												A CONTRACTOR OF THE PARTY OF TH
	taff in DIC Subong, B, C type abs and Puskeswan	DIC Subang	Training on Parasitic Discuse Diagnosis	2013 11 12	2013.11.14	Indonesian Government	T 30, LT 2 (BBALITVET)																						
	taff in DIC Subang, B, C type abs	DIC Subang	Training on Sampling & Necropsy of Avian and Ruminant livestock	2013.11.25	2013.11.27	Indonesian Government	T 25, LT 1 (Drh.D.M.N Dharma, M.Sc., Ph.D)			and the second																			\prod
ا (" ا	talf of Pathology Laboratory in MC Subang	DIC Subang	Training on l'athological Dragnosts by Local Expert	2013 11.28	2013 11.29	лсл	T 3, LT 1 (Drh.D.M.N.Dharma, M.Sc., Ph.D)	ì	W. James							-											П		
30 I	arge-scale (urm, slaughterhouse, ivestock market, field reterinarian, dairy cooperative and	DIC Subang	Livestock forum in Subang district (Creative Communication Meeting)	2013.12.11	2013.12.11	Indonesian Government	T 60, LT 1 (Subang District)								de sado se de sado se														
	PINAS DKI Jakarta, B-type Lab. (PSHU, Staff of DIC Subang	Jakarta (Pondok Rangon)	Workshop for Brucellous surveillance in East Jakarta	2013 12.13	2013.12.13	Indenesian Government	T 31, LT 1 (Drh. Pammsareng, KPSHU)								-														
	or,Sunamo, Mr. Lukman, Staff fom all DICs	DIC Subang	Refresher Training on PCR	2014.1 27	2014.1.30	FAO 	T 25, LT 2 (FAO: Dr.Chrismorisi et.al)		-																				
	taff in DIC Subang, Banton rovince and districts	Cilegon, Banten	Coordination Meeting for Amnal Health in Banten Province	2014.4 29	2014 4 30	Indonesian Government, JICA	T 120, LT 2 (Frol deb.Sey an an Budikarta, SEH, Ph.D (USSM), De.Herta Sanch a (USSM), Dr. April Wardhana, S.K.I., M.S., Ph.D (BDALITVET)						P. State Company														***************************************		
	taff in DIC Subang and 3 wovinces	Tangerang, Banten	Areusl Coordination Meeting for Animal Health and Public Health	2014.5 20	2014.5.23	Indonesian Government, JICA	T70, LT4 (Prof. drh. Scry awar Badharta, KBH, Ph.D.) (UGA), De Hers Smelys (UGA), Hr drh. I Wopen Legab, Wikowan (BBALITVET), Dr. Didt. Talir S (BDALITVET)						aurono vocarrant						and of the second							***************************************			

		r	1	Term of	Training	Supporting		1	-	2011		т-		-	2012		_			28	13				**********	2014		\neg	201	<
No	Name of Counterpart	Field in charge	Name of training Course	From	Te	Organization	Remarks	7	# 9 10		1 2	3 4	5 6			t t2 1	2 3	a 5	6 7			12 1	213	5 6			1 12 1	2 3	1 [5]	_
33	and 3 provinces	DIC Subang	Workshop of Toxicology in 2014	2014.8,18	2014.8.22	Indonesian Government	T21, LT2 (IPB)								П					-				\prod		Π		П	П	
36	staff in DIC Subang, other DICs and 3 provinces	DIC Subang	To I technical training on Laboratory Field Linkage	2014.9.15	2014.9.19	Indonesian Government	T25, LT2 (FAO, IXILAUS)																							
37	staff in Puskeswan	DIC Subang	Surveillance Training for Puskeswan staff	2014.[0 27	2014,10,30	Indonessan Government, JICA	T 30, LT 2 (Prof. Dr. dr.k. 1 Way as Topuli Wikawan, MS (HTH), dr.k. Agung Badianto, PAL PAD (UGM)					li				***************************************														
38	Maintenance staff in DIC Subang. DIC Medan and DIC Lampung	DIC Subang	Laboratory Maintenance Training (Air volume, Automatic control system, Funnication, Changing HEPA fileter)	2014.11.18	2014.11.30	ЛСА	T10, ЛСА I, LT2 (PT Kurden, PT Azbil)																							
39	ILab, Puskeswan	I raijung Center in Bekasi	Training on Management of Discase Control for PUSKESWAN	2014.12.10	2014.12.14	Government, ACA	T30, LT7 (PB, UGM)																						\prod	
40	Maintenance staff in DIC Subaug. DIC Medan and DIC Lampung		Generalor)	2015 1 20	2015.1.27	ЛСЛ	T10, JICAT, LT5 (PT Kinden, PT Daikin, PT Ancka Bina Cura)					-							***************************************											-
41	staff of Parasitology Lab in DIC Subong and other 3 DICs		Baccomb manting on Daniertologic and Joint	2015,3,9	2015.3-13		T15, Japanese expert 2 (Obihiro Univ. (wate Univ.)								П								T	1						

(4) Counterpart Educational Degree

			***************************************	Period	of study	Place	Supporting Organization	Remarks
Ne	Name of Counterpart	Field in charge	Name of University	From	To	riace	Supporting Organization	Remarks
t	Dr. Aprizal l'anus	Subeng	Bogor Agriculture University	2011.2	2014,10	Bogor	Indonesian Government	Master Degree in Graduate School
2	Dr. Isrok Malikus Sufi	Staff of Parasitology Laboratory, DIC Subang	Bogor Agriculture University	2014 1	2016 1	Bogor		Master Degree in Graduate School
3	Dr. Suryo Purnomo Edi	E W	Gajak Mada University	2014.9	2016.8	Yogyakarta	Indonesian Government	Master Degree in Graduate School
4	Mr. Finnan Duk K	Subang	Halai Hesar Pelatihan Kesebatan Hewan BBPKH Cinagara Bogor	2014 9	2016,8	Bogor	Indonesian Government	Hachelor Degree in University
5	Mr Eka Mahpudin	Staff of Pathology Laboratory, DIC Subang	Balai Besar Pelatihan Kesehatan Hewan BBPKH Ciragara Bogor	2014.9	2016 8	Bogor	Indonesan Government	Hachelor Degree in University
5	Mr. Dudi Widi, Amd	Subang	Balai Besar Pelatihan Kesekatan Hewan BBPKH Cinagara Bogor	2014 9	2016.8	Bogor	Indonesian Government	Hachelor Degree in University
6	Mr. Guswanio	Staff of Vetermary Public Health Laboratory, DIC Subang	Obtain University of Agriculture and Veterinary Medicine	2014 10	20179	Hokkado, Japan	Agriculture and Veterinary	Doctor Degree in Graduate School
7	Ms. Kartika	1	Universitas Diponegoro Jawa Tengah	2014.9	2017 8	Semarang		Master Degree in Graduate School
8	Mr. Komar		Sekolah Tinggi (kmu Ekonomi Golong Rovong Jakarta	2008.6	2012.9	Jakarta		Hachelor Degree in University

Provision Equipment by the Japan side

13-3-001480 Grass Chopper

14-3-001484 Aspirator Vacuum Pump

14-3-001485 Differential Pressure Gauge

Neutralizer

Formalin Fumigation Sterilizer

Ammonium Hydrogen Carbonate

13-3-001481 Mupid-exU

13-3-001482 Fume Flood

F.Y. 2014

14-3-001486

14-3-001487

Mupid (Advance)

2150x740.5x1050

BIOBASE FX-100

BIOBASE TZ-100

testo 510

sigma-Aldrich Z675733-1EA Eyela 1000-S

Annex 7

(1) Major Equipment Provided by JICA (based on the A4 form or more than 5 million rupiah) Main Unit Price Amount Amount Opera Items, Model, Specifications QTY Place enanc Delivery Remarks Ref. No. (Rp, \$) (Rp, S) tion F.Y. 2011 F 44,750,000 44,750,000 386.282 DIC Subang Α Α 28/09/2011 Project Office SHARP MX-2301N P1109281 Copy machine Project Office, Parasitology, Bactenology, \$965 304,274 DIC Subang Α Α 24/11/2011 HP Pro 3300 4 \$3,860 Desktop PC P11112401 Pathology 146,619 DIC Subang 24/11/2011 Project Office, Epidemiology 2 \$930 \$1,860 Α Α P11112402 Notebook PC Lenovo Thinkpad L420 Bacteriology, Epidemiology, Administration, **\$**350 \$1,400 110,358 DIC Subang Α Α 4 P11112403 Color Printer Canon Pixma MX886 Pathology Project Office, Parasitology, Bacteriology, 24/11/2011 UPS Ica CKE1200 4 \$87 \$348 27,432 DIC Subang A A P11112404 \$3,150 248,306 DIC Subang Α Α 24/11/2011 Maintenance Hp Compaq Proliant ML350 1 \$3,150 P11112405 Server \$1,320 247,124 DIC Subang A A 24/11/2011 Maintenance Sony SSC-N20 8 5165 P11112406 CCTV Digital Video Recorder and \$1,815 247,124 DIC Subang Α Α 28/12/2011 Maintenance 1 \$1,815 P11122801 GANZ DR8H-DVD Monitor for CCTV 188,100,500 188,100,500 1.623.684 DIC Subang Α Α 07/12/2011 Project Office DAIHATSU Terios TX-MT-MC 1 P11120701 Vehicle 5,564,000 48,028 DIC Subang В В 07/12/2011 Project Office 4 1,391,000 P11120702 Digital Camera Panasonic Digital Camera LUMIX DMC-FP1 В В 07/12/2011 Project Office Sony Handyeam Cameoder HDR CX130 I 5,457,000 5,457,000 47,105 DIC Subang P11120703 Digital Video Camera 104,592,500 104,592,500 902,842 DIC Subang В В 19/12/2011 Bacteriology THERMO Multiskan EX Elisa System Work Station 1 P11121901 ELISA Reader 19/12/2011 Project Office, Epidemiology 16,692,000 144,085 DIC Subang В В GARMIN GPSMAP 62s 4 4,173,000 P11121902 GPS Terminal 29/03/2012 Pathology Lab Microscope CCD camera and 228,400,000 2,038,470 DIC Subang Nikon NI-U, DS-Fi2-U3 1 228,400,000 A Α P12032901 23/02/2012 Virology Lab A Α 3 6,412,400 19,237,200 171,692 DIC Subang P12022301 8 channel Pippetor 20-200ul CMSI, C200 - 8A-SL Membrane solution: VPJ0332 9,625,000 85,903 DIC Subang В В 19/03/2012 Virology Lab 9,625,000 P12031901 Vacuum pump 8,325,000 ВВ 8,325,000 74,301 DIC Subang 27/03/2012 Pathology Lab l P12032701 Slide Staining Set Finetek 4451 Y. 2012 33,646,500 300,295 DIC Subang 04/05/2012 Epidemiology Lab 33,646,500 ВВ IBM SPSS Statistics v.20 P12050401 08/05/2012 Project Office Mitsubishi Pajero Sport 4GX 4WD MT Vehicle (4WD) 458,000,000 458,000,000 4,087,650 DIC Subang A A P12050801 1,209,721 DIC Subang A 22/05/2012 Parasitology Lab 135,543,000 A TOMY LC-230 1 135,543,000 P12052201 Centrifuge 45,928,500 409,912 DIC Subang Α . A 22/05/2012 Bacteriology Lab TOMY ES-215 1 45,928,500 P12052202 Autoclave 91,491,000 816,557 DIC Subang 1 91,491,000 A A 29/05/2012 Bacteriology Lab Nihon VT-208 & TN-208 P12052901 Chest Freezer 6,412,400 8 channel Pippetor 20-200ul CMSI, C200 - 8A-SL 1 6,412,400 57,231 DIC Subang A A 10/07/2012 Parasitology Lab P12071001 04/10/2012 Bacteriology Lab 6,470,625 ВВ P12100401 Rabbit Retrainer Natsume KN-317 1 6,470,625 57,750 DIC Subang 06/11/2012 Bactenology Lab APC Smart UPS 1500VA & Serial 230 Volt type 5,950,000 49,427 DIC Subang В В P12110601 UPS for Thermal Cycler 1 5,950,000 82,000,000 82,000,000 ВВ 12/11/2012 Bacteriology Lab 681,174 DIC Subang P12111201 Thermal Cycler Bio-Rad T100 Refrigerated Micro Centrifuge for Fomy MX-107 145,000,000 145,000,000 1,290,355 DIC Subang В В 12/11/2012 Bacteriology Lab 1 P13012501 F.Y. 2013 5,600,000 54,432 DIC Subang 11/04/2013 Bacteriology Lab 13-3-001483 Stabilizer for Safety Cabinet MATSUYAMA AVR-KD-2GS 5,600,000 AAA 90,990 DIC Subang 11/05/2013 Experimental Animal

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7,300,000

38,115,000

16,300,000 5,100,000

5.400,000

5,400,000

16,200,000 Total Rp1,815,470,779 ¥16,833,045

9 000 000

7,300,000

38,115,000

16,300,000

5,100,000

16,200,000

A A

BBB

A A

ВВ

В В

В В 13/01/2014 Bacteriology Lab

17/10/2014 Virology Lab (Cell Preparation)

20/01/2014 Pathology Lab

06/11/2014 Maintenance

20/11/2014 Maintenance

20/11/2014 Maintenance

62,831 DIC Subang

328,056 DIC Subang

146,472 DIC Subang

45,773 DIC Subang

145,395 Medan, DIC

145,395 Medan, DIC

DIC Subang, DIC

DIC Subang, DIC

* Classification of the frequency of use of the equipment (by the manual for JICA coordinators)

rank	statement	frequency	others
A	used frequently	almost daily	
В	used well	1-3 times per week	
С	used in specific season(s)		needs reasons
D	not so much used	3-11 times per year	needs reasons
E	not used by specific reason		needs reasons

Local Cost Implementation

Local Cost Implementation						Auntao
(1) Indonesia						Unit: Rupial
Budget Item	2011	2012	2013	2014	2015 (budget plan)	Total Amount
1 Salary	420,510,000				3,614,822,000	
Base salary for all staff	75,240,000	1,602,833,000	1,633,363,000	1,716,677,000	1,517,273,000	6,545,386,000
Additional salary for all staff	-	311,110,000		716,981,000	850,769,000	2,925,758,000
Payment for Outsourcing Staf	265,200,000	402,720,000				
Operasional fee for staff	80,070,000	180,590,000			254,780,000	
Honorarium for lecturer	-	67,500,000			56,000,000	
2 Staff training and capacity building	255,100,000			862,617,000	1,024,920,000	3,643,373,000
Administration	-	152,900,000			-	152,900,000
Technical (outside training)	-	407,300,000		•		407,300,000
Inhouse training	-	450,736,000		•	-	450,736,000
3 Consumable, Reagentia and Equipment	9,442,017,400.00	3,636,456,200.00			4,357,254,000	22,842,164,600
for Diagnostic	7,294,221,000	1,911,026,000			2,911,943,000	
for reagents and small instruments	1,898,526,400	1,307,968,200			215,000,000	
For field surveillance	232,000,000	305,800,000			939,701,000	2,765,599,000
For Administration and biosecurity	17,270,000	111,662,000	250,400,000	138,810,000	290,610,000	803,752,00
4 Field survey	334,400,000	431,450,000			1,596,500,000	4,037,435,00
5 Utilities (electricity, water, etc)	420,000,000				707,400,000	
Electricity	-	468,000,000			540,000,000	
Water	-	10,200,000			72,000,000	123,600,00
Newspaper	•	2,290,000			5,400,000	
Telp and Internet		78,000,000		58,800,000	90,000,000	316,800,00
6 Equipment for others (Dormitory, Guest house etc.)	77,211,000	325,494,000		0	0	402,705,00
7 Facilities maintenance	257,452,000					
for Vehicles	78,000,000	184,700,000			122,000,000	
for Motorcycle	-	6,480,000			13,080,000	
for Building Facilities	179,452,000	331,880,000		342,070,000	693,200,000	
8 Vehicles	450,000,000				0	487,500,00
9 Additional food	33,252,000.00	52,080,000.00			130,560,000	
for Laboratory technician	18,252,000	22,080,000	36,960,000	36,960,000	66,960,000	181,212,00
for Others	15,000,000	30,000,000			63,600,000	
10 Computer and Equipment for office	65,000,000				0	280,000,00
lt Infrastructure (Building, Book, Furniture etc)	3,227,634,000	1,120,810,000			1,275,946,000	
12 Annual Coordination Meeting and Confirmation Test	328,500,000	489,550,000	455,300,000	421,200,000	252,200,000	1,946,750,00
13 Other	96,025,000	270,662,000	251,250,000	28,500,000	20,109,000	666,546,00
14 Project Counter Budget (for Equipment)	0	600,000,000			600,000,000	
Total Expenditure (Rp.)	15,407,101,400					63,707,558,600
Grand Total (Yen)	131,515,018	101,331,680				435,752,115
Exchange Rate (December)	0 008536	0 008572	0 008727	0.009665		

(2) Japan						Unit: Rupiah
Budget Item	2011	2012	2013	2014	2015 (from Jan to Feb)	Total amount
I General operating expenses	276,124,209	1,064,864,371	824,703,800	786,246,300		1,340,988,580
for reagents and small instruments	45,407,900	735,702,629	613,294,870	347,668,450	24,237,500	781,110,529
2 Air fares	1,615,000	22,037,900	7,646,300	62,321,400	5,501,300	99,121,900
3 Travel expenses (except airline fares)	26,650,000	84,913,800	80,401,900	120,196,000	31,406,800	343,568,500
4 Reward & compensation	13,630,000	93,640,100	105,854,900	172,611,300	13,352,200	399,088,500
5 Engagements (local consultants)	0	0	0	76,300,000	74,050,000	150,350,000
6 Engagements (local NGO)	0	0	0	0	0	0
7 Business agreement	0	0	0	0	0	0
8 Meeting cost	18,105,000	42,225,000	1,325,000	440,000	0	62,095,000
Total Expenditure (Rp.)	336,124,209	1,307,681,171	1,019,931,900	1,218,115,000	201,889,200	4,083,741,480
Grand Total (Yen)	2,869,156	11,209,443	8,900,946	11,773,081	0	34,752,626
Exchange Rate (Dec 2011, 2012)	0.008536	0.008572	0 008727	0 009665		

^{*} Total amount (2011) Indonesia; from Jan to Dec 2011, Japan: from Jul to Dec 2011

^(2012 - 2014) From Jan to Dec 2012 (2015) Indonesia: from Jan to Dec 2015 (Budget), Japan: from Jan to Feb 2015 (Actual)

Annex 9

Land, Building, Office and Facility provided by the Indonesia side

No.	Item	Place	Component
1	Project Office	DIC Subang	Office, Room, Desks, Chairs, Air Conditioners
2	Desks for experts in laboratories	DIC Subang	Desks, Chairs

10. プロジェクト成果物一覧

List of Products

Annex 10

	inting				ex 10
No.	Date	Item	Category	Distributed to	Printed copies
1	Oct. 2011	Project Introduction "Proyek Peningkatan Laboratorium Kesehatan Hewan"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative	500
2	Feb. 2012	Animal Disease Awareness "AVIAN INFLUENZA (AI)"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
3	Feb. 2012	Animal Disease Awareness "HOG CHOLERA"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
4	Feb. 2012	Animal Disease Awareness "DAGING YANG SEHAT"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
5	Feb 2012	Animal Disease Awareness "FASCIOLOSIS"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
6	Feb. 2012	Animal Disease Awareness "BRUCELOSIS"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
7	Feb. 2012	Animal Disease Awareness "RABIES"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
8	Feb. 2012	Animal Disease Awareness "ANTHRAX"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
9	Feb. 2012	Introduction of DIC Subang "BPPV SUBANG"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
10	Feb. 2012	Introduction of DIC Subang "DAFTAR TARIF PENGUJIAN BPPV SUBANG"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
12	Jan. 2013	Subang DIC Desk Calendar 2013 (by Indonesian budget)	Calendar	Dinas Provincial/Kabupaten office, National/ Provincial Institution	100
13	Feb 2013	Sampling method of cattle brain for BSE diagnosis (3 videos)	Video	Dinas Provincial/Kabupaten office (Slaughter houses), National/ Provincial Institution, Other DICs	40
14	Mar. 2013	Reprinted: Animal Disease Awareness "AVIAN INFLUENZA	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
15	Mar. 2013	Reprinted Animal Disease Awareness "HOG CHOLERA"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
16	Mar. 2013	Reprinted Animal Disease Awareness "DAGING YANG SEHAT"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
17	Mar. 2013	Reprinted Animal Disease Awareness "FASCIOLOSIS"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
18	Mar. 2013	Reprinted Animal Disease Awareness "BRUCELOSIS"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
19	Mar. 2013	Reprinted Animal Disease Awareness "RABIES"	Leaflet	Dinas Provincial/Kabupaten office, National/	1000
20	Mar. 2013	Reprinted Animal Disease Awareness "ANTHRAX"	Leaflet	Provincial Institution, Farmers Cooperative, Farmers Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
21	Mar. 2013	Reprinted: Introduction of DIC Subang "BPPV SUBANG"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
22	Mar. 2013	Reprinted New price list for diagnosis "DAFTAR TARIF PENGUJIAN BPPV SUBANG"	Leaflet	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	1000
23	Jul 2013	Manual Pengendalian Mastitis Pada Sapi Perah (Manual of Mastitis Control)	Manual	Dinas Provincial/Kabupaten office, National/ Provincial Institution, Farmers Cooperative, Farmers	20
24	Mar 2015	DIAGNOSTIC FLOWCHART MANUAL - Reference for the Animal Priority Diseases in Indonesia -	Manual	Preparing to print	50

(2) Research findings/ Papers

No.	Date of receipt	Title	Auther	Journal/ Magazine	Media
1	Jun. 2011	Monitoring Penyakit IBR dan BVD pada Ternak Sapi di Wilayah Banten, Jawa Barat, dan Jakarta Tahun 2010	Dr. Sodik, Dr. Satriyo etc	Buletin BPPV Subang, Vol.1 No.1 Juni 2011	Article
2	Jun. 2011	Serosurveilans Penyakit Anthraks di Jawa Barat Tahun 2010	Dr. Rince, Dr. Ali, etc	Buletin BPPV Subang, Vol.1 No.1 Juni 2011	Article
3	Jun 2011		Dr. Sodirun, Dr. Trian	Buletin BPPV Subang, Vol 1 No 1 Juni 2011	Article
4	Jun 2011	Studi Kasus Mycoplasmosis pada Babi di Kabupaten Kuningan Propinsi Jawa Barat	Dr. Tri, Dr. Trian, etc	Buletin BPPV Subang, Vol 1 No 1 Juni 2011	Article
5	Jul 2011 Dec. 2011	Situasi Perkembangan Penyakit Rabies dan Pengendahannya di Provinsi Jawa Barat & Banten	Dr. Sodirun	Proceeding of Technical Meeting and Academic Convention of Animal Health Surveillance, Vol 1, No 2, 2011 Buletin BPPV Subang, Vol 1 No 2 Desember 2011	Contribution & Presentation
6	Jul. 2011 Dec. 2011	Monitoring dan Surveilans Penyakit Brucellosis di Wilayah Kerja BPPV Subang Tahun 2010-2011	Dr Alı	Proceeding of Technical Meeting and Academic Convention of Animal Health Surveillance, Vol. I, No 2, 2011 Buletin BPPV Subang, Vol. 1 No 2 Desember 2011	Contribution & Presentation
7	Jul 2011 Dec. 2011	Monitoring Penyakit Trichomoniasis pada Sapi Bibit di Wilayah BPPV Subang	Dr. Sylvia	Proceeding of Technical Meeting and Academic Convention of Animal Health Surveillance, Vol. 1, No 2, 2011 Buletin BPPV Subang, Vol. 1 No 2 Desember 2011	Contribution & Presentation
8	Dec 2011	Kasus Colibacillosis Pada Ayam Diwilayah Kerja BPPV Subang Tahun 2011	Dr Trian, Dr Shibahara, etc	-	Poster
9	Dec 2011	Kejadian Mycoplasmosis Pada Babi Diwilayah Kerja BPPV Subang Tahun 2011	Dr Trian, Dr Shibahara, etc	-	Poster
10	Dec 2011	IDAN Buffor Amedicact® nine until Databet Intelet	Dr. Isrok, Dr. Nakamura	-	Poster
11	Dec 2011	Penentuan High Pathogenic dan Low Pathogenic Virus Avian Influenza (Al) H5 secara In Vitro Menggunakan Chicken Embryo Fibroblast (CEF)	Dr. Suryo, Dr. Trian, etc.	-	Poster
12	Jan. 2012	Animal Production and Animal Health in the Republic of Indonesia	Dr Shibahara Tomovuki	Livestock Technology, Feb, 2012	Article
13	Apr. 2012	Activity as a short-term expert of JICA - Project on Capacity Development of Animal Health Laboratory in Indonesia	Dr. Matsubayashi Makoto	NIAH News, No 45	Article
14	Jun 2012	Perbedaan Hasil Pengunaan Antigen Protein G dan Whole Virus		Contributing to "PROSIDING" (publication of investigation/research work on animal health, issued by DGLAHS.	Contribution & Presentation
15	Jun. 2012	Pengembangan Diagnosa Al Secara 1HK (Imunohistokimia) Pada Kasusu Lapangan Di BPPV Subang	Dr Rinto	Contributing to "PROSIDING"	Contribution & Presentation

No.	Date	ltem	Category	Distributed to	Printed copies
16	Jun 2012	Penentuan HPAI dan LPAI Virus AI H5N1 Secara In Vitro Menggunakan Biak Sel CEF (Chicken Embryo Fibroblast)	Dr. Suryo	Contributing to "PROSIDING"	Contribution & Presentation
17	Jun 2012	Development and Evaluation of ELISA to Detect Antibodies to NDV and AIV	Dr. Sunarno	Contributing to "PROSIDING"	Contribution &
18	Jun. 2012	Improvement of ITS1-PCR System by Using FTA Cards and	Dr. Islok	Contributing to "PROSIDING"	Presentation Contribution &
19	Sep. 2012	Amndirect Plus Buffer for Detection of Trypanosoma evansi Activity as a short-term expert of JICA (Pathological Diagnosis) - Project on Capacity Development of Animal Health Laboratory in Indonesia	Dr Mikami Osamu	NIAH News, No.47	Presentation Article
20	Mar. 2013	Survey on gastrointestinal parasites and detection of Cryptosporidium spp on cattle in West Java, Indonesia	Dr Sylvia, Dr Matsubayashi, et al	Asian Pacific Journal of Tropical Medicine. 7, 197- 201 (2014).	Scientific Paper
21	Jul 2013	Pengembangan Diagnosa Penyakit Infectious Bovine Rhinotraccheitis di Wilayah Kerja BPPV Subang dengan Metode Real Time PCR (SBYR Green)	Dr. Suлагло	Proceeding of Technical Meeting and Academic Convention of Animal Health Surveillance, Vol. 1, No. 4, 2013 Buletin BPPV Subang Vol. 3 No. 1 Juni 2013	Contribution & Presentation
22	Jul. 2013	Alternatif Pembuatan Kontrol Positif Imunohistokimia Avian Influenza (AI) Menggunakan Sel Chicken Embryo Fibroblast (CEF) yang Diinokulasi Virus AI pada Hati Babi	Dr. Rinto	Proceeding of Technical Meeting and Academic Convention of Animal Health Surveillance, Vol. 1, No. 4, 2013 Buletin BPPV Subang Vol. 3 No. 1 Juni 2013	Contribution & Presentation
23	Jul. 2013	Diagnosa Rabies di BPPV Subang dengan Metode Seller's, FAT (Flourescent Antibody Technique) dan Uji Biologis (Tahun 2010-Tahun 2012)	Dr Yuliantı	Proceeding of Technical Meeting and Academic Convention of Animal Health Surveillance, Vol. 1, No. 4, 2013	Contribution & Presentation
24	Jul. 2013	Isolasi dan Identifikasi Salmonella pada Unggas di Wilayah Kerja Balai Penyidikan dan Pengujian Veteriner (BPPV Suhang)	Dr Bagyaningtyas	Proceeding of Technical Meeting and Academic Convention of Animal Health Surveillance, Vol. 1, No. 4, 2013	Contribution & Presentation
25	Jul 2013	Isolasi Mycoplasma darı Paru-Paru Sapı	Euis Siti M, Amd	Proceeding of Technical Meeting and Academic Convention of Animal Health Surveillance, Vol. 1, No. 4, 2013	Contribution & Presentation
26	Jul 2013	Penggunakan Metode Diagnosa Mikroskopik dan Metode MPSP PCR untuk Identifikasi Theileria SPP	Dr. Isrok	Proceeding of Technical Meeting and Academic Convention of Animal Health Surveillance, Vol 1, No. 4, 2013 Buletin BPPV Subang Vol. 3 No. 1 Juni 2013	Contribution & Presentation
27	Jul 2013	Surveilans dan Monitoring Penyakit Parasit Darah di Wilayah Kerja BPPV Subang Tahun 2012	Dr. Suharno	Proceeding of Technical Meeting and Academic Convention of Animal Health Surveillance, Vol. 1, No. 4, 2013 Buletin BPPV Subang Vol. 3 No. 1 Juni. 2013	Contribution & Presentation
28	Jul. 2013	Kondisi Optimal Pemisahan Senyawa Antibiotik Quinolon dan Turunannya dengan Menggunakan Acetonitrile dan 0,1% Asam Formiat Sebauai Pelarut		Proceeding of Technical Meeting and Academic Convention of Animal Health Surveillance, Vol 1, No. 4, 2013	Contribution & Presentation
29	Jul 2013	PCR Detection and Genetic Diversity of Bovine Hemoprotozoan Parasites in Vietnam	Thillaiampalam SIVAKUMAR, Azuwan GUSWANTO, Naoaki YOKOYAMA et al	The Journal of Veterinary Medical Science, 75: 1455-1462 (2013).	Scientific Paper
30	Aut 2013	In vitro inhibitory effect of gedunin on Babesia and Theileria parasites	Azirwan GUSWANTO, Ikuo IGARASHI	The Journal of Protozoology Research 23:1-6 (2013)	Scientific Paper
31	Dec 2013	Molecular characterization of a new Babesia bovis thrombospondin-related anonymous protein (BbTRAP2)	Terkawi MA, Rathanophart J, Salama A, Aboul,aila M, Asada M, Ueno A, Albasan H, Guswanto A, Masatani T, Yokoyama N, Nishikawa Y, Xuan X, Igarashi I	PLoS One 13 8(12):e83305 (2013).	Scientific Paper
32	Feb. 2014	Diversity of Babesia bovis merozoite surface antigen genes in the Philippines	Tathyapong M, Sivakumar T, Ybanez AP, Ybanez RH, Perez ZO, Guswanto A, Igarashi I, Yokovama	Parasitol Int. 63 57-63 (2014).	Scientific Paper
33	Aug 2014	Evaluation of a fluorescence-based method for antibabesial drug screening	Guswanto A, Sivakumar T, Rizk MA, Elsayed SA, Youssef MA, ElSaid Eel S, Yokoyama N, Igarashi	Antimicrob Agents Chemother, 58:4713-4717 (2014).	Scientific Paper
34	Oct. 2014	Isolası dan Hasıl Identifikası Salmonella pada Unggas dı Wilayah Kerja BPPV Subang	Dr. Bagyanıngtyas	Proceeding of Technical Meeting and Academic Convention of Animal Health Surveillance, Vol. I.	Contribution & Presentation
35	Oct. 2014	Seromonitoring dan Surveilans Penyakit Hog Cholera selama	Dr. Yulianti	Proceeding of Technical Meeting and Academic	Contribution &
36	Oct. 2014	Empat Talum (2010 - 2013) di Wilayah Keria Balai Veteriner Serosurvei Antibodi Neospora caninum pada Sapi Perah di	Dr. Sylvia, Dr.	Convention of Animal Health Surveillance, Vol 1. Proceeding of Technical Meeting and Academic	Presentation Proceedings
37	Oct. 2014	Provinsi Jawa Barat Tahun 2012 Gambaran Serologis Penyakit BVDV (Bovine Viral Diarrhoea	Suharno Fitri Dian A, Amd	Convention of Animal Health Surveillance, Vol. I. Proceeding of Technical Meeting and Academic	Proceedings
		Virus) di Wilayah Kerja Balai Veteriner Subang Tahun 2010- Penarapan Diagnosa Bovine Viral Diarrhea menggunakan	Dr. Sunarno	Convention of Animal Health Surveillance Vol. t. Proceeding of Technical Meeting and Academic	-
38	Oct. 2014	ELISA Indirect Antigen dan PCR sebagai Uji Konfirmasi Faktor Resiko Kejadian Abortus pada Kerbau di Provinsi		Convention of Animal Health Surveillance, Vol. 1. Proceeding of Technical Meeting and Academic	Proceedings
39	Oct. 2014	Banten	Dr. Satriyo	Convention of Animal Health Surveillance, Vol. 1	Proceedings

(3) Manuals / Protocois

No.	Date/ Year	Title	Author	Distributed to	Category
Ĺ	Aug. 2011	Basic concept in diagnosis of the disease	Kishima	Bacteriology, Public Health	Protocols
2	Aug. 2011	Essential media and reagents for characterization of bacteria	Kishima	Bacteriology, Public Health	Protocols
3		Results of isolation of bacteria from specimens collected in the field	Kishima	Bacteriology	Material
4	Aug. 2011	Bacterial characters and identification	Kishima	Bacteriology, Public Health	Protocols

No.	Date	Item	Category	Distributed to	Printed copies
5	Aug. 2011 -	List of culture collection of bacteria isolated from specimens of diseased animals in the field and introduced from the other	Kıslıma	Bacteriology	Bacteria culture
2	Present	orvanization	Kisiona	Bacteriology	collection
		Protocols for preparation of buffer solution, balance salt solution (BSS) and reagents such as phosphate buffer solution			
6	Aug 2011	(PBS), Hanks' BSS, Earle's solution, phenol red solution to be	Koike	Virology including cell culture section	Protocols
		used for cell culture Protocol for preparation of antibiotics to be used for cell culture			
7	Sep 2011	and treat field materials	Koike	Virology including cell culture section	Protocols
_		Protocol for preparation of culture media such as yeast extract			
8	Sep 2011	lactalbumine hydrolysate Earle's media (YLE), tryptosephosphate broth (TPB) with other necessary reagent	Koike	Virology including cell culture section	Protocols
		Protocols for primary cell culture of chicken embryo fibroblast			
9	Sep. 2011	(CEF) and chicken embryo kidney (CEK)	Koike	Virology including cell culture section	Protocols
ιo	Sep 2011	Protocols for preparation of dispersants such as trypsin, dispase, and trypsin-versene to be used for primary cell culture and	Korke	Virology including cell culture section	Protocols
		established cell lines Protocol for HI antibody tests of Newcastle Disease (ND) and			
11	Sep 2011	Avian Influenza in accordance with OIE terrestrial manual	Koike	Virology and Serology	Protocols
12	Sep 2011	Visual protocol for rapid HA test	Koike	Virology and Scrology	Technical materials
13	Sep 2011	Visual protocol for occipital foramen route for brain sampling in Rabies inspection	Koike	Virology and Pathology	Technical materials
14	Sep 2011	Visual protocol for preparation of brain specimen in Rabies	Koike	Virology and Pathology	Technical materials
15	Sep 2011 - Apr	Inspection Isolation and characterization of salmonella from feces of	Kishima	Restarialany Public Health	Protocols
17	2014	chicken	1750HIIId	Bacteriology, Public Health	1 10100015
16	Oct. 2011	Fundamental protocol on sterilization with autoclave and filtration	Koike	Virology including cell culture section	Technical materials
17	Oct. 2011	Protocol for flexible laboratory working record matrix sheet	Koike	Virology and Serology	Format
18	Nov. 2011	Guidance on primers for detection of major viral diseases of poultry, swine, bovine and zoonosis (rabies) with PCR / Real-	Koike	Biotechnology	Technical materials
••	1101. 2011	Time PCR test		Distriction,	Teenmen materials
19	Nov. 2011	Protocol for working record of virus test with cell culture in a 96-well microplate	Koike	Virology	Format
20	Nov. 2011	Protocol for working record of primary cell culture	Koike	Virology including cell culture section	Format
21	Nov. 2011	Preparation of yeast extract	Kıshıma	Bacteriology, Public Health	Protocols
22 23	Nov. 2011 Nov. 2011	Diagnosis of Cryptosporidiosis Diagnosis of Chicken Coccidiosis (Eimeria)	Matsubayashi Matsubayashi	Parasitology Parasitology	Technical materials Technical materials
24	Nov 2011	Diagnosis of Giardiasis	Matsubayashi	Parasitology	Technical materials
25	Dec 2011	Coccidia, 2 Purification of oocysts, 3 Sporulation of oocysts, 4 Counting (OPG), 5 Morphological identification of Coccidia, 6 Isolation of one oocyst of Eimeria species and cultivate in chicken, 7 Histological examination of infected intestitine, 8 Getetical identification of Eimeria species (Cryptosporidium/ Giardia), 9 Purification of parasites using QIAamp DNA Stool Mini Kit, 10 Additional fecal examination, 11 Immune	Matsubayashı	Parasitology	Protocols
26	2011	fluorescence analysis, 12 Geimsa staining Tests and media: Test of urease activity	Kishima	Bacteriology	Protocols
27	2011	Tests and media: Phenol red solution	Kishima	Bacteriology	Protocols
28	Jan. 2012	Protocol for calculation of 50 % tissue culture infection dose	Koike	Virology	Protocols
29	Jan. 2012	(TCID50) and 50 % egg infection dose (EID50) Oxidation or fermentation of glucose (OF test)	Kishima	Bacteriology, Public Health	Protocois
30	Jan 2012	Protocol for working record of ND/AI HA antigen preparation procedure	Koike	Virology	Format
31	Apr 2012	Protocol for estimation of the time required for pelleting viruses	Korke	Virology	
					Protocols
32	Apr. 2012	Protocol for concentration of viruses as etiological agents of	Koike	Virology	Protocols Protocols
		Protocol for concentration of viruses as etiological agents of major animal diseases Protocol for preparation of agar gel immunodiffusion (AGID)	Koike	Virology	Protocols
33	Арг. 2012	Protocol for concentration of viruses as etiological agents of major animal diseases. Protocol for preparation of agar gel immunodiffusion (AGID) antigen of avian influenza	Koike Koike	Virology	Protocols Protocols
33 34	Apr. 2012 Apr. 2012	Protocol for concentration of viruses as etiological agents of major animal diseases Protocol for preparation of agar gel immunodiffusion (AGID) antigen of avian influenza Protocol for agar gel immunodiffusion (AGID) tests of avian influenza, avian encephalomyelitis, and leucocytozoonosis	Koike Koike Koike	Virology Virology Virology	Protocols Protocols Protocols
33 34 35	Apr. 2012 Apr. 2012 Apr. 2012	Protocol for concentration of viruses as etiological agents of major animal diseases Protocol for preparation of agar gel immunodiffusion (AGID) antigen of avian influenza Protocol for agar gel immunodiffusion (AGID) tests of avian	Koike Koike Koike Koike	Virology Virology Virology Virology and Serology	Protocols Protocols Protocols Format
33 34 35 36	Apr. 2012 Apr. 2012 Apr. 2012 May 2012	Protocol for concentration of viruses as etiological agents of major animal diseases. Protocol for preparation of agar gel immunodiffusion (AGID) antigen of avian influenza. Protocol for agar gel immunodiffusion (AGID) tests of avian influenza, avian encephalomyclitis, and leucocytozonosis. Protocol for working record of AGID test Protocol for preparation of challenge virus standard (CVS) for tables test.	Koike Koike Koike Koike	Virology Virology Virology Virology and Serology Virology	Protocols Protocols Protocols Format Protocols
33 34 35 36 37	Apr. 2012 Apr. 2012 Apr. 2012 May 2012 May 2012	Protocol for concentration of viruses as etiological agents of major animal diseases Protocol for preparation of agar gel immunodiffusion (AGID) antigen of avian influenza Protocol for agar gel immunodiffusion (AGID) tests of avian influenza, avian encephalomyelitis, and lencocytozonosis Protocol for working record of AGID test Protocol for preparation of challenge virus standard (CVS) for rabies test Media for cultivation of general mycoplasmas	Koike Koike Koike Koike Koike Kishima	Virology Virology Virology Virology and Serology Virology Bacteriology	Protocols Protocols Protocols Format Protocols Protocols
33 34 35 36 37 38	Apr. 2012 Apr. 2012 Apr. 2012 May 2012 May 2012 May 2012	Protocol for concentration of viruses as etiological agents of major animal diseases Protocol for preparation of agar gel immunodiffusion (AGID) antigen of avian influenza Protocol for agar gel immunodiffusion (AGID) tests of avian influenza, avian encephalomyelitis, and leucocytozonosis Protocol for working record of AGID test Protocol for preparation of challenge virus standard (CVS) for tables test Media for cultivation of general mycoplasmas Isolation of mycoplasmas from respiratory tract in chicken	Koike Koike Koike Koike	Virology Virology Virology Virology and Serology Virology	Protocols Protocols Protocols Format Protocols
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33 34 35 36 37 38 39 40 41	Apr. 2012 Apr. 2012 Apr. 2012 May 2012 May 2012 May 2012 Jun 2012 Jun 2012 Jun 2012	Protocol for concentration of viruses as etiological agents of major animal diseases Protocol for preparation of agar gel immunodiffusion (AGID) antigen of avian influenza Protocol for agar gel immunodiffusion (AGID) tests of avian influenza, avian encephalomyelitis, and leucocytozononsis Protocol for working record of AGID test Protocol for working record of AGID test Protocol for preparation of challenge virus standard (CVS) for rabies test Media for cultivation of general mycoplasmas Isolation of mycoplasmas from respiratory tract in chicken Protocol for detection of rabies virus with cell culture Epidemiology - Basic concept of epidemiology Epidemiology - Causation	Koike Koike Koike Koike Kishima Kishima Koike Kobayashi	Virology Virology Virology Virology Virology Virology Bacteriology Bacteriology Virology including cell culture section Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab	Protocols Protocols Protocols Format Protocols Protocols Protocols Protocols Technical materials Technical materials
33 34 35 36 37 38 39 40 41 42	Apr. 2012 Apr. 2012 Apr. 2012 May 2012 May 2012 May 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012	Protocol for concentration of viruses as etiological agents of maior animal diseases Protocol for preparation of agar gel immunodiffusion (AGID) antigen of avian influenza. Protocol for agar gel immunodiffusion (AGID) tests of avian influenza, avian encephalomyclitis, and leucocytozonosis. Protocol for working record of AGID test Protocol for preparation of challenge virus standard (CVS) for rabies test. Media for cultivation of general mycoplasmas Isolation of mycoplasmas from respiratory tract in chicken Protocol for detection of rabies virus with cell culture Epidemiology - Basic concept of epidemiology Epidemiology - Causation Epidemiology - Quantification of disease occurrence	Koike Koike Koike Koike Koike Kishima Kishima Koike Kobayashi Kobayashi	Virology Virology Virology Virology Virology and Serology Virology Bacteriology Bacteriology Virology including cell culture section Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab	Protocols Protocols Protocols Format Protocols Protocols Protocols Protocols Technical materials Technical materials
33 34 35 36 37 38 39 40 41 42 43	Apr. 2012 Apr. 2012 Apr. 2012 May 2012 May 2012 May 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012	Protocol for concentration of viruses as etiological agents of major animal diseases Protocol for preparation of agar gel immunodiffusion (AGID) antigen of avian influenza Protocol for preparation of agar gel immunodiffusion (AGID) tests of avian influenza, avian encephalomyelitis, and leucocytozonomis Protocol for working record of AGID test Protocol for preparation of challenge virus standard (CVS) for tables test Media for cultivation of general mycoplasmas Isolation of mycoplasmas from respiratory tract in chicken Protocol for detection of rabies virus with cell culture Epidemiology - Basic concept of epidemiology Epidemiology - Causation Epidemiology - Quantification of disease occurrence Epidemiology - Design of epidemiological studies	Koike Koike Koike Koike Kishima Kishima Koike Kobayashi	Virology Virology Virology Virology Virology Virology Bacteriology Bacteriology Virology including cell culture section Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab	Protocols Protocols Protocols Format Protocols Protocols Protocols Protocols Technical materials Technical materials
33 34 35 36 37 38 39 40 41 42	Apr. 2012 Apr. 2012 Apr. 2012 May 2012 May 2012 May 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012	Protocol for concentration of viruses as etiological agents of maior animal diseases Protocol for preparation of agar gel immunodiffusion (AGID) antigen of avian influenza. Protocol for agar gel immunodiffusion (AGID) tests of avian influenza, avian encephalomyclitis, and leucocytozonosis. Protocol for working record of AGID test Protocol for preparation of challenge virus standard (CVS) for rabies test. Media for cultivation of general mycoplasmas Isolation of mycoplasmas from respiratory tract in chicken Protocol for detection of rabies virus with cell culture Epidemiology - Basic concept of epidemiology Epidemiology - Causation Epidemiology - Quantification of disease occurrence	Koike Koike Koike Koike Koike Kishima Kishima Koike Kobayashi Kobayashi Kobayashi	Virology Virology Virology Virology Virology and Serology Virology Bacteriology Bacteriology Virology including cell culture section Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab	Protocols Protocols Format Protocols Protocols Protocols Protocols Protocols Technical materials Technical materials Technical materials
33 34 35 36 37 38 39 40 41 42 43 44 45 46	Apr. 2012 Apr. 2012 Apr. 2012 May 2012 May 2012 May 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012	Protocol for concentration of viruses as etiological agents of major animal diseases Protocol for preparation of agar gel immunodiffusion (AGID) antigen of avian influenza Protocol for agar gel immunodiffusion (AGID) tests of avian influenza, avian encephalomyelitis, and leucocytozononsis Protocol for working record of AGID test Protocol for preparation of challenge virus standard (CVS) for tables test Media for cultivation of general mycoplasmas Isolation of mycoplasmas from respiratory tract in chicken Protocol for detection of rabies virus with cell culture Epidemiology - Basic concept of epidemiology Epidemiology - Causation Epidemiology - Causation Epidemiology - Design of epidemiological studies Epidemiology - Interpretation of diagnostis tests Epidemiology - Sampling Epidemiology - Surveillance	Koike Koike Koike Koike Koike Kishima Kishima Koike Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi	Virology Virology Virology Virology Virology Virology Bacteriology Bacteriology Virology including cell culture section Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab	Protocols Protocols Protocols Format Protocols Protocols Protocols Protocols Protocols Technical materials Technical materials Technical materials Technical materials Technical materials
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47	Apr. 2012 Apr. 2012 Apr. 2012 May 2012 May 2012 May 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012	Protocol for concentration of viruses as etiological agents of maior animal diseases Protocol for preparation of agar gel immunodiffusion (AGID) antigen of avian influenza. Protocol for preparation of agar gel immunodiffusion (AGID) tests of avian influenza, avian encephalomyclitis, and leucocytozonosis. Protocol for working record of AGID test Protocol for preparation of challenge virus standard (CVS) for rabies test. Media for cultivation of general mycoplasmas Isolation of mycoplasmas from respiratory tract in chicken Protocol for detection of rabies virus with cell culture Epidemiology - Basic concept of epidemiology Epidemiology - Causation Epidemiology - Quantification of disease occurrence Epidemiology - Design of epidemiological studies Epidemiology - Interpretation of diagnostis tests Epidemiology - Sampling Epidemiology - Surveillance Statistics - Data & database	Koike Koike Koike Koike Koike Kishima Kishima Kishima Koike Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi	Virology Virology Virology Virology Virology Virology Bacteriology Bacteriology Bacteriology Virology including cell culture section Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab	Protocols Protocols Protocols Format Protocols Protocols Protocols Protocols Protocols Technical materials
33 34 35 36 37 38 39 40 41 42 43 44 45 46	Apr. 2012 Apr. 2012 Apr. 2012 May 2012 May 2012 May 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012 Jun 2012	Protocol for concentration of viruses as etiological agents of major animal diseases Protocol for preparation of agar gel immunodiffusion (AGID) antigen of avian influenza Protocol for agar gel immunodiffusion (AGID) tests of avian influenza, avian encephalomyelitis, and leucocytozononsis Protocol for working record of AGID test Protocol for preparation of challenge virus standard (CVS) for tables test Media for cultivation of general mycoplasmas Isolation of mycoplasmas from respiratory tract in chicken Protocol for detection of rabies virus with cell culture Epidemiology - Basic concept of epidemiology Epidemiology - Causation Epidemiology - Causation Epidemiology - Design of epidemiological studies Epidemiology - Interpretation of diagnostis tests Epidemiology - Sampling Epidemiology - Surveillance	Koike Koike Koike Koike Koike Kishima Kishima Koike Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi Kobayashi	Virology Virology Virology Virology Virology Virology Bacteriology Bacteriology Virology including cell culture section Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab Epidemiology, other DICs, B-type lab	Protocols Protocols Protocols Format Protocols Protocols Protocols Protocols Protocols Technical materials Technical materials Technical materials Technical materials Technical materials

No.	Date	[tem	Category	Distributed to	Printed copies
51	Jun 2012	Statistics - Hypothesis Testings	Kobayashi	Epidemiology, other DICs, B-type lab	Technical materials
	Jul. 2012	Protocol for rabies virus titration with cell culture	Koike	Virology including cell culture section	Protocols
	Jul. 2012	Protocol for cell cloning of established cell line with a 96 -well microplate	Kaike	Virology including cell culture section	Protocols
54	Aug. 2012	Procedure for making improved pasture for experimental animal lab	Maeda	Experimental animal lab	Protocols
55	Sep. 2012	Protocol for frozen storage of cells	Koike	Virology including cell culture section	Protocols
56	Oct. 2012	Protocol for virus neutralization antibody titration in a 96-well microplate	Koike	Virology	Protocols
57	Oct. 2012	Protocol for plaque test for differentiation of pathogenicity in avian influenza virus and newcastle disease virus	Koike	Virology including cell culture section	Protocols
58	Oct. 2012	Protocol for working record of inspection of plaque formation	Kaike	Virology	Format
59	Oct. 2012	Cultivation of Campylobacter	Kishima	Bacteriology	Protocols
$\overline{}$	Oct. 2012	Note for Blood Smear Examination	Fujisaki	Parasitology	Protocols
	Oct. 2012	Note for Chicken Leucocytozoonosis	Fujisaki	Parasitology	Protocols
\rightarrow	Nov. 2012	Note for Haemotrophic Mycoplasmas (haemoplasmas)	Fujisaki	Parasitology	Protocols
	2012	Tests and media: Long-term preservation of bacteria	Kishima	Bacteriology	Protocols
$\overline{}$	2012	Tests and media: Malonate broth	Kishima	Bacteriology	Protocols
	2012	Tests and media: Nitrate reduction test	Kishima	Bacteriology	Protocols
66	2012	Tests and media: Temperature (heat) tolerance test	Kishima	Bacteriology	Protocols
67	2012	Tests and media. Ryu KOH technique (KOH String test) helpful for Gram staining	Kishima	Bacteriology	Protocols
68	2012	Tests and media: Sugar utilization test (OF test)	Kishima	Bacteriology	Protocols
69	2012	Tests and media: Coagulase test	Kishima	Bacteriology	Protocols
70	Feb. 2013	Characters of Pasteurella multocida and Mannheimia liaemolytica	Kishima	Bacteriology	Protocols
71	Mar. 2013	Tests and media: Tween hydrolysis test	Kishima	Bacteriology	Protocols
-	Mar. 2013	Bovine spongiform encephalopathy (BSE) sampling using a brain sampling spoon	Shibahara	Pathology	Protocols
73	Mar. 2013	Improved histopathological diagnosis using hematoxylin-cosin staining and immunohistochemistry in field cases	Shibahara	Pathology	Protocols
74	Mar 2013	Improvement of immunohistochemical method for diagnosis of numerous priority diseases	Shibahara	Pathology	Protocols
75	Mar. 2013	Out break of chronic suppurative pneumonia associated with Pasteurella spp (Mannheimia haemolytica) and Mycoplasma spp. in cattle	Shibahara	Pathology	Material
76	Apr 2013	Extraction of organochlorine from animal product for gas chromatography (GC) analysis	Miyamoto	Vetermary Public Health	Protocols
77	Apr. 2013	Identification of organochlorine in animal products using gas chromatography analysis	Miyamoto	Veterinary Public Health	Protocols
78	Apr 2013	Extraction of quinolones from animal product for high- performance liquid chromatography (HPLC) analysis	Miyamoto	Veterinary Public Health	Protocols
79	Apr. 2013	Determination of residual quinolones in animal products using high-performance liquid chromatography (FIPLC)	Miyamoto	Veterinary Public Health	Protocols
80	Jul. 2013	Tests and media: Esculin hydrolysis test	Kishima	Bacteriology	Protocols
81	Aug. 2013	Manual pengendalian mastitis pada sapi perah	Anri	Pathology	Protocols
82	Aug 2013	Primary identification of subclinical mastitis causative nathogens (by eye)	Anri	Pathology	Protocols
83	Apr. 2014	Basic skills to conduct the epidemiological surveillance	Kobayashi	Epidemiology	Protocols
84	Apr. 2014	Recent prevalence of brucellosis of dairy cattle in West Java Province, Indonesia	Kobayashi	Epidemiology	Material
85	Apr. 2014	Farm management factors associated with the incidence of reproductive disorders of buffalo in Banten Province, Indonesia	Kobayashi	Epidemiology	Material
86	Jan Nov. 2014	Isolation and identification of brucella	Kishima	Bacteriology	Manual
	Jan. 2015	Cell culture techniques	Taguchi	Serology, Biotechnology, Virology	Protocols
88	Jan 2015	Techniques in isolation of viruses	Taguchi	Serology, Biotechnology, Virology	Protocols
89	Jan. 2015	Detection of neutralizing antibodies to Akabane virus in cows	Taguchi	Serology, Biotechnology, Virology	Protocols
90	Mar. 2015	Diagnostic manual	Taguchi, Maeda	DIC Subang, DINAS (B/C type Lab), DGLAHS	Manual
91	Jan. 2015	7) Manual for replacement of HEPA filter 8) Air balance sheet for BSL2+ laboratory 9) Training document of DAIKIN 10) Manual for formalin fumigation		Maintenance Division of Administration in DIC Subang, DIC Medan and DIC Lampung	Manual
		11) Training document of AZBIL 12) Improvement plan of air filter for poultry house			
	Feb. 2015	Identification of mycoplasma by PCR	Kishima	Bacteriology	Protocols

11. セミナー開催・発表実績

List of Seminar and Presentation

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			1	, , , , , , , , , , , , , , , , , , , 	T .	iar.		* Seminars conducted in single day	
No.	Date	C/P or Expert	Presentator	Presentation Title	Name of the Seminar/ Meeting	Number of Participa nts	l	Organization of Participants	
ı	29/07/2011	Expert	Mr. Maeda	Outline of the Project	Project First Meeting	35	DIC Subano	Staff of DIC Subang	
2	05/08/2011	C/P	Dr. Tri	Swine mycoplasmosis	Diagnostic Seminar				
3	05/08/2011	C/P	Dr. Trian	Procedures of sending sample pathology laboratory	Diagnostic Seminar	29	DIC	Staff of DIC Subang	
4	05/08/2011	C/P	Mr Eka	Quick response on pathology laboratory	Diagnostic Seminar		Subang	Start of Dic Subang	
5	05/08/2011	Expert	Dr. Koike	OfE Diagnostic Standard	Diagnostic Seminar				
б	12/08/2011	C/P	Dr. Tn	Avian colibacillosis	Diagnostic Semmar	20	DIC	Staff of DIC Subang	
7	12/08/2011	Expert	Dr. Keike	OIE Diagnostic Standard	Diagnostic Seminar		Subang	Start of Dic. Subang	
8	19/08/2011	C/P	Dr Trian	Avian colibacillosis	Diagnostic Seminar				
9	19/08/2011	C/P	Dr. Rince	Monthly Diagnostic Progress - Isolation of bacteria from chicken -	Diagnostic Seminar	27	DIC Subang	Staff of DIC Subang	
10	19/08/2011	C/P	Dr Suryo	Monthly Diagnostic Progress	Diagnostic Seminar	1			
11	26/08/2011	C/P	Dr. Tn	JICA - Pathology Training Progress	Project Monthly Meeting				
12	26/08/2011	C/P	Dr. Rince	IICA - Bacienology Progress	Project Monthly Meeting		DIC	a. e. 1910 s l	
13	26/08/2011	C/P	Dr. Sodirun	JICA - Virology Progress	Project Monthly Meeting	29	Subang	Staff of DIC Subang	
14	26/08/2011	Expert	Mr Maeda	Activity Plan on this Month	Project Monthly Meeting	1			
15	08/09/2011	Expert	Dr. Shibahara	DIC Subang. To be the leading Diagnostic Lab in Indonesia	Project Opening Ceremony				
16	08/09/2011	Expert	Mr. Maeda	Introduction of the New Project	Project Opening Ceremony	1		Japan Embassy, JICA, DGLAHS,	
17	08/09/2011	C/P	Dr. Tri	Pathology Training Progress	Project Opening Ceremony	75	DIC Subang	National Research Istitute, Province and District Animal Health Services,	
18	08/09/2011	C/P	Dr Bagyaningtyas	Bactenology Lab Progress	Project Opening Ceremony		y	B/C type laboratories	
19	08/09/2011	C/P	Dr. Sedirun	Topics in Virology & Serology	Project Opening Ceremony				
20	09/09/2011	Expert	Dr. Koike	Notifiable Avian Influenza in view of amino acid sequence of cleavage site and Pathogenicity in chicken	Diagnostic Seminar	15	DIC Subang	Staff of DIC Subang	
21	16/09/2011	Expert	Dr. Koike	Case Study of Af Control in some Foreign Country	Diagnostic Seminar	20	DIC Subane	Staff of DIC Subang	
22	23/09/2011	C/P	Dr. Satriyo	Survey to estimate prevalance of Avian Influenza in West Java	Report of Training in Japan				
23	23/09/2011	C/P	Dr. Ali	Surveillance of Brucellosis in Target Area	Report of Training in Japan	12	DIC Subang	Staff of DIC Subang	
24	23/09/2011	C/P	Mr Eka	Utilization of Automatic Staining Machine	Report of Training in Japan				
25	27/09/2011	Expert	Mr Maeda	Presentasi Proyek JICA di DIC Subang	National Parasitology Training	30	DIC	Parasitology Lab staffs from all	
26	27/09/2011	C/P	Dr. Sodirun	Presentasi Perkembangan DIC Subang	National Parasitology Training	30	Subang	DICs, DGLAHS, National research institute	
27	04/11/2011	C/P	Dr Ali	Monthly Progress on October (Birology Lab)	Project Monthly Meeting				
28	04/11/2011	Expert	Mr. Maeda	Activity Plan on this Month	Project Monthly Meeting	30	DIC Subang	Staff of DIC Subang	
29	04/11/2011	Expert	Dr Kobayashi	Introduction of Epidemiology	Project Monthly Meeting				
30	10/11/2011	Expert	Dr. Kobayashi	Achievement of 2 weeks activity in DIC Subang	Project Briefing Session of Epidemiology Laboratory				
31	10/11/2011	C/P	Dr. Satnyo	Active and Passive Surveillance in DIC Subang	Project Briefing Session of Epidemiology Laboratory	25	DIC Subang	Staff of DIC Subang	
32	10/11/2011	Expert	Dr. Matsubayashi	Profile of Expert	Project Briefing Session of Epidemiology Laboratory				
33	22/11/2011	C/P	Dr Suhamo	Introduction of Modified Diagnostic Method Connected with Floatation and Sedimentation	Parasitic Diagnosis Seminar		DIC		
34	22/11/2011	C/P	Dr Silvia	Identification of Intestinal Parasites by the Modified Method and Result of Examination in	Parasitic Diagnosis Seminar	28	Subang	Staff of DIC Subang	
35	02/12/2011	C/P	Dr Silvia	Monthly Progress on November	Project Monthly Meeting				
36	02/12/2011	C/P	Dr Ali	Monthly Progress on November	Project Monthly Meeting				
37	02/12/2011	C/P	Dr. Satnyo	Monthly Progress on November	Project Monthly Meeting				
38	02/12/2011	C/P	Dr. Suryo	Monthly Progress on November (Isolation of HPAIV)	Project Monthly Meeting	29	DIC Subang	Staff of DIC Subang	
39	02/12/2011	C/P	Dr Rinto	Monthly Progress on November (Rabies diagnosis)	Project Monthly Meeting	1 "			
20									

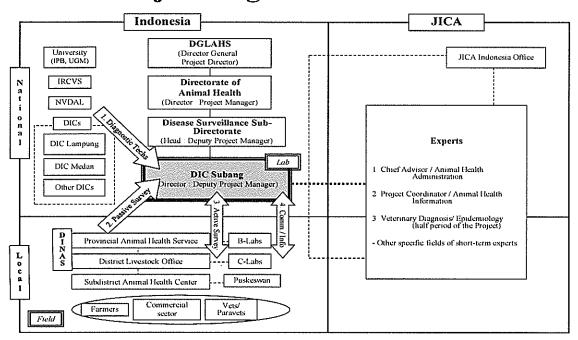
No.	Date	C/P or Expert	Presentator	Presentation Title	Name of the Seminar/ Meeting	Number of Participa nts	Place	Organization of Participants	
41	15/12/2011	C/P	Dr Suhamo	Blood smear and fecal examinations for passive and active surveillance	Parasitology Lab Activity Termination Seminar	28	DIC	Staff of DIC Subang	
42	15/12/2011	Expert	Dr. Matsubayashi	Outline of short-term expert's activity	Parasitology Lab Activity Termination Seminar		Subang		
43	27/01/2012	C/P	Dr. Rinto	Pathological Diagnosis of Fowl and Swine Viral Diseases	Report of Training in Japan	21	DIC	Staff of DIC Subang	
44	27/01/2012	C/P	Dr. Isrok	Improvement of diagnostic techniques on Parasitic disease	Report of Training in Japan		Subang		
45	17/02/2012	Expert	Dr. Mikami	My research in NIAH and introduction of special staining	Short-term expert activity initiation seminar	21	DIC	Staff of DIC Subang	
46	17/02/2012	C/P	Dr. Satnyo	Results of Project Baseline Survey	Short-term expert activity initiation seminar		Subang	State of Brita Gallang	
47	14/03/2012	C/P	Dr. Rince	Project Accomplishment in 2011 & Activity Plan in 2012	Joint Coordinating Committee			DIC Subung, DGLAHS, Provincial	
48	14/03/2012	C/P	Dr. Satriyo	Results of the Baseline Survey	Joint Coordinating Committee	31	DGLAHS	Animal Health Services, B/C type labs, Japan Embassy, JICA, JICA	
49	14/03/2012	C/P	Dr. Putut	Activity plan in Project pilot site	Joint Coordinating Committee	ĺ		advisory mission team	
50	28/03/2012	Expert	Dr. Mikami	Poisoning by toxic plants in cattle and case study of gatrointestina diseases in cattle and pigs	Workshop patologi veterier dan pertemuan ilmiah nasional	45	DIC Subang	DGLAHS, National Institute,	
51	20/04/2012	C/P	Dr. Rinto	Immunohisto chemistry procedure for Avian Influenza virus	Pathological diagnosis seminar		DIC		
52	20/04/2012	C/P	Mr. Eka	Improvement of histopathological diagnosis with special staining	Pathological diagnosis seminar	20	Subang	Staff of DIC Subang	
53	25/04/2012	Expert	Dr Mikami	Activities in DIC Subang - To improve pathological diagnosis	Short-term expert activity termination seminar	18	DIC	Staff of DIC Subang	
54	25/04/2012	C/P	Dr. Tra	Improvement of Diagnosis in Pathology Lab	Short-term expert activity termination seminar		Subang		
55	15/06/2012	C/P	Dr. Aji	Report The 7th A-PBA Biosafety Conference	Training report seminar on Biosafety and Brucellosis				
56	15/06/2012	C/P	Dr. Isrok	Animal Biorisk Management	Training report seminar on Biosafety and Brucellosis	22	DIC	Staff of DIC Subang	
57	15/06/2012	C/P	Dr. Alı	Laboratory Diagnosis of Brucellosis	Training report seminar on Biosafety and Brucellosis	~~	Subang	3.0	
58	15/06/2012	C/P	Dr Sodik	Brucellosis in Cattle, Sheep & Goats: Fundamentals of surveillance and eradication	Training report seminar on Biosafety and Brucellosis				
59	13/07/2012	C/P	Dr Satriyo	Brucellosis control trial in collaboration with DIC Subang and Jakarta Province supported by JICA	New proposals on bruellosis control activities in Jakarta and Banten Province		DIC		
60	13/07/2012	C/P	Dr. Sodik	Survey sistem peternakaa pada kerbau di Prov Banten	New proposals on bruellosis control activities in Jakarta and Banten Province	15	Subang	Staff of DIC Subang	
61	07/09/2012	C/P	Dr. Rinto	The usage of personal safety equipments in BSL	BSL lab operation guidance	16	DIC	Staff of DIC Subang	
62	07/09/2012	C/P	Dr. Suryo	The staff movements in BSL lab	BSL lab operation guidance seminar	107	Subang	·	
63	12/10/2012	Expert	Dr. Fujisaki	Ticks survive at a threshold between engorgement and starvation Review on "Advances in Diagnosis of Protozoan	Short-term Expert Parasitology Seminar Parasitology seminar & Report of	35	DIC Subang	DIC Subang, BIB Lembang, BET Cipelang and BP2HK Cikole	
64	02/11/2012	Ç/P	Dr. Silvia	Disease"	Training in Japan				
65	02/11/2012	C/P	Dr. Tran	JICA Training Report on "Zoonosis Control"	Parasitology seminar & Report of Training in Japan Parasitology seminar & Report of	24	DIC Subang	Staff of DIC Subang	
66	02/11/2012	C/P	Mr. Afif	JICA Training Report on "Zoonosis Control"	Training in Japan		ouvang.		
67	02/11/2012	C/P	Dr. Tyas	IICA Training Report on "Research on Veterinary Technology"	Parasitology seminar & Report of Training in Japan				
68	13/11/2012	C/P	Dr. Isrok	Review on "Reinstatement of Rhipicephalus (Boophilus) australis" and Tick Collection Activity in Sumedang, West Java	Parasitology Seminar	14	DIC Subang	Staff of DIC Subang	
69	29/11/2012	С/Р	Dr Isrok	IICA Short-term Expert Activity Report and Recommendations in the field of Parasitic Disease (Microscopical works)	Short-term expert activity termination seminar	.,	DIC	5-7-6-6010 (1)	
70	29/11/2012	Expert	Dr. Fujisakı	JICA Short-term Expert Activity Report and Recommendations in the field of Parasitic Disease (Concluding remarks)	Short-term expert activity termination seminar	15	Subang	Staff of DIC Subang	
71	25/01/2013	Expert	Dr. Shibahara	Activities in DIC Subang - To improve pathological diagnosis	Short-term expert seminar	24	DIC Subang	Staff of DIC Subang	
72	19/02/2013	Expert	Dr Shibahara	BSE prevention and control measures in Japan	In-house Training Pengendalian dan Pencegahan penyakit BSE dan FMD di Indonesia In-house Training Pengendalian dan			DIC Subang, DGLAHS, Slaughter house of districts, B/C type lab, other DICs	
73	19/02/2013	Expert	Dr Shibahara	FMD prevention and control measures in Japan	Pencegahan penyakit BSE dan FMD di Indonesia	38	DIC Subang		
74	19/02/2013	C/P	Dr. Tri	BSE Ongoing Surveillance Program	In-house Training Pengendalian dan Pencegahan penyakit BSE dan FMD di Indonesia				

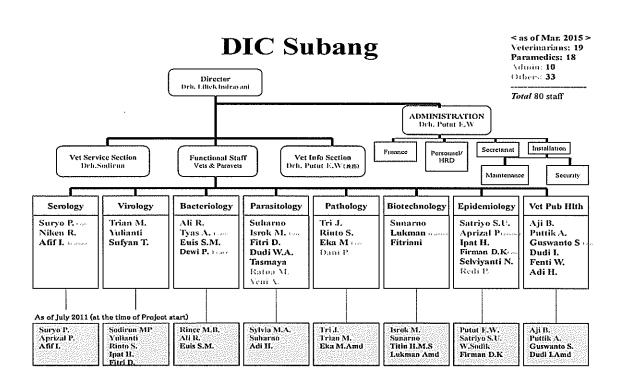
No.	Date	C/P or Expert	Presentator	Presentation Title	Name of the Seminar/ Meeting	Number of Participa nts	Place	Organization of Participants
75	21/02/2013	Expert	Dr. Kishima	Biosafety in Disease Investigation Center Subang	Donner Meeting - 8th Technical Briefing Meeting on Laboratory Supports	58	DGLAHS	DICs, DGLAHS, Foreign donner
76	01/03/2013	Expert	Dr. Miyamoto	Introduction of my activity in NIAH and plan in public health laboratory	Short-term Expert Activity Plan & Diagnosis Seminar			
77	01/03/2013	C/P	Dr. Trt	Outbreak of Chronic Suppurative Pneumonia Associated with Pasteurella sp and Mycoplasma sp	Short-term Expert Activity Plan & Diagnosis Seminar	25	DIC Subang	Staff of DIC Subang
78	01/03/2013	C/P	Ms. Euis	Isolation of bacteria and mycoplasmas from pneumonic lungs of cattle Bacteriology	Short-term Expert Activity Plan & Diagnosis Seminar			
79	13/03/2013	Expert	Dr. Koike	Blood sampling with filter paper	Diagnostic Seminar	15	DIC	Staff of DIC Subang
80	14/03/2013	Expert	Dr. Shibahara	Activities and issues in DIC Subang To improve pathological diagnosis	Short-term expert activity termination seminar			
81	14/03/2013	C/P	Dr. Tri	Final Report JICA Short-term Activities in Pathology Laboratory of DIC Subang	Short-term expert activity termination seminar			
82	14/03/2013	C/P	Dr. Rinto	Improved Histopathological Diagnosis Using H&E Staining and Immunohistochemistry in Field Cases	Short-term expert activity termination seminar	20	DIC Subang, DGLAHS	Staff of DIC Subang (Mar. 14), DGLAHS (Mar. 15)
83	14/03/2013	C/P	Mr Eka	Improvement of immunohistochemical method for diagnosis of numerous priority diseases – preparing positive controls for IHC and Gram staining -	Short-term expert activity termination seminar		(Mar.15)	
84	17/04/2013	Expert	Mr Miyamoto	Transfer of Techniques about Analytical Methods for Residual Pepticides and Antibiotics in Animal Products, and Future Activities in Veterinary Public Health Laboratory of DIC Subang	Short-term expert activity termination seminar		DIC	
85	17/04/2013	C/P	Dr. Aji	Identification of Organochlorines in Animal Products Using GC	Short-term expert activity termination seminar	19	Subang,	Staff of DIC Subang (Apr. 17),
86	17/04/2013	C/P	Dr. Puttik	Determination of Residual Quinolones in Animal Products using HPLC	Short-term expert activity termination seminar		DGLAHS (Apr. §8)	DGLAHS (Apr 18)
87	17/04/2013	C/P	Mr Dudi I.	Extraction of Quinolones from Animal Products for HPLC Analysis	Short-term expert activity termination seminar]		
88	17/04/2013	C/P	Ms Fenty	Extraction of Organochlorines from Animal Products for GC Analysis	Short-term expert activity termination seminar	1		
89	14/06/2013	C/P	Dr. Suharno	Surveillans dan Monitoring Penyakit Parasit Darah di Wilayah Kerja BPPV Subang Tahun 2012	Terrattation Seriam			
90	14/06/2013	C/P	Dr. Isrok	Penggunaan Metode Diagnosa Mikroskopik dan Metode MPSP PCR untuk Identifikasi Theileria				
91	14/06/2013	C/P	Dr. Tyas	Isolasi dan Identifikasi Salmonella pada Unggas di Wilayah Kerja BPPV Subang				
92	14/06/2013	C/P	Ms Euis	Isolasi Mycoplasma dari Paru-Paru Sapi	i			
93	14/06/2013	C/P	Dr. Puttik	Kondisi Optimal Pemisahan Senyawa Antibiotik Quinolon dan Turunannya dengan Menggunakan Acetonitrile dan 0,1% Asam Formiat Sebagai Pelarut				
94	14/06/2013	C/P	Dr. Yulianti	Teknik Diagnosa Penyakit H1N1 (Flu Babi) Di BPPV Subang dengan Menggunakan Melode Inokulasi Pada Telur Embrio Tertunas Umur 10-11 Hari	Presentation Practice for RATEKPIL	29	DIC Subang, Surabaya	other DICs, DGLAHS, Foreign Donors
95	14/06/2013	C/P	Dr. Trian	Diagnosa Rabies di BPPV Subang dengan Metode Selfer's FAT (Flourescent Antibody Technique) dan Uji Biologis (Tahun 2010 – Tahun 2012)				
96	14/06/2013	C/P	Dr Rinto	Alternatif Pembuatan Kontrol Positif Imunohistokimia Avian Influenza (Al) dengan Menggunakan Sel Chicken Embryo Fibroblast (CEF) yang Diinokulasi Virus Al Pada Hati Babi				
97	14/06/2013	C/P	Dr. Sunamo	Pengembangan Diagnosa Penyakit Infectious Bovine Rhinotracheitis di Wilayah Kerja BPPV Subang dengan Metode Real Time PCR				
98	14/06/2013	Expert	Dr Ann	Current Concept and Practice on Mastitis Control in Dairy Cattle	JICA Short-term Expert Technical Seminar	40	DIC Subang	staff of DIC Subang, UPT Cikole, DINAS, B-type Labs, BET Ciperang, BPMPP, etc.
99	28/06/2013	C/P	Mr. Eka	Final Report Kontrol Mastitis di DKI Jakarta	Mastitis control training in South Jakarta	35	South Jakarta	DINAS, B-type Lab, Puskeswan, Farmers
100	05/07/2013	Expert	Dr. Koike	Notes/Suggestions/Comments for Development of Laboratory Techniques Through Review of Activities	Long-term expert final report	60	DGLAHS, DIC Subang	Staff of DIC Subang, IPB, DGLAHS
								•

No.	Date	C/P or Expert	Presentator	Presentation Title	Name of the Seminar/ Meeting	Number of Participa nts	Place	Organization of Participants
101	08/07/2013	C/P	Dr Aji	Final Report Kontrol Mastitis di Lembang	Mastitis control training in Lembang	14	KPSBU Lembang	KPSBU Lembang, DIC Subang
102	25/07/2013	C/P	Dr Ajı	Final Report Kontrol Mastitis di Cikole	Mastitus control training in Cikole	15	Cikole dairy training	Cikole dairy training center•B- type Lab•DIC Subang
103	29/07/2013	С/Р	Dr. Anri, Dr. Ajı, Mr. Eka	Expert's Activities, Observation and Recommendation in the Field of Clinical Diagnosis	Short-term expert activity termination seminar	28	DGLAHS, DIC Subang	staff of DIC Subang • DGLAHS
104	06/09/2013	C/P	Dr. Sunarno	Training report for FAO Workshop onH7N9 and CSF in Vietnam	Overseas training report seminar	15	DIC	staff of DIC Subang
105	06/09/2013	C/P	Mr. Guswanto	Training report for Advanced Research Course on International Animal Health	Overseas training report seminar	13	Subang	staff of DIC Subang
106	11/09/2013	C/P	Dr. Salnyo	Progress report of brucellosis surveillance in Banten province	Pilot site surveillance evaluation workshop in Banten	20	Banten Province	Banten Province · B-type Lab · DIC Subang
107	18/09/2013	C/P	Dr. Sodirun	Rencana Kegiatan Surveilans dan Menitoring Penyakit Hewan dan PHMS dan Hasil Pelaksanaan Surveilans B-Vet Subang 2012/2013	Annual Coordination Meeting in Bogor	170	Bogor	Related organizations • DIC Subang
108	08/11/2013	C/P	Dr. Suryo	"Research on Diagnosis for Pig and Avian Respiratory Disease" and "Action Plan"	JICA Training Report	22	DIC Subang	staff of DIC Subang
109	27/11/2013	C/P	Dr. Tn	Teknik Pengambilan Sampel Obex	Training on Pathological Sampling & Necropsy	40	DIC Subang	B/C type Lab Public slaughter houses DIC Subang
011	17/01/2014	Expert	Dr. Shirafuji	Arthropod-borne virus (Arbovirus) infection in ruminants: Abortion, stillbirth, premature birth, congenital abnormalities and febrile illness	Virological diagnosis semmar	35	DIC Subang	staff of DIC Subang • UPT Cikole, BIB Lembang, BIT Ciperang, BPTU Baturaden
ш	25/02/2014	C/P	Dr. Satriyo	Tindak Lanjut Pembebasan Brucellosis di Provinsi Banten	Brucellosis surveillance coordination meeting in Banten	30	Banten Province	Banten Province - B-type Lab - DIC Subang
112	28/02/2014	C/P	Dr. Sunamo	Refresher training of PCR				A CONTRACTOR OF THE PARTY OF TH
113	28/02/2014	C/P	Mr. Guswanto & Mr.Dudi	Analysis of Hormone by using HPLC	Diagnostic Seminar	13	DIC Subang	staff of DIC Subang
114	28/02/2014	C/P	Dr. Aji & Ms. Fenti	Identification of Staphylococcus from the contaminated animal products				
115	17/02/2014	C/P	Dr. Suryo	Arthropod-borne virus (Arbovirus) yg dapat menyebkan aborsi, kematian fetus, kelahiran prematur, abnormalitas kongenital dan demam pada	Virology Seminar in KPSBU Lembang	17	KPSBU Lembang	KPSBU Lembang • CikoleB-type Lab • DIC Subang
116	18/03/2014 18/03/2014		Dr. Shirafuji, Dr. Suryo, Mr. Afif Mr. Miyamoto,	Short-term activity termination seminar: Transfer of fundamental techniques for surveillance and diagnosis of arboviral diseases (mainly abortion and febrile illness of cattle) The Improvement of Analytical Method for	Short-term Expert Activity Termination Seminar	35	DIC Subang (Mar. 18), DGLAHS (Mar. 19)	DGLAHS · DIC Subang
-			Mr. Guswanto, Mr. Mr. Dudi Widi	Determination of Trenbolone Residues in cattle				
118	04/04/2014		Arahman	Culture method of Tripanosoma Evansi	Monthly diagnosis senunar	22	DIC Subang	staff of DIC Subang
119	04/04/2014 1 0 /04/2014		Ms. Fenty Dr. Kobayashi, Dr. Satniyo	Sampling of animal products according to the SNI - Recent prevalence of brucellosis of dairy cattle in West Java Province, Indonesia - Farm management factors associated with the incidence of reproductive disorders in Banten Province, Indonesia	Short-term Expert Activity Termination Seminar		DIC Subang (Apr 10), DGLAHS	DGLAHS + DIC Subang
121	16/04/2014	Expert	Dr. Kobayashi, Dr. Satriyo	Report of the activity on the epidemiological surveillance in DIC Subang: two applications from West Jawa province and Banten province			(Apr.11)	
122	09/05/2014		Mr. Eka	Acquisition of fundamental and applicative skills necessary for histopathological diagnosis	Reporting of JICA Training in NIAH Japan	14	DIC Subang	staff of DIC Subang
123	09/05/2014		Ms. Eurs	Bactenological diagnosis of Johne's disease	Coordination meeting for URC-		Banten	Banten Province - B-type Lab -
124	23/05/2014		Mr. Maeda	Activity of JICA Project in Banten 2014	PHMS in Banten Annual Coordination Meeting in	120	Province Banten	Puskeswan • DINAS • DIC Banten Province • B-type Lab •
125	23/05/2014		Mr. Maeda	Pilot-site activity of JICA Project (2014 - 2015)	Tangerang Tangerang	80	Province	Puskeswan • DINAS • DIC
126	26/09/2014 26/09/2014		Dr Taguchi Dr Puttik	Introduction of the animal disease in Uganda JICA Training on "Advanced Training Course for	Training report senunar in DIC	ام ي	DIC	elaff of DIC Sub
128	26/09/2014	C/P	Dr Niken,	Protozoa and Food Borne Diseases" ToT technical training on "Laboratory Field	Subang	15	Subang	slaff of DIC Subang
129	15/01/2015		Mr.Eko, Mr.Lukman	Linkage" Cell Culture				
130	15/01/2015	C/P	Mr Afif	ND virus isolation by using HmLu cell	Short-term expert activity		DIC	DGLAHS · DIC Subang
131	15/01/2015			Recommendation and Suggestion	termination seminar		Subang	_
132	30/01/2015	Expert	Dr. Takahashi	Relationship between Reproductive Disorder and Metabolic Profile Test in Japan	Diagnostic Seminar by JICA Short- term Expert	21	DIC Subang	staff of DIC Subang
133	11/03/2015	Expert	Dr.Tri, Dr.Takahashi	Metabolic profile test in Indonesia in JICA project	Short-term expert activity termination seminar		DIC Subang (Mar.11), DGLAHS	DGLAHS • DIC Subang

Annex 12

Project Organization Chart





Accomplishment Grid

Annex 14

as of Mar. 2015

as of Mar. 2015																			
	A		201 III			2012		Ļ		113			201			2015		I (DI	Accomplishm
	Outputs and Activities		# 1	<u>v </u>	1 1	1 111	IV	1	Ш	1111	IA	1	Ш	ш]	IV	<u> </u>	Progress	Issues / Plan	ent (%)
Output	The DIC Subang staff obtain basic and systematic diagnosis for animal diseases.		Ħ				+							Ī					
Activity	The Staff of DIC Subang surveys the current capacities and needs in the diagnostic techniques at DIC Subang	Planned Actual	X U O	,			1							1			Conducted a baseline survey in DIC Subang and grasped the situation.	-	100%
	Based on the results of the survey, the staff of DIC Subang sets the necessary diagnostic techniques (kind of disease, diagnostic method etc.) and a target levels of the techniques for each laboratory.	Planned Actual	x x														Already conducted surveys at each laboratory and set target levels	-	100%
1-3	The staff of DIC Subang makes the plan of mastering diagnostic techniques for each laboratory of DIC Subang.	Planned Actual		XX 00 00	٥	X O		0		Х			ŀ	1	,		Already made the draft mastering plans for each lab.	DIC Subang revices the mastering plans every 5 years.	100%
	The staff of DIC Subang makes the list of trainer resources, for example, staff of other DICs, IRCVS, NVDAL, Vet Faculty of university, foreign experts etc.	Planned Actual		XX 0 00	0		o				0			o	,		Already made the resource list of each fields	Many local experts were invited as a trainer and the relationship with other institutes has been established.	100%
	The staff of DIC Subang learns the planned diagnostic techniques from the resources trainers through training in Indonesia, Japan or third country	Planned Actual					XXX 3 000				000	000	000	900 0	100 00	000	Diagnostic techniques have been transferred by JICA and local experts.	The planned techniques have been transferred. But C/Ps must continue learning after the project.	100%
	The staff of DIC Subang receives the diagnostic capability evaluation (including the proficiency tests) by resource trainers about the transferred diagnostic tests	Planned Actual	o	0 X	0 00	000	00	S 000	D	٥	∞ .	x 00	00	∞ o	000 X		The proficiency test and diagnostic comparisons with other DIC were conducted	In order to apply for accreditation of ISO, DIC Subang is required to have proficiency test periodically	100%
Output 2	The capacity to provide the customer oriented diagnosis services (Passive Survelllance) of DIC Subang staff is strengthened.																		
Activity 2-1	The staff of DIC Subang analyzes the current situation of sample flow and examinations at DIC Subang.	Planned Actual	x o				۰				000	00			٥		Conducted a baseline survey in DIC Subang and grasped the situation.	-	100%
2-2	The staff of DIC Subang analyzes the current situation of sample submission from the fields	Planned Actual		X X O O			o				0				ō		ditto	-	100%
2-3	The staff of DIC Subang makes the plan of improved sample flow and examination system at DIC Subang (Measures for the sample senders will be planed in Output 4)	Planned Actual		0 0	XX 600 B						000	00					DIC Subang staff are making procedures of sample reception & diagnosis flow related to the application of ISO	-	100%
2-4	The staff of DIC Subang conducts the improved diagnostic services.	Planned Actual			1	xx xx	X XXX 0 000			XXX 000					XXX X		According to the above plan of improvement, we developed the new reporting system and continue improving.	Sometimes it is difficult to collect epidemiological information of the sample. It is also necessary to teach the methods to customers.	100%
2-5	The staff of DIC Subang monitors the improved diagnostic services (sample reception, diagnostic flow and customer's comment etc.) and conducts the feed-back to the system.	Planned Actual				x o	a	X O	0	X O	0	X O	0		x o		DIC Subang conducts the customer satisfaction survey every year to improve the service	The end-line survey will be conducted to evaluate the improvement of services in detail.	90%
Output 3	The capacity to conduct the surveys and the technical support of animal disease control (Active Surveillance) in the pilot sites of DIC Subang staff is strengthened.																		
Activity 3-1	The staff of DIC Subang conducts preliminary surveys to select pilot site(s) from livestock / poultry industry promoted areas.	Planned Actual		XX 00 00	o			o				o					Conducted a baseline survey of the stakeholders and grasped the situation.	-	100%
3-2	The staff of DIC Subang specifies the pilot site and some animal diseases for the surveys and control	Planned Actual		X) 00 00	X 00 01	,		0				o					Picked up some candidate place and target disease.	-	100%
3-3	The staff of DIC Subang plans and conducts the surveys on animal health considering the specificity of promoted livestock / poultry sectors in the pilot site through cooperation with B/C type laboratories.	Planned Actual			DO DX	00	XXX 0 00		XXX 000		xxx 00		XXX 000	000 0	00	00	The surveillance considering the specificity of the pilotsite situation was planed and conducted colaborating with DINAS and B-type labs	Active surveillance has already been carried out as a routine work, but the purpose of the survey should be more cleared after the project	100%
	The staff of DIC Subang analyses the results of surveys and develops the recommendation reports to the authorities for the improvement of animal health situation.	Planned Actual					90	×		x	00	x			00		The reports of the surveillance were showr at the meeting or report. Preverence of brucellosis (West Java), Risk analysis (Banten), Brucellosis control & animal ID system (Jakarta)	Conducted the coordination meeting every year, and the survey results are presented to there. But the abortion surveillance is still on going and Dr Aprizal will develop the reports by	90%

			20	11		201	2	Т	26)13			20)14		20	15			Accomplishm
	Outputs and Activities		皿	N	I	П	II IV	I	I	Ш	IV	I	I	П	IV	I	I	Progress	Issues / Plan	ent (%)
3-5	The staff of DIC Subang organizes and conducts the monitoring of the animal health improvement for the follow-up of recommended activities and the feed-back.	Planned Actual						s	o	x o		x	00	x				DIC Subang develops and distributes disease map every year as a feed-back of surveillance to improve the disease control situation and make next surveillance plan.	DIC Subang is expected to continue making disease control plan and its evaluation according to the results of the surveillance.	100%
	The DIC Subang staff conduct the continuous support activities for laboratory workers, field vets and farmers, including information exchange, awareness on animal health in the pilot sites.																			
	The DIC Subang issues periodical Newsletters to provide and exchange information on animal health for laboratory workers, field yets and farmers in the 3 provinces of West Java area.	Planned Actual		X 0 0	,	00	0	x 0 0	X O	0	, s	o	X O	o	X O		х	Web site of DIC Subang has been developed and the news of the activity is released periodically.	We focused on the web site developing other than the newsletter. The technical information in web site is going to be developed more.	100%
4-2	The staff of DIC Subang examines and conducts necessary measures of information exchange (on site meetings, etc.) for veterinary officers, laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type laboratories.	Planned Actual	0		eec	0		XXX	o	c	o	XXX	0:0			xxx	o	DIC Subang holds annual coordination meeting 2 times a year. Also, meeting with B/C lab and puskeswan has been conducted frequently.	-	100%
4-3	The staff of DIC Subang makes plans of sustainable activities of awareness and technical supports for improvement of animal health and production, which are necessary for laboratory workers, field vets and farmers in the pilot site. (Utilize other JICA projects outcomes such as a Flip-chart for dairy farmers.)	Planned Actual		0		o o		o	AXX	Đ	٥		XXX O		o	•	XXX	DIC Subang built the accommodation facilities in 2012, and conducts trainings At the time of active surveillance, awareness support has been done for the farmers.	-	100%
4-4	The staff of DIC Subang conducts sustainable activities of awareness and technical support for the laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type	Planned Actual		0	,	80	0 00	1			XXX 00			XXX 000				DIC Subang conducts technical training for the laboratory workers and field vets through cooperation with B/C type	Activities of awareness for the farmers is responsibility of DINAS district, and DIC cannot conduct directly.	100%
4-5	The staff of DIC Subang organizes and conducts the monitoring and the feed-back of the results to the next actions	Planned Actual						×	٥	c	9	x	00			X	0	Activity planning and evaluation has been made with stakeholders at the coordination meeting every year. The results of survillance are discussed and feed-backed to the next actions	-	100%

Progress and Results on the Project Activities based on PO (Plan of Operation)

No.	Objectively Verifiable Indicators	Status before the project	Progress at the time of review
1-1	The technical levels acquired on diagnostic tests in each laboratory (8 laboratories) of DIC Subang attain to the target levels set up in the "Project Technical Target Sheet" by June 2013.	The target goal had not been set	The target goal until 2014 was set in each lab All laboratories almost accomplished the planned technical target.
2-1	More than one staff in DIC Subang are certified by the Project he/she is able to make a final diagnosis based on the result of tests in each laboratory.	The head of veterinary service section makes diagnosis according to the results of each laboratory test	Currently, the laboratory chief conducts final diagnosis as a diagnostician in rotation every month. All laboratory chief were certified by the short-term expert that they can diagnose almost adequately.
2-2	Each laboratory chief in DIC Subang he/she is able to make an appropriate comments based on the result of tests in each laboratory.	The understanding of field situation was not enough and the feed-back comment was not appropriate enough	The staff have had experience to visit farmers on active surveillance, and they are become able to feedback the appropreate comment. But the short-term expert recommended to make more specific comment especially for the brucellosis positive cattle.
3-1	Active surveillances on animal health are conducted annually with a framework (Planning, Implementing, Analyzing and feedback) by the staff of DIC Subang	Head of diagnostic service indicates the planning and implementation of disease surveillance, another member of staff was working accordingly	The system that all veterinarian and paramedic staff participate in disease surveillance was established. The evaluation of surveillance feedback to next activity are discussed with local government every year.
3-2	Each laboratory chief in DIC Subang are able to make recommendations of animal disease control in the pilot sites for the veterinary officers and laboratory workers	The recommendations for the customer had not been made.	Active surveillance is conducted more than 100 times a year. The veterinary staff including laboratory chief is in charge of each surveillance. The results and reccomendation is feedbacked after the surveillance every time
4-1	DIC Subang (Vet. Information section) issues periodical Newsletter of animal health 2 times a year for laboratory workers, field vets and farmers in the three provinces by June 2012	Information through such as newsletter, has not been carried out	Instead of the newsletter, web site of DIC Subang was developed to provide information on a regular basis. Also, the project issued awareness brochures of livestock disease, bulletine and disease map, and they were distributed to stakeholders
4-2	Each laboratory chief in DIC Subang is able to make annual plan of technical support activities to the laboratory workers, field vets and farmers in the pilot site by December 2013.	Technical support activity for the stakeholder had not been implemented.	The plan of active surveillance is developed collaborating with stakeholders every year. Also, the coordination meeting combined with training is impremented twice a year by gathering stakeholders.
4-3	Achievement rate of annual activity plan (set in 4-2) becomes more than 90% in the pilot site.	Awareness activity had not been planed.	Sometimes there are some revision of activity plan caused by the budgetary problems, but basically, almost all planned activity is impremented every year.

	Objectively Verifiable Indicators	Status before the project	Achieve prediction at the time of evaluation
	The number and the kind of animal disease diagnosis at DIC Subang becomes more than 35,000 samples in a year and 16 kind at the end of the Project	The number of sample for diagnosis was 14,875 (15 diseases) in 2010.	2011: 32,016 samples (23 diseases), 2012. 47,466 (23), 2013: 50,554 (31), 2014: 60,156 (32)
эѕофи	The feedbacks of diagnosis (Passive Surveillance) to the customers are returned promptly in prescribed days set by the Project.	According to the result of baseline survey, it depends on the kind of test, but the average is about 1 week. But 20% of the customer get the result after more than 3 weeks.	The flow of sample in DIC Subang has been improved and the feedback is returned to the customer in standard period. The culture of bacteria and pathological diagnosis take 2 weeks, but the serological test and pathological test take only 2 days.
Project P	3 The DIC Subang staff are ready to conduct Active Surveillance (Planning, Implementing, Monitoring and Feedback the results to next survey) on animal health considering with livestock / poultry industry promotion in the pilot sites more than 2 times/site in a year.	The pilot sites had not yet been set	The pilot sites were set and disease surveillances were planned. The activity imprementation, Monitoring and Feedback have been done thorough the workshop and meeting every year. 2012. 8 times, 2013: 22 times, 2014: 17 times.
		Recognition of DIC Subang was low in 2010, there were no customer to ask diagnosis besides the local government.	The study on customer satisfaction has been conducted by DGLAHS. The percentage of satisfied customer is 87.4% in 2011 and 94.8% in 2014.
Goal	area increases 10% by the year of 2018 in comparison with the number in 2015	Until the end of the project, we assume that the diagnostic sample number increase of 5% every year. After that, it is to increase 10 percent in three years.	The number of diagnostic sample is already more than 60,000 in a year, and it is almost the limit of manpower for DIC Subang. DIC Subang has promoted to share the role of diagnosis between they and B/C type labs. For the time of Post-evaluation, increase of the diagnostic samples in B/C type labs or quality of diagnosis in DIC Subang should be considered
Overall (Number of district where the animal disease control is monitored by DIC Subang amounts to all district required in West Java area by the year of 2018	The number of district monitored was 31 in 2010	DIC Subang monitors all districts (41 districts) in 2014
	3 Number of awareness and technical support activity concerning animal health conducted by DIC Subang in West Java area goes up 20% by the year of 2018 in comparison with the number in 2015	There was no awareness and technical support activity conducted by DIC Subang	The technical support activities (Training, Seminar, etc.) for the staff of local laboratories were conducted as following 2011: 5 times, 2012. 8 times, 2013: 15 times, 2014: 12 times. Active surveillances conducted with DINAS were as following 2012. 91 times, 2013: 105 times, 2014: 130 times

Suggestion for revisions of Objectively Verifiable Indicators (OVI) on Project Design Matrix (PDM) by the Joint Terminal Evaluation Team

DDMM die G	Objectively Verif	iable Indicators	Reason for Change
PDM Narrative Summary	Current OVI	Suggested OVI	Reason for Change
Overall Goal Measures for animal disease control in West Java region (Jurisdictional area of DIC Subang) are strengthened.	1 Number of test samples for animal disease diagnoses at DIC Subang in West Java region increases 10% by the year of 2018 in comparison with the number in 2015. 2 Number of district where the animal disease control is monitored by DIC Subang amounts to all district required in West Java region by the year of 2018. 3 Number of awareness and technical support activity concerning animal health conducted by DIC Subang in West Java region goes up 20% by the year of 2018 in comparison with the number in 2015.	1 The number of test performed for animal disease diagnoses at the DIC Subang, type-B/C laboratories and PUSKESWAN in the jurisdiction area of the Center increases 10% by the year of 2018 in comparison with that in 2015 2 Number of district where the animal disease control is monitored by DIC Subang amounts to all district required in West Java region by the year of 2018.	Current OVI 1 and OVI 3 are integrated as Suggested OVT 1 becase of that; • The number of test performed is approximately 61,000 in the year of 2014, approaching the capacity limit of the DIC Subang. • By sharing simple tests from DIC Subang to type-B/C laboratories enhances diagnostic capacity of type-B/C laboratories. • DIC Suban should conduct activities of awareness raising and technical assistances steadily for type-B/C as describe on Current OVI 3. The unit of the target value of the OVI regarding the performance of tests should be changed from "the number of test samples" to "the number of tests performed" because of that; • One sample might be subject to multiple tests and the DIC Subang counts the number of tests practically due to the difficulty in grasping the performance with the number of samples.

Project Design Matrix (PDM)

Project Name Project on Capacity Development of Animal Health Laboratory

Target GroupStaff of Diseases Investigation Center (DIC) SubangProject DurationFour (4) years, July 17, 2011 – July 16, 2015

Project Site DIC Subang

Implementing Agency Directorate of Animal Health DGLAHS-MoA and JICA

Annex 17

(Draft)

Date: May 26, 2015 Version 3

		•	
Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal Measures for animal disease control in West Java region (Jurisdictional area of DIC Subang) are strengthened.	1 The number of tests performed for animal disease diagnoses at the DIC Subang, type-B/C laboratories and PUSKESWAN in the jurisdiction area of the Center increases 10% by the year of 2018 in comparison with that in 2015.	Monitoring Report, Survey on target groups in West Java region by DIC Subang (Terminal evaluation survey and final survey)	
	2 Number of district where the animal disease control is monitored by DIC Subang amounts to all district required in West Java region by the year of 2018.	2 Monitoring Report	
Project Purpose The quality and quantity of animal disease diagnosis service at DIC Subang are improved.	1 The number and the kind of animal disease diagnosis at DIC Subang becomes more than 35,000 samples in a year and 16 kind at the end of the Project. 2 The feedbacks of diagnosis (Passive Surveillance) to the customers are returned promptly in prescribed days set by the Project.	Monitoring Reports Diagnosis records at DIC Subang	The measures and policies concerning of animal disease control will be implemented by the government of Indonesia continuously.
	3 The DIC Subang staff are ready to conduct Active Surveillance (Planning, Implementing, Monitoring and Feedback the results to next survey) on animal health considering with livestock / poultry industry promotion in the pilot sites more than 2 times/site in a year. 4 80% of inquired customers (stakeholders such as DINAS staff, Field vets, and Farmers) recognizes improvement of diagnosis services of DIC Subang by the end of the Project.	3 Observation at the time of mid-term review and terminal evaluation. 4 Monitoring Reports, The results of questionnaire survey on users at the time of mid-term review and terminal evaluation (questionnaire survey to be done by the project monitoring activity 2-5).	Enough budget and personnel are allocated to DIC Subang for sustaining outcomes of the Project.
Outputs Output 1 The DIC Subang staff obtain basic and systematic diagnosis for animal diseases.	1-1 The technical levels acquired on diagnostic tests in each laboratory (8 laboratories) of DIC Subang attain to the target levels set up in the "Project Technical Target Sheet" by June 2013.	1-1 The results of examination by the Project	The staff of DIC Subang who have been transferred techniques by the Project are not
Output 2 The capacity to provide the customer oriented diagnosis services (Passive Surveillance) of DIC Subang staff is strengthened.	2-1 More than one staff in DIC Subang are certified by the Project he/she is able to make a final diagnosis based on the result of tests in each laboratory. 2-2 Each laboratory chief in DIC Subang he/she is able to make an	2-1 Records of comments for diagnosis results 2-2 The results of certification by the	transferred to other office during the Project period.
	appropriate comments based on the result of tests in each laboratory.	Project	

Output 3

Output 4

The capacity to conduct the surveys and the technical support of animal disease control (Active Surveillance) in the pilot sites of DIC Subang staff is strengthened.

The DIC Subang staff conduct the continuous

technical support activities for laboratory workers, field vets and farmers, including

information exchange, awareness on animal

health improvement in the pilot sites.

3-1 Active surveillances on animal health are conducted annually with a framework (Planning, Implementing, Analyzing and feedback) by the staff of DIC Subang.

- 3-2 Each laboratory chief in DIC Subang are able to make recommendations of animal disease control in the pilot sites for the
- 4-1 DIC Subang (Vet. Information section) issues periodical Newsletter of animal health 2 times a year for laboratory workers. field yets and farmers in the three provinces by June 2012.

veterinary officers and laboratory workers.

- 4-2 Each laboratory chief in DIC Subang is able to make annual plan of technical support activities to the laboratory workers, field vets and farmers in the pilot site by December 2013.
- 4-3 Achievement rate of annual activity plan (set in 4-2) becomes more than 90% in the pilot site.

3-1 Record of surveys

- 3-2 Records of Recommendations for animal disease control measures
- 4-1 Records of issued Newsletter
- 4-2 The plan and records of awareness and technical support activities
- 4-3 The plan and records of awareness and technical support activities

Activities

Output 1

1-1

The Staff of DIC Subang surveys the current capacities and needs in the diagnostic techniques at DIC Subang.

Based on the results of the survey, the staff of DIC Subang sets the necessary diagnostic techniques (kind of disease, diagnostic method etc.) and target levels of the techniques for each laboratory.

1-3

The staff of DIC Subang makes the plan of mastering diagnostic techniques for each laboratory in DIC Subang.

The staff of DIC Subang makes the list of trainer resources, for example, staff of other DICs, IRCVS, NVDAL, Vet Faculty of university, foreign experts etc.

The staff of DIC Subang learns the planned diagnostic techniques from the resources trainers through training in Indonesia, Japan or third country.

The staff of DIC Subang receives the diagnostic capability evaluation (including the proficiency tests) by resource trainers about the transferred diagnostic tests.

Output 2

2-1

The staff of DIC Subang analyzes the current situation of sample flow and examinations at DIC Subang.

The staff of DIC Subang analyzes the current situation of sample submission from the fields.

The staff of DIC Subang makes the plan of improved sample flow and examination system at DIC Subang. (Measures for the sample senders will be planed in Output 4)

The staff of DIC Subang conducts the improved diagnostic services.

The staff of DIC Subang monitors the improved diagnostic services (sample reception, diagnostic flow and customer's comment etc.) and conducts the feed-back to the system.

Inputs

Indonesian side

- 1. Assignment of counterpart personnel
- 2. Salary, Travel expense, accommodation cost and daily allowance of counterpart personnel
- 3. Project office space and communication device etc.
- 4. Budget for operational cost for the Project implementation (electricity etc.)
- 5. Procurement of Reagents and consumables.

Japanese side

- 1. Dispatch of Experts
- (1) Long-term Experts:
- Chief Advisor / Animal Health Administration
- Project Coordinator / Animal Health Information
- Veterinary Diagnosis / Epidemiology (assigned in half period of the project)
- (2) Short-term experts: from Japan or from third country

Relevant experts in specific subjects of animal health will be dispatched, when necessity arises, for the smooth implementation of the Project within the framework of the Project.

Sufficient budget to conduct the necessary diagnosis is secured by Indonesian side.

Output 3

3-1

The staff of DIC Subang conducts preliminary surveys to select pilot site(s) from livestock / poultry industry promoted areas.

3-2

The staff of DIC Subang specifies the pilot site and some animal diseases for the surveys and control.

3-3

The staff of DIC Subang plans and conducts the surveys on animal health considering the specificity of promoted livestock / poultry sectors in the pilot site through cooperation with B/C type laboratories.

3-4

The staff of DIC Subang analyses the results of surveys and develops the recommendation reports to the authorities for the improvement of animal health situation.

3-5

The staff of DIC Subang organizes and conducts the monitoring of the animal health improvement for the follow-up of recommended activities and the feed-back.

Output 4

4-1

The DIC Subang issues periodical Newsletters to provide and exchange information on animal health for laboratory workers, field vets and farmers in the 3 provinces of West Java region.

4-2

The staff of DIC Subang examines and conducts necessary measures of information exchange (on site meetings, etc.) for veterinary officers, laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type laboratories.

4-3

The staff of DIC Subang makes plans of sustainable activities of awareness and technical supports for improvement of animal health and production, which are necessary for laboratory workers, field vets and farmers in the pilot site. (Utilize other JICA projects outcomes such as a Flip-chart for dairy farmers.)

4-4

The staff of DIC Subang conducts sustainable activities of awareness and technical support for the laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type laboratories.

4-5

The staff of DIC Subang organizes and conducts the monitoring and the feed-back of the results to the next actions.

- Counterparts training in Japan or in third country
- 3. Provision of machinery / equipment
- Budget for operational cost for the Project implementation

Pre-Conditions

18. スバン DIC で提供される診断可能な疾病及び診断技術一覧

Diagnostic test conducted in DIC Subang

No	Disease	Diagnostic Test	Lab	Before Project Implementation (2010)	End of the Project (2014)
1	Hemorrhagic Septicemia	Isolation and identification	Bacteriology	x	0
2	Anthrax	Isolation and identification	Bacteriology	x	0
		ELISA	Bacteriology	0	0
		Pathology Staining	Bacteriology	x	0
3	Brucellosis	Rose Bengal Test	Bacteriology	0	0
		CF Test	Bacteriology	x	0
		Isolation and identification	Bacteriology	x	0
4	Campylobacteriosis	Isolation and identification	Bacteriology	X	0
5	Salmonellosis	Quick Test (Pullorum serum test)	Bacteriology	0	0
		Pullorum isolation and identification	Bacteriology	x	0
		Salmonella isolation and identification	Bacteriology	x	0
6	Rabies	FAT	Virology, Serology	0	0
		ELISA	Virology, Serology	0	0
		Biological Test	Virology, Serology	x	0
7	Jembrana Disease	ELISA	Virology, Serology	x	0
		PCR	Virology, Serology	x	x
8	BVD	ELISA	Virology, Serology	0	0
		PCR	Biotechnology	x	0
9	IBR	ELISA	Virology, Serology	0	0
10	Classical Swine Fever	ELISA	Virology, Serology	0	0
		PCR	Biotechnology	x	0
11	Avian Influenza	TET Isolation	Virology, Serology	0	0
		HA/HI (Serology)	Virology, Serology	0	0
		PCR (Type A)	Biotechnology	x	0
		PCR (H1)	Biotechnology	x	0
		PCR (H5)	Biotechnology	x	0
		PCR (H7)	Biotechnology	x	0
12	Newcastle Disease	TET Isolation	Virology, Serology	0	0
		HA/HI (Serological Test)	Virology, Serology	0	0
		PCR	Biotechnology	x	0
13	IBD	ELISA	Virology, Serology	x	Ö
		PCR	Biotechnology	x	0
14	Foot and Mouth Disease	ELISA	Virology, Serology	x	Ó
15	Enzootic Bovine Leukosis	ELISA	Virology, Serology	0	Ō
		PCR	Biotechnology	x	Ö
16	Mycoplasma (CRD)	Quick test	Bacteriology	0	Ō
		Isolation and identification	Bacteriology	x	Ö
17	BSE	Histopathology	Pathology	x	Ō
18	Swine flu (H1N1)	ELISA	Virology, Serology	0	Ö
		PCR	Biotechnology	Ō	Ö
19	Blood parasite	Trypanosomiasis	Parasitology	Ö	Ö
	•	Anaplasmosis	Parasitology	x	Ö
		Theileriosis	Parasitology	0	Ō
		Babesia	Parasitology	x	Ö
		Plasmodium	Parasitology	x	Ö
		Leucocytozoon	Parasitology	x	Ö
		Eperythrozoon	Parasitology	x	Ö
		Clinostomum	Parasitology	x	Ö
20	Endoparasite	Fasciolosis	Parasitology	0	Ö
		Paramphistomum	Parasitology	ŏ	ŏ
		Moniezia	Parasitology	Ö	ŏ
		Eimeria (Coccidiosis)	Parasitology	ŏ	ŏ
		Nematodiasis	Parasitology	ŏ	ŏ
		Bunostomum	Parasitology	x	ŏ
		Cooperia	Parasitology	x	0
		Cotyloporon	Parasitology	x	0
		Mecistocirus	Parasitology	x X	0
		Oesophagustomum	Parasitology	x x	0
		Strongyloides	Parasitology Parasitology	x x	0
		Trichostrongylus	Parasitology Parasitology	x x) (
		Trichuris	Parasitology Parasitology		0
21	Mansnassis	ELISA	Parasitology Parasitology	x	0
21 22	Neosporosis			x	0
	Toxoplasmosis	ELISA	Parasitology	x	0
23	Trichomoniasis	ELISA	Parasitology	x	0
24	Colibacillosis	Isolation and identification	Bacteriology	x	0

25	Johne's disease	ELISA	Bacteriology	x	0
		PCR	Biotechnology	x	0
26	Akabane disease	Isolation and identification	Virology, Serology	x	0
		Neutralization test	Virology, Serology	x	0
27	Food-borne poisoning	Total Plate Count	Public Health	x	0
		Pig containing	Public Health	x	0
		Antibiotics residue	Public Health	x	0
		Borax residue	Public Health	x	0
		Coliform culture	Public Health	x	0
		Salmonella culture	Public Health	x	0
		Formalin Test	Public Health	x	0

MINUTES OF MEETING ON THE TERMINAL EVALUATION FOR

THE PROJECT ON CAPACITY DEVELOPMENT OF ANIMAL HEALTH LABORATORY

The Japan International Cooperation Agency (hereinafter referred to as "JICA")

dispatched the mission, headed by Dr. Masaharu Kanameda, to the Republic of Indonesia from May 7 to 27, 2015 for the purpose of conducting terminal evaluation for "the Project on Capacity Development of Animal Health Laboratory" (hereinafter referred to as "the Project") in accordance with the Record of Discussions on the project.

For this purpose, the Japanese mission and the Indonesian authorities concerned formed the Joint Terminal Evaluation Team (hereinafter referred to as "the Team").

After review and analysis of the activities and achievements of the Project, the Team prepared the Joint Terminal Evaluation Report (hereinafter referred to as "the Report"), which was presented to the Joint Coordinating Committee (hereinafter referred to as "the JCC").

The JCC discussed the major issues pointed out in the Report and agreed the matters attached hereto.

Jakarta, May 26, 2015

Dr. Mardiatmi

Acting Director
Directorate of Animal Health
Directorate General of
Livestock and Animal Health
Services
Ministry of Agriculture
Republic of Indonesia

Senior Adviser Japan International Cooperation Agency Japan

Dr. Masaharu Kanameda.

ATTACHMENT

- 1. The Team presented the Report shown in the Appendix 1 to the JCC.
- 2. The JCC accepted the Report presented by the Team, and agreed to take necessary measures for successfully sustaining and extending the achievement of the Project.
- 3. The JCC had a discussion and agreed on the contents of revised the Project Design Matrix (herein after referred to as "PDM") (ver. 3.0) as shown in the Appendix 2, which was explained by Mr. Yasuyuki. Maeda, Project Coordinator.

END

Appendix 1: the Joint Terminal Evaluation Report

Appendix 2: PDM (ver.3.0)

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JOINT TERMINAL EVALUATION REPORT

ON

THE JAPANESE TECHNICAL COOPERATION PROJECT

ON

CAPACITY DEVELOPMENT OF ANIMAL HEALTH LABORATORY

Japan International Cooperation Agency (JICA)

and

Directorate General of Livestock and Animal Health Services
(DGLAHS) of the Ministry of Agriculture

The Republic of Indonesia

Dr. Masaharu KANAMEDA

Leader

Japanese Terminal Evaluation Team
Japan International Cooperation Agency
Japan

Leader

Dr. Nilma Lubis

Indonesian Terminal Evaluation Team DGLAHS, Ministry of Agriculture

The Republic of Indonesia

25 MAY 2015

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Abbreviation

AAHL Australian Animal Health Laboratory

CFT Complement Fixation Test

DAH Directorate of Animal Health

DGLAHS Directorate General of Livestock & Animal Health Services

DIC Disease Investigation Center

DINAS Provincial/District Office

ELISA Enzyme-Linked Immunosorbent Assay

FAO Food and Agriculture Organization

HPAI High-Pathogenic Avian Influenza

IDR Indonesian Rupiah

ILRI International Livestock Research Institute

IRCVS Indonesian Research Centre for Veterinary Science

iSIKHNAS Integrated Animal Health Information System (Sistem Informasi Kesehatan

Hewan Nasional Terintegrasi)

JCC Joint Coordination Committee

JICA Japan International Cooperation Agency

M/M Man-Month

ND Newcastle Disease

NVDAL National Veterinary Drug Assay Laboratory

ODA Official Development Assistance

OIE World Organization for Animal Health

OJT On-the-Job Training

PDM Project Design Matrix

PO Plan of Operation

PUSKESWAN Center for Animal Health (Pusat Kesehatan Hewan)

SOP Standard Operation Procedure

Standard Operation r roccd

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CHAPTER 1 SCOPE OF TERMINAL EVALUATION

1.1 Background of the Terminal Evaluation

In the Republic of Indonesia (hereinafter referred to as "Indonesia"), animal health is regarded as an important agenda for the development of livestock business including productivity improvement. In recent years in particular, infectious animal diseases including zoonoses became a main concern, which impacted the socioeconomics and human health as well. Therefore, the reinforcement of disease surveillance system is important to control animal and livestock diseases in Indonesia.

In Indonesia, eight (8) Disease Investigation Centers (hereafter referred to as "DICs") had been established for animal disease control, namely DIC Medan, DIC Bukittinggi, DIC Lampung, DIC Wates, DIC Denpasar, DIC Banjarbaru, DIC Maros and DIC Subang. These DICs have been founded as "type-A laboratory" that cover several provinces for diagnosis of animal diseases. In addition, type-B and type-C laboratories are disposed at provinces and districts, respectively. Type-A laboratories under DGLAHS practice surveillance and diagnosis of animal diseases; type-B and type-C laboratories on each province and district practice management of animal diseases along with the animal disease control. Under the situation that Indonesia has been implementing the decentralization system, the relationship and collaboration among these three types of laboratories has to be strengthened to improve the management of animal and livestock disease control system.

The Government of Japan had implemented a grant aid project entitled "Improvement on Animal Health Laboratory for Avian Influenza and other Strategic Animal Disease" from 2007 to 2009. The purpose of the Grant Aid Project was to improve DIC Medau and DIC Lampung and to establish a new DIC in Subang in order to carry out the National Strategic Plan for Avian Influenza Control steadily and properly. The DIC Subang is located approximately 100 km from Jakarta, supervising DKI Jakarta Province, West Java Province and Banten Province, where the DIC Wates previously had jurisdiction over. Since these three provinces are caught on poultry faming in Indonesia, it is naturally regarded as very important areas on the animal health control. Forty-seven (47) staff including technical staff including 21 veterinaries and 16 paraveterinary workers (hereinafter referred to as "parayets") was allocated at newly-established DIC Subang, but the most of those had less experiences on testing and diagnostic techniques as well as other duties regarding animal and livestock disease control. Under such circumstances, the Government of Indonesia requested the Government of Japan to implement a technical cooperation project with the purpose of strengthening the function of the DIC Subang in their diagnostic services for animal and livestock diseases, in order to realize effective animal and livestock disease control in the West Java region. On the basis of the request, the Japan International Cooperation Agency (hereinafter referred to as "JICA") commenced a 4-year technical cooperation entitled "the Project on Capacity Development of Animal Health Laboratory" from July 2011.

With the project closure approaching in July 2015, JICA dispatched the Terminal Evaluation Team (hereinafter referred to as "the Team") to evaluate the Project by the "Five Evaluation Criteria" (Relevance, Effectiveness, Efficiency, Impact and Sustainability) based on their performances, progress of the project activities and implementation process of the Project as a joint evaluation with the Indonesian side. On the basis of the evaluation results, the Team provided recommendations for relevant parties on the project activities to secure fulfillments of the Outputs and the Project Purpose as well as better sustainability of the benefits derived from the Project. Lessons learnt from the Project, in parallel, are identified in order for JICA to utilize them for designing and organizing similar other projects.

1.2 Objectives of the Terminal Evaluation

The objectives of the Terminal Evaluation are as follows:

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- To review the overall progress of the Project and evaluate the achievement as of the time of the Terminal Evaluation in accordance with the five evaluation criteria on the basis of latest version of Project Design Matrix (hereinafter referred to as 'PDM') version 2 (Annex 2);
- 2) To identify the contributing and hindering factors for the achievements of the Outputs and the Project Purpose;
- 3) To discuss the plan of the Project for the rest of the project period together with the Indonesian side based on reviews and analysis of the project performances;
- 4) To make recommendations in order to ensure the steady achievement of the Project Purpose by the end of the project period, and to revise the PDM as necessary; and
- 5) To summarize the results of the review and evaluation in the Joint Terminal Evaluation Report.

1.3 Joint Terminal Evaluation Team

The members of the Team are indicated below.

<The Japanese Side>

Name	Designation	Title and Affiliation	Duration of Survey
Dr. Masaharu KANAMEDA	Leader .	Senior Adviser, JICA	17/May/2015 27/May/2015
Dr. Tetsuya NAKAO	Livestock Disease Diagnosis	Director, Microbiological Inspection Division, Department of Investigation and Research, Animal Quarantine Service, Ministry of Agriculture, Forestry and Fisheries	17/May/2015 – 27/May/2015
Dr. Takehisa YAMAMOTO	Veterinary Epidemiology	Senior Researcher, Viral Disease and Epidemiological Research Division, Epidemiological Research Team, National Institute of Animal Health	17/May/2015 – 27/May/2015
Mr. Shinji HIRONAKA	Planning and Management	Associate Expert, Team 1, Agricultural and Rural Development Group 1, Rural Development Department, JICA	17/May/2015 – 27/May/2015
Dr. Yoichi INOUE	Evaluation Analysis	Senior Consultant, Consulting Division, Japan Development Service Co., Ltd.	7/May/2015 — 27/May/2015

<The Indonesian Side>

Name	Title and Affiliation	
Dr. Nilma Lubis	Senior Veterinary Officer, Sub Directorate of Animal Disease Surveillance, Directorate of Animal Health, DGLAHS	
Dr. M. Farid. AZ. Senior Veterinary Officer, JICA Project Management Unit, DGLAHS		
Dr. Megawaty Iskandar	Veterinary Officer, Sub Directorate of Institutional and Animal Health Resources, Directorate of Animal Health; DGLAHS	
Ms. Yuliana Susanti	Senior Officer, Subdivision Cooperation and Public Relation, Planning Division, DGLAHS	



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The field study was conducted from the 8th to 26th of May 2015. The investigation period was used for site visits, interviews and scrutinizing various documents and data related to planning, implementation and monitoring processes of the Project (Annex 1).

1.4 Framework of the Project

Implementing and related agencies, target areas and beneficiaries are described below. The Narrative Summary of the Project (Project Purpose, Outputs and Activities) set in the latest PDM (version 2) is described below.

[Target Group]

Staff of DIC Subang

[Project Site]

DIC Subang

[Implementing Agency]

Directorate of Animal Health of DGLAHS-the Ministry of Agriculture (MOA) and JICA

[Narrative Summary of the latest PDM (version 2, Date: May 23, 2013)]

Overall Goal	Measures for animal disease control in West Java region (Jurisdictional area of DIC Subang) are strengthened.	
Project Purpose	The quality and quantity of animal disease diagnosis service at DIC Subang are improved.	
Outputs	Output 1 The DIC Subang staff obtains basic and systematic diagnosis for animal diseases.	
	Output 2 The capacity to provide the customer oriented diagnosis services (Passive Surveillance) of DIC Subang staff is strengthened.	
	Output 3 The capacity to conduct the surveys and the technical support of animal disease control (Active Surveillance) in the pilot sites of DIC Subang staff is strengthened.	
	Output 4 The DIC Subang staff conducts the continuous technical support activities for laboratory workers, field vets and farmers, including information exchange, awareness on animal health improvement in the pilot sites.	
Activities	Activities under Output 1 1-1. The Staff of DIC Subang surveys the current capacities and needs in the diagnost techniques at DIC Subang.	
	1-2. Based on the results of the survey, the staff of DIC Subang sets the necessary diagnostic techniques (kind of disease, diagnostic method etc.) and target levels of the techniques for each laboratory.	
	1-3. The staff of DIC Subang makes the plan of mastering diagnostic techniques for each laboratory in DIC Subang.	
	1-4. The staff of DIC Subang makes the list of trainer resources, for example, staff of other DICs, IRCVS, NVDAL, Vet Faculty of university, foreign experts etc.	



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- 1-5. The staff of DIC Subang learns the planned diagnostic techniques from the resources trainers through training in Indonesia, Japan or third country.
- 1-6. The staff of DIC Subang receives the diagnostic capability evaluation (including the proficiency tests) by resource trainers about the transferred diagnostic tests.

Activities under Output 2

- 2-1. The staff of DIC Subang analyzes the current situation of sample flow and examinations at DIC Subang.
- 2-2. The staff of DIC Subang analyzes the current situation of sample submission from the fields.
- 2-3. The staff of DIC Subang makes the plan of improved sample flow and examination system at DIC Subang. (Measures for the sample senders will be planed in Output 4).
- 2-4. The staff of DIC Subang conducts the improved diagnostic services.
- 2-5. The staff of DIC Subang monitors the improved diagnostic services (sample reception, diagnostic flow and customer's comment etc.) and conducts the feed-back to the system.

Activities under Output 3

- 3-1. The staff of DIC Subang conducts preliminary surveys to select pilot site(s) from livestock / poultry industry promoted areas.
- 3-2. The staff of DIC Subang specifies the pilot site and some animal diseases for the surveys and control.
- 3-3. The staff of DIC Subang plans and conducts the surveys on animal health considering the specificity of promoted livestock / poultry sectors in the pilot site through cooperation with B/C type laboratories.
- 3-4. The staff of DIC Subang analyses the results of surveys and develops the recommendation reports to the authorities for the improvement of animal health situation.
- 3-5. The staff of DIC Subang organizes and conducts the monitoring of the animal health improvement for the follow-up of recommended activities and the feedback.

Activities under Output 4

- 4-1. The DIC Subang issues periodical Newsletters to provide and exchange information on animal health for laboratory workers, field veterinarians and farmers in the 3 provinces of West Java region.
- 4-2. The staff of DIC Subang examines and conducts necessary measures of information exchange (on site meetings, etc.) for veterinary officers, laboratory workers, field veterinarians and farmers in the pilot site through cooperation with B/C type laboratories.
- 4-3. The staff of DIC Subang makes plans of sustainable activities of awareness and technical supports for improvement of animal health and production, which are necessary for laboratory workers, field vets and farmers in the pilot site. (Utilize other JICA projects outcomes such as a Flip-chart for dairy farmers.)
- 4-4. The staff of DIC Subang conducts sustainable activities of awareness and technical support for the laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type laboratories.
- 4-5. The staff of DIC Subang organizes and conducts the monitoring and the feedback of the results to the next actions.



CHAPTER 2 EVALUATION PROCESS

The Terminal Evaluation was conducted in accordance with the 1st and 2nd edition of "JICA Guidelines for Project Evaluations" issued in June 2010 and May 2014, respectively. Achievements and implementation process were assessed based on the review results, which are consolidated in the evaluation grid (Annex 3-1, 3-2), in accordance with the five evaluation criteria of relevance, effectiveness, efficiency, impact, and sustainability, as well as the Verification of Implementation Process.

Based on the evaluation grids, the Team conducted surveys at the project sites to review the Project through questionnaires and interviews to counterpart personnel, related organizations and the JICA experts involved.

Both the Indonesian and Japanese sides jointly analyzed and reviewed the Project based on the Project Cycle Management (PCM) concept. The evaluation was performed on the basis of PDM version 2. Both sides jointly analyzed the achievements of the Project, evaluated the Project based on the five evaluation criteria, and consolidated the findings in this Joint Review Report.

Description of the five evaluation criteria that were applied in the analysis for the Terminal Evaluation is outlined in Table 1 below.

Table 1: Description of Five Evaluation Criteria

Five Criteria	. Description
Relevance	Relevance of the Project was reviewed by the validity of the Project Purpose and the Overall Goal in connection with the government development policy and the needs in the Indonesia. Relevance of the Project was verified on the basis of facts and achievements at the time of the Terminal Evaluation.
Effectiveness	Effectiveness was assessed as to what extent the Project has achieved its Project Purpose, clarifying the relationship between the Project Purpose and the Outputs. Effectiveness of the Project was verified on the basis of facts and achievements at the time of the Terminal Evaluation.
Efficiency	Efficiency of the project implementation was analyzed with emphasis on the relationship between the Outputs and the Inputs in terms of timing, quality and quantity. Efficiency of the Project was verified on the basis of facts and achievements at the time of the Terminal Evaluation.
Impact	Impact of the Project was assessed in terms of positive/negative, and intended/unintended influence caused by the Project. Impact of the Project was verified on the basis of extrapolation and expectation at the time of the Terminal Evaluation.
Sustainability	Sustainability of the Project was assessed in terms of political, financial and technical aspects by examining the extent to which the achievements of the Project will be sustained after the Project is completed. Sustainability of the Project was verified on the basis of extrapolation and expectation at the time of the Terminal Evaluation.



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CHAPTER 3 PROJECT PERFORMANCE

3.1 Inputs

1) Inputs from the Japanese Side

The following are inputs from the Japanese side to the Project as of December 2014. See Annex from 4 to 9 for more information.

Components	Inputs
Dispatch of JICA experts	Long-term Experts: a total of three (3) persons (Chief Advisor/Anima Health
	Administration, Veterinary Diagnosis/Epidemiology and Coordinator / Animal
	Health Information) (a total of 121.8 M/M, estimation as of the time of the end of
	project period)
	Short-term Experts: a total of 17 personnel (28.1 M/M)
Employment of Local Staff	Clerical staff: a total of 2 persons, System Engineer: 1 person, Field Trainer: 1
	person, and Drivers: 2 persons
Provision of Equipment	Desktop/Notebook PCs Photocopier, Vehicle (4WD), Testing and Diagnostic
	instruments such as Refrigerated Micro Centrifuge, Microscope with CCD camera
	and monitor, etc.
Training in Japan and Third	Training in Japan: a total of 16 persons (Zoonosis Control in Japan, Research on
Countries	Veterinary Technology in Japan, Advanced Research Course on International
	Animal Health, Training on Veterinary Diagnosis for Paramedics, Research on
	Veterinary Technology in Japan)
	Training in Third countries: 1 person for Diagnosis of Avian Influenza at Source in
	Southeast Asia Region in Malaysia, and 2 persons for Training on diagnosis &
	surveillance of Brucellosis in Thailand
Other Activity Costs	Meeting Package, etc.: IDR 62,095,000 IDR

2) Inputs from the Indonesian Side

The followings are inputs from the Indonesian side to the Project as of December 2014. See details on the Annex 8 and 9.

Components	liputs
Allocation of Counterpart	A total of 64 persons
Researchers	- DAH of DGLAHS: a total of 6 persons
	- DIC Subang: a total of 58 persons
Facilities, Equipment and	Project Office with desks, chairs, miscellaneous items, etc. in the DIC Subang
Materials	
Local costs IDR 63,707,558,600 (Implemented from 2011 to 2014, and planned budget in 201	



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3.2 Performance and Achievements of the Project

1) Performance of the Project Activities

Performances of the Project Activities under Outputs are as indicated below.

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Output 1 The DIC Subang staff obtains basic at	nd systematic diagnosis for animal diseases.
Activities	Performances
1-1. The Staff of DIC Subang surveys the current capacities and needs in the diagnostic techniques at DIC Subang.	 The Project conducted a baseline survey promptly after the commencement of the Project with the following items of targets and contents: The inside of DIC Subang; and Capacity of disease diagnosis, the number of diagnosis for each disease, the situation of daily operation and instruments, equipment, facilities, etc. The out side of DIC Subang.
	the situation of livestock business, questionnaire surveys to a total of 27 local organizations such as local governments (DINAS) and dairy cooperatives in the jurisdictional area of the DIC Subang on general information, the way of simple submission to DIC, the situation of active surveillance, training opportunities for animal and livestock health, the feedback system of test results with its commentaries from DIC Subang to clients, etc. On the basis of the survey results, the Project determined unfixed matters on the PDM version 0 such as the target values of the Objectively Verifiable Indicators (OVIs). The updated PDM was authorized as version 1 by the Joint Coordinating Committee (JCC) on
1-2. Based on the results of the survey, the staff of DIC Subang sets the necessary diagnostic techniques (kind of disease, diagnostic method etc.) and target levels of the techniques for each laboratory. 1-3. The staff of DIC Subang makes the plan of mastering diagnostic techniques for each laboratory in DIC Subang. 1-4. The staff of DIC Subang makes the list of trainer resources, for example, staff of other DICs, IRCVS, NVDAL, Vet Faculty of university, foreign experts etc.	 the 14th of March, 2012. On the basis of the baseline survey, the Project selected the target sites as well as the target diseases, and the Plan of Operation (PO) was also developed. At the same time, the Project prepared a "Target Goal" sheet for each laboratory that stipulate diagnostic techniques and services to be acquired or operated with accomplishment indicators and due date. The preparation works for the sheets were done mainly in the 1st quarter of 2012, and completed by the 3rd quarter of 2012 in all laboratories. A total of JICA short-term experts were dispatched to Indonesia in accordance with the Plan of Operation (PO) for necessary duration and at necessary timing (a total of 842 days, 28.1 M/M). In addition, the Project built a list of Indonesian trainers by the 1st quarter of 2012, and utilized it for seminars and workshops. Indonesian trainers were appointed from various types of organizations (composed mainly of Professors of universities). The Project has been updating the list from time to time.
1-5. The staff of DIC Subang learns the planned diagnostic techniques from the resources trainers through training in Indonesia, Japan or third country.	 At the time of the Terminal Evaluation, a total of 16 counterpart personnel had received the "Training in Japan" at Japanese institute and universities, namely, the National Institute of Animal Health, the Hokkaido University and the Obihiro University of Agriculture and Veterinary Medicine in the themes of "Research on Veterinary Technology in Japan", "Zoonosis Control in Japan", "Training on Veterinary Diagnosis for Paravets" and "Advanced Research Course on International Animal Health". One (1) counterpart personnel participated a training course in the theme of "Diagnosis of Avian Influenza at Source in Southeast Asia Region in Malaysia" under the support of the Third Country Training Programme in October 2011 (0.8 M/M). Other two (2) personnel participated a training course in the theme of "Training on diagnosis & surveillance of Brucellosis in Thailand" under the support of JICA in June 2011 (0.6 M/M).

	 A number of Indonesian eligible personnel from the DIC Subang, Type-B/C laboratories, DINAS, etc. had participated in a total of 41 seminars, workshops and training organized by the Project, the Government of Indonesia, DGLAHS or the Food and Agriculture Organization (FAO).
	 The Project has organized seminars and meetings for 65 times, and a total of 133 presentations were made by the staff of the DIC Subang or JICA experts.
1-6. The staff of DIC Subang receives the diagnostic capability evaluation (including the proficiency tests) by resource trainers about the transferred diagnostic tests.	There were 2 different types of proficiency testing mechanisms until 2013; one by the Australian Animal Health Laboratory to which the World Organization for Animal Health (OIE) accredited; and the other by a laboratory assigned as the organizer of inter-laboratory tests to harmonize the level of laboratories in Indonesia
	• In 2012, The Minister of Agriculture assigned DIC Wates as the national reference laboratory for AI, and DIC Wates organized the quality assurance testing mechanism from 2013.
	 The DIC Subang has received the comparison/proficiency tests for a total of 103 times for leveling facilities among DICs and NVDAL with the target diseases of Brucellosis, AI, Rabies, etc. as of the time of the Terminal Evaluation.
	• In accordance with the standards to be followed under the accreditation of ISO, the DIC Subang is placed an obligation to receive proficiency tests annually (or comparative test with other DIC). Therefor, external quality assurance of the DIC Subang will surely be continued even after the end of the project period

Output 2

The capacity to provide the customer oriented diagnosis services (Passive Surveillance) of DIC Subang staff is strengthened.

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Activities	Performances	
2-1. The staff of DIC Subang analyzes the current situation of sample flow and examinations at	 The Baseline survey was conducted from the 4th quarter of the year 2011 to the Ist quarter of the year 2012 to investigate and analyze the situation of sample flow, diagnosis procedures and sample delivery. 	
DIC Subang.	 The survey revealed several agendas at each laboratory to be improved, such as putting necessary instruments and tools for testing, streamlining daily duties and the necessity of instruments and devices, on top of the necessity of acquiring new technologies and improving testing skills described in Output 1. 	
2-2. The staff of DIC Subang analyzes the current situation of sample submission from the fields.		
2-3. The staff of DIC Subang makes the plan of improved sample flow and examination system at DIC Subang. (Measures for the sample senders will be planed in Output 4). 2-4. The staff of DIC Subang conducts the improved diagnostic services.	 The Project elaborated a plan for the improvement in the sample flow from the reception to the feedback of results, from the 3rd quarter 2011 to the 1st quarter 2012. 	
	 After the time of the 1st JCC held in March 2012, the DIC Subang has been putting great efforts to improve the testing and diagnostic services continuously, and developed a reporting system in accordance of the plan aforementioned. 	
	At the time of the Terminal Evaluation, it is guaranteed by the JICA experts that the head of each laboratory has acquired capacity to give diagnoses properly in general. In addition, since the DIC Subang was certified as an ISO 17025-certifed facility in 2014, it is proved that the management system in the DIC Subang is compliant with international standards for the testing and diagnostic laboratory.	
	As aforementioned, the system of testing and diagnostic services has been improved significantly; nevertheless, there are several challenges for ideal implementation of comprehensive diagnoses in terms of sample quality, insufficient epidemiological information, etc. Therefore, the DIC Subang should continue efforts to raise the	

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	awareness and capacity of clients including staff in type-B/C laboratories.
2-5. The staff of DIC Subang monitors the improved diagnostic services (sample reception, diagnostic flow and customer's comment etc.) and conducts the feed-back to the system.	system of testing and diagnostic services in accordance with the requirements of ISO 9001 and ISO 17025.

Output 3

The capacity to conduct the surveys and the technical support of animal disease control (Active Surveillance) in the pilot sites of DIC Subang staff is strengthened.

the pilot sites of DIC Subang staff is		
Activities	Performances	
3-1. The staff of DIC Subang conducts preliminary surveys to select pilot site(s) from livestock / poultry industry promoted areas.	 The Project gathered basic information for the selection of pilot sites from the baseline survey. Amongst the contagious animal diseases strategically designated in the National Priority Diseases (rabies, HPAI, brucellosis, anthrax and hog cholera), the Project selected bovine brucellosis with high prevalence and fewer countermeasures as a target disease. West Java region has a big number of dairy cattlet however, accurate data from agreeillane. 	
3-2. The staff of DIC Subang specifies the pilot site and some animal diseases for the surveys and control.	big number of dairy cattle; however, accurate data from surveillance has not been obtained even though high prevalence is expected. The Project selected East Jakarta in DKI Jakarta as pilot site considering the data showing the high positive rate of brucella antibody as 15.3% (23/163) tested by Complement Fixation Test (CFT). Banten province was reported to be free from Brucellosis; therefore, the Project selected there as a pilot site since it is necessary to monitor the freedom from brucellosis.	
	• In addition to bovine brucellosis, the Project commenced an active surveillance on abortion in cattle from 2014. The surveillance on abortion targeted water buffalo in Banten province and dairy cattle in Lembang district in West Java. Pangalengan district was added to the target site for the surveillance on abortion based on the request from the provincial government of West Java.	
3-3. The staff of DIC Subang plans and conducts the surveys on animal health considering the specificity of promoted livestock / poultry sectors in the pilot site through cooperation with B/C type laboratories.	• After the commencement of the Project, a short-term expert in the field of veterinary epidemiology took initiative to investigate actual situation and challenges at Epidemiology Laboratory in the DIC Subang, subsequently, transferred the methods and technologies with regard to selection of target sites, sampling, data analysis. A manual for isolation and identification of Brucella abortus was developed at the initiative of the JICA long-term expert from January to February 2012. Based on the manual, Bacteriology laboratory has commenced the preparation of selection media, followed by culturing the bacterium Brucella abortus.	
	• Based on "the concept of practical epidemiology", "the method of field survey for epidemiological analysis" and "the method of data analysis using epidemiological techniques" that were technically-transferred by the said short-term expert from April to July 2012. On the basis of these technical transportations, the Project conducted the surveillance on bovine brucellosis. The Project tested 5,400 head of cattle for brucella antibody by the Rose Bengal Plate Agglutination Test, and showed that 3.2% of those (173/5,400) were positive.	
	 The results of surveillance on bovine brucellosis conducted from 2013 were summarized as below: DKI Jakarta Province In collaboration with type-B/C laboratories, the Project established an individuals identification system for cattle, and subsequently investigated the prevalence of brucellosis. One hundred twenty eight (128) out of 1,567 head of cattle (8.2%) showed positive for brucella antibody. 	
	West Java Province The Project conducted the surveillance on brucellosis, and estimated the prevalence at each district. The Project estimated the	

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prevalence of it in entire West Java as approximately 4% from a total of 433 dairy farms.

- Banten Province
- The Project conducted questionnaire and brucella antibody surveys for farmers possessing water buffalo, and confirmed negative results for all the water buffalo tested (1.955 head). Meanwhile, the survey showed that approximately 20% of the farmers experienced abortions. It is notable the survey was the very first full-scale survey on brucellosis in Banten Province.
- The Project conducted the surveillance on brucellosis in DKI Jakarta, West Java and Banten in a total of 8,026 head of dairy cattle and water buffalo, and the prevalence was 0.57% in entire area investigated. The Project find out the heterogeneity in prevalence as follows: 6.8% in Sumedang, 4.2% in Bandung and 3.7% in East Jakarta whereas 0.0% in 23 out of 29 districts.
- The surveillance on abortion in cattle was conducted from September to November 2014 in Pangalengan and Lembang districts in West Java Province. The Epidemiology laboratory of the DIC Subang, with support from JICA experts, took initiative to elaborate the plan of field surveys, questionnaire, and data analysis of the active surveillance. Other laboratories participated the surveillance to investigate the abortion cases caused by bacteria, viruses and/or parasites in cattle. The target pathogens of each laboratory were as follows: Bacteriology laboratory for Brucella, Salmonella and Campylobacters; Virology laboratory for Arbovirus; and Parasitology laboratory for parasites in blood and feces. The Pathology laboratory also participated the survey.
 - Brucellosis
 - The positive rate of brucella antibody in serum was 6.3% (48/760) in CFT. The Project identified a strain isolated from 50 samples of vaginal swabs as *Brucella abortus* by biochemical characterization and PCR test. The Project also identified two (2) cases of *Brucella abortus* infection from existing suspected samples. Eventually, the Project has identified *Brucella abortus* from three (3) head of cattle with abortion history.
 - Arbovirus, a cause of premature parturition, abortion and stillbirth in cattle, was investigated for its prevalence in cattle. Three hundred and eighty three (383) out of 526 serum samples (72.8%) were positive for Akabane virus (a type of Arbovirus) antibody. The Project identified the localizations in antibody prevalence rate as well as antibody titer using neutralization reaction.
- Meanwhile, as a collaboration between the Project and the DIC Subang, bird feces was continuously collected for the isolation and serotyping of Salmonella as a part of active surveillance on HPAI in the DIC Subang. The Project also collected infected poultry together with the feces, and tested them histopathologically and bacteriologically. As a result, Mycoplasma was isolated for the first time at the DIC Subang in April 2012.
- 3-4. The staff of DIC Subang analyses the results of surveys and develops the recommendation reports to the authorities for the improvement of animal health situation.
- The Project conducted meetings and workshops with stakeholders such as DINAS, type-B/C laboratories, dairy cooperatives, etc. at each pilot site to share the results of surveillance and to discuss countermeasures for better control of animal and livestock diseases. The plans of field activities were also discussed at the meetings. The Project also presented the results of risk analysis at Banten as well as the development of individuals identification system in DKI Jakarta through reports and meetings to the stakeholders.
- The Project convened coordination meeting annually and shared the performance of the Project to the stakeholders.
- The Project is still working on the development of comprehensive analyses of the results from active surveillances as of the time of the Terminal Evaluation. The recommendation report is supposed to be compiled together with the advanced analyses that are conducted in Japan by the staff of Epidemiology laboratory the DIC Subang, and the Project is expecting to finalize it in October 2015.

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3-5. The staff of DIC Subang organizes and conducts the monitoring of the animal health improvement for the follow-up of recommended activities and the feedback

- As was described in the Activity 3-4, the results of surveillances were shared to the stakeholders.
- The DIC Subang is publishing the animal disease map annually for monitoring livestock and animal health status, and distributed to the stakeholders. The map is made by integrating the data at type-B/C laboratories and PUSKESWAN into that at the DIC Subang. The User can have a grasp of the number of tests, the number of positive and test spots.

Output 4

The DIC Subang staff conducts the continuous technical support activities for laboratory workers, field vets and farmers, including information exchange, awareness on animal health improvement in the pilot sites.

Activities

4-1. The DIC Subang issues periodical Newsletters to provide and exchange information on animal health for laboratory workers, field vets and farmers in the 3 provinces of West Java region.

Performances

- The Project developed the brochure for introducing the Project and distributed 500 and 1,000 copies in October 2010 and February 2012, respectively (Annex 10).
- Substituting for news letter, the Project created a website of the DIC Subang in December 2011 geared to the stakeholders at central level, DINAS, veterinarians, paravets who are accessible to internet, and disseminate information with regard to disease information regarding animal disease map in the jurisdiction area of the DIC Subang, seminars/workshops, etc. As an instance of beneficial utilization of the website, DINAS and type-B/C laboratories develop a operational plan of surveillance on the basis of the animal disease map issued by the DIC Subang annually for the following fiscal year. Besides, the users can check the items with its prices that can be tested in the DIC Subang in the website. The DIC Subang, hereafter, is planning to improve the system of the website to add the function of ordering tests and receiving test results on the Web, and to enrich technical information, at the initiative of the Epidemiology laboratory. (The improvement work is expected to be completed after the end of the project period)

A new sletter was published in October 2013 by $\mbox{\sc MCA}$ experts just for one time.

- The Project developed 8 brochures written in Bahasa Indonesia to raise awareness of animal and livestock diseases geared to type-B/C laboratories, dairy farmers, etc. and distributed 1,000 copies for each to all the relevant parties such as agencies at central level, DINAS, dairy cooperatives, etc. The Project revised the brochures in March 2013 and distributed the said stakeholders. The brochures were distributed to dairy farmers by taking opportunities of field activities of the active surveillances.
- The Project developed the calendar as a public awareness tool annually from January 2012.
- The Project developed 3 video learning aids entitled "Sampling method of cattle brain for BSE diagnosis" in February 2013, and distributed a total of 40 copies to the livestock industry bureaus at provincial and district level (slaughter house) and other relevant agencies at national and provincial level.
- The Project developed "A Manual for the Control of Mastitis in Dairy Cattle" in July 2013, by revising an existing manual developed by a JICA technical cooperation entitled "Project for the Improvement of Countermeasure on the Productive Diseases of Dairy Cattle" implemented in West Java from 2008 to 2011. The Project distributed a total of 20 copies of the Manual to the stakeholders.
- The Project developed "Diagnostic Flowchart Manual -Reference for the Animal Priority Diseases in Indonesia" in March 2015 by reference to IICA's technical cooperation entitles "The Project of the Japan-Thailand Technical Cooperation on Animal Disease Control in Thailand and Neighboring Countries" (2001-2006) as well as "The Technical Assistance to Improve National Diagnostic Capacity for Animal Disease Control" (2010-2014) conducted in Uganda, and the



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- DIC Subang is working on translating it into Bahasa Indonesia as of the time of the Terminal Evaluation, and planning to distribute a total of 50 copies to the stakeholders immediately after the translation be completed.
- In addition to those described above, the Project has been developing
 the annual report and the disease distribution map to share with the
 stakeholders.
- 4-2. The staff of DIC Subang examines and conducts necessary measures of information exchange (on site meetings, etc.) for veterinary officers, laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type laboratories.
- The DIC Subang has launched biannual coordination meetings consist of organizations at central level such as DGLAHS, the Animal Quarantine Office, the Indonesian Research Institute for Veterinary Science and the National Veterinary Drug Assay Laboratory, at provincial level such as DINAS and Type-B laboratories and at district level such as DINAS, type-C laboratories and the Center for Animal Health (PUSKESWAN), with the function of designing the plan of activities for awareness raising as well as technical assistance for eligible personnel and organizations concerning animal health or husbandry.
- The Project conducted training seminars and workshops geared to type-B/C laboratories, PUSKESWAN and dairy cooperatives from June 2013. Staff member of the DIC Subang provided 7 lecture courses at seminars and workshops with a total of 171 participants as of the time of the Terminal Evaluation.
- 4-3. The staff of DIC Subang makes plans of sustainable activities of awareness and technical supports for improvement of animal health and production, which are necessary for laboratory workers, field vets and farmers in the pilot site. (Utilize other JICA projects outcomes such as a Flip-chart for dairy farmers.)
- The DIC Subang constructed dormitory for trainees and provided a lot of training opportunities for staff in type-B/C laboratories, field veterinarians in PUSKESWAN and paravets.
- As was described in the Activity 4-1, the Project is doing awareness raising activities by means of website, newsletter, brochures.
- The DIC Subang has developed the disease map annually with the
 objective of monitoring livestock and animal health, and distributed to
 the stakeholders. See the Activity 3-5 for more information.
- The Project participated "the Agricultural exhibition of World Food Day" held in Padang in 2013 and "the National Agriculture and Fishery exhibition" held in Malang in 2014, and exhibited posters as publicity activities of the DIC Subang.
- 4-4. The staff of DIC Subang conducts sustainable activities of awareness and technical support for the laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type laboratories.
- The DIC Subang conducted awareness-raising activities geared to dairy farmers by taking opportunities of field activities of active surveillance. Nevertheless, awareness raising activities as well as technical assistances comes under the jurisdiction of the livestock industry bureaus of DINAS, not under DICs or type-B laboratories. Thus, the DIC Subang can only provide indirect assistance via the bureaus; however, the DIC Subang has supported DINAS at provincial and district level to select and mediate dairy farmers for active surveillance and to instruct them for countermeasures and vaccinate with their livestock on the basis of diagnosis results.
- In addition to the said activities, as was described in the Activity 1-5, the Project has been conducting awareness raising activities and technical assistance to the stakeholders by means of a total of 65 seminars and meetings (a total of 133 presentations by JICA experts or the staff of the DIC Subang) (Annex 11). Besides, the staff of the DIC Subang and JICA experts participated meeting at national level such as "Preparatory Committee for Proclamation of the Minister of Agriculture for a Guide in Animal Disease Surveillance (2011)" and "Technical and Scientific Meeting of Animal Health (2012)", and exchanged views and shared the performance of the Project with other participants.
- See the Activity 4-1 for the utilization of materials developed by other projects supported by JICA.
- 4-5. The staff of DIC Subang organizes and conducts the monitoring and the feed-back of the results to the next actions.
- The DIC Subang convenes coordination meeting biannually, and planning and evaluation of operation are discussed.
- Especially for the activities at the pilot sites, the Project analyzed the
 results of the surveillance and gave feedback to the next action plan.

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- 2) Achievements of the Outputs
- a) Output 1

Achievements of the Objectively Verifiable Indicators (OVIs) for Output 1 are as indicated below.

[Output 1]

The DIC Subang staff obtains basic and systematic diagnosis for animal diseases.		
OVIs	Achievements	
1-1. The technical levels acquired on diagnostic tests in each laboratory (8 laboratories) of DIC Subang attain to the target levels set up in the "Project Technical Target Sheet" by June 2013.	 Basic techniques and technologies stipulated in "the Project Technical Target Sheet" "had been transferred by time of the Mid-term Review, however, it was deemed that the staff of the DIC Subang were supposed to rehearse what they learnt to establish it at the time. As of the time of the Terminal Evaluation, the staff's skill and techniques were far improved after the time of the Mid-term Review, and it is evaluated by the JICA experts that the staff have reached at desirable level in their technical skills for the target stipulated in the said Sheet. 	

After the commencement of the Project, testing and diagnostic instruments, equipment and materials necessary for the technical transfer of diagnostic techniques had been installed in the DIC Subang.

*Diagnostic techniques and services that were stipulated in "the Project Technical Target Sheef" had been transferred to the DIC Subang by time of the Mid-term Review (May 2013), and thereafter, the quality of testing and diagnostic services have far improved through on-the-job training as well as the said training opportunities such as seminars and workshops, as a result, the time necessary for diagnosis was shortened. Improvement of the accuracy of tests conducted in the DIC Subang can be explained by the results of the Proficiency Tests aforementioned.. Meanwhile, the DIC Subang could provide diagnosis services only for 13 diseases before the commencement of the Project (the year of 2010). The DIC Subang, as of the time of the Terminal Evaluation, has raised their capacity to provide diagnostic services in 41 diseases with 75 diagnostic methods at desired level enough to operate the services independently with sufficient quality (see Annex 18). Through these activities for technical transfer, the Project standardized the test procedures and operation of services, and subsequently, developed 58 testing and diagnostic protocol (Standard Operating Procedures: SOPs), 3 manuals, 20 technical references, 6 formats and 4 other documents.

As was just described above, the DIC Subang has ensured the system to conduct standardized testing and diagnosis in accordance with the SOPs. The number of testing and diagnostic methods is no less than 75. Though some of those needs to be more rehearsed even after the end of the project period, it is deemed that the DIC Subang can provide accurate test results using testing protocols in conformity to the international or national standards by the staff with sufficient skills since the DIC Subang gained accreditation of ISO 9001 (quality management principles) and certification of ISO 17025 (global quality standard for testing and calibration laboratories) by the International Organization for Standardization. The DIC Subang is supposed to receive the Proficiency Test in conformity to the requirements of ISO; therefore, it is deemed that the External Quality Assurance (EQA) system is established in the DIC Subang. Further, a JICA short-term expert was dispatched to the DIC Subang, and established a system for proper maintenance and management of facilities and equipment in accordance with the manual.

For these reasons, it is deemed that the DIC Subang obtained basic and systematic diagnosis for animal diseases; to wit, the achievement level of the Output 1 is deemed to be appropriate at the time of the Terminal Evaluation.

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The manual was developed by the JICA short-term expert and geared not only to the DIC Subang but also to the DIC Medan and the DIC Lampung.

b) Output 2

Achievements of the OVIs for Output 2 are as indicated below.

[Output 2]

The capacity to provide the customer oriented diagnosis services (Passive Surveillance) of DIC Subang staff is

strengthened.		
OVIs	Achievements	
2-1. More than one staff in DIC Subang are certified by the Project he/she is able to make a final diagnosis based on the result of tests in each laboratory.	 As of the time of the Mid-term Review, final diagnoses were made only by the head of veterinary services section provided the final diagnoses. Comments on the test results were given by 12 veterinary staff. As of the time of the Terminal Evaluation, the Chefs of each laboratory provide the final diagnosis as diagnosticians in rotation. The short-term JICA expert with expertise of comprehensive diagnosis guaranteed that those diagnosticians could provide proper final diagnoses in general. 	
2-2. Each laboratory chief in DIC Subang he/she is able to make an appropriate comments based on the result of tests in each laboratory.	 The seven (7) diagnosticians (the chefs of laboratories) gained greater understanding of actual situation of stock farming on the ground through ' the project activities such as active surveillance; as the result, the comments on the test results became more feasible and specific. 	

The Project, on top of the technical issues under the Output 1, identified several challenges for ideal system of comprehensive diagnosis such as intra- and inter-facility intra-sample flow and standardizing and streamlining of testing and diagnostic services through the baseline survey conducted at the initial phase of the Project. To counter this, the Project has been working on the improvement the testing and diagnostic services continuously from 2011 by promoting reform measures, developing a reporting system, etc. As the results of the efforts of the Project, the DIC Subang is providing testing and diagnostic services under the operational system compatible with the international standards since the DIC gained ISO 17025 as was mentioned in the Achievement of output I.

Meanwhile, as was described in the Achievements of OVIs for Output 2, final diagnoses were made only by the head of veterinary services section provided the final diagnoses as of the time of the Mid-term Review; however, it is deemed by the short-term JICA expert that 7 laboratory chiefs (diagnosticians) can provide practical comments on the diagnosis results and proper final diagnoses in general through gaining basic technologies of testing and diagnosis (Output 1) and experiencing active surveillance (Output 3).

For these reasons, it is deemed that the capacity to provide the customer oriented diagnosis services (Passive Surveillance) of the DIC Subang is strengthened; to wit, the achievement level of the Output 2 is deemed to be appropriate at the time of the Terminal Evaluation.

However, though it might be beyond the framework of the Project, there were problems regarding the quality of samples, delivered to the DIC Subang by clients such as type-B/C laboratories, PUSKESWAN and dairy farmers via DINAS, in terms of insufficient part of body were collected as specimens, insufficient volume of specimens, improper method of specimen preservation, insufficient epidemiological information, etc. To counter this, the DIC Subang started a countermeasure that the samples that does not meet the requirements are refused to accept and returned to the clients with proper instruction on parts, volume and preservation methods, etc. in accordance with the newly-developed SOP from January 2015.



c) Output 3

Achievements of the OVIs for Output 3 are as indicated below.

[Output 3]

The capacity to conduct the surveys and the technical support of animal disease control (Active Surveillance) in the pilot sites of DIC Subang staff is strengthened.

the pilot sites of DIC Subang staff is strengthened,		
OVIs	Achievements	
3-1. Active surveillances on animal health are conducted annually with a framework (Planning, Implementing, Analyzing and feedback) by the staff of DIC Subang.	 The DIC Subang elaborates the annual activity plan including active surveillance not only for brucellosis but also for other strategically prioritized diseases stipulated in the National Priority Diseases. Before the commencement of the Project, the head of veterinary services section took the initiative of planning and implementation of disease surveillance. After the commencement of the Project, the DIC Subang established a system that all veterinary staff and paravets should participate the active surveillance. This helped them to conduct multimodal assessment on the surveillance results and to reflect the analysis results in activity planning for coming year. 	
3-2. Each laboratory chief in DIC Subang are able to make recommendations of animal disease control in the pilot sites for the veterinary officers and laboratory workers.	• Before the commencement of the Project, recommendations did not presented on the basis of the disease surveillance. As of the Terminal Evaluation, the number of field activities under active surveillance has increased up to over 100 times in a year. Veterinary staff including chiefs bear the responsibility of the survey to feed back the recommendations that were made based on the results for the sample.	

The DIC Subang has been doing active surveillance on bovine brucellosis as well as abortion in cattle as the target diseases of the Project. In addition, the DIC Subang is implementing active surveillance, as daily activities, on HPAI, rabies, hog cholera, parasitic diseases, authrax, hemorrhagic septicemia and exotic infectious diseases such as bovine spongiform encephalopathy (BSE), foot-and-mouth disease (FMD) and infectious bovine rhinotracheitis (IBR). Reproductive disorder is also targeted for active surveillance. Every batch of surveillance targeted one species of animal; however, several diseases are targeted by sampling several parts of organs and/or fluids from each individual animal. The Veterinary Public Health Laboratory of the DIC Subang is also conducting surveillance activities on livestock products such as meat, egg, milk, etc.

Before the Project, JICA experts identified the needs of technical transfer regarding epidemiological studies an advance of the surveillance since the Epidemiology laboratory of the DIC Subang had less experiences in epidemiological survey methods for effective and efficient implementation of field activities, and accordingly, the analytical results were not accompanied with sufficient epidemiological evidences. After the technical transfer of basic epidemiology, the Epidemiology laboratory acquired the ability to establish the implementation plan of surveillance including the preparatory work for sampling methods, preparation of questionnaires, data analysis methods, with the support of JICA experts. The said laboratory also played a key role in the field activities and subsequent data analyses. In relation to this, the DIC Subang is performing active surveillance for over 100 times annually, and giving feedback comments on the results to the stakeholders. For these reasons, it is deemed that the DIC Subang is organizing and operating the active surveillance effectively and efficiently.

In consideration of the sustainability of the DIC Subang, the Project conducted project-led surveillance targeting bovine brucellosis and abortion in cattle as a part of active surveillance system routinely conducted in the DIC Subang. As was described in the achievement of Output 3 above, all the veterinarians and paravets are supposed to be involved in the active surveillance. Accordingly, the staff of DIC Subang recognized that there were positive influence of the project-led surveillances on the implementation and organization of other routine surveillance activities to a certain extent.

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The DIC Subang has just commence a new active surveillance on reproductive disorder in cattle under the instruction of DGLAHS, and the knowledge and techniques gained through the project-led surveillance on bovine brucellosis and abortion in cattle are expected to be utilized to the said surveillance beneficially. Further, through the collaboration with the Project in the surveillance on bovine brucellosis and abortion in cattle, partners such as DINAS, type-B/C laboratories and dairy cooperatives raise the awareness for epidemic prevention and the capacity with regard to the implementation of surveillance to a certain extent; consequently, cooperative framework amongst stakeholders were enhanced further than before. For a typical instance concerning the coalition, The 2nd and 3rd surveillance on bovine brucellosis conducted in 2014 were conducted only by DINAS and dairy cooperative in Lembang; neither the staff of the DIC Subang nor JICA experts accompanied them, confirmation tests were conducted by the DIC Subang.

As has been described, the DIC Subang enhanced the capacity for the implementation of the whole active surveillance through the project-led surveillance under the coalition of stakeholders. For these reasons, the achievement level of the Output 3 is deemed to be appropriate at the time of the Terminal Evaluation.

d) Output 4

Achievements of the OVIs for Output 3 are as indicated below.

[Output 4]

The DIC Subang staff conducts the continuous technical support activities for laboratory workers, field vets and farmers, including information exchange, awareness on animal health improvement in the pilot sites.

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OVIs	Achievements	
4-1. DIC Subang (Vet. Information section) issues periodical Newsletter of animal health 2 times a year for laboratory workers, field vets and farmers in the three provinces by June 2012.	 Before the commencement of the Project, information sharing activities via newsletter, etc. had not been done by the DIC Subang. As a substitute of newsletter, the Project launched the web page in December 2011, and disseminates the information with regard to disease information regarding disease map in the jurisdiction area of the DIC Subang, seminars/workshops, etc. at monthly intervals. With an eye on the people who are inaccessible to Internet, the Project transmitted paper-based information for the stakeholders through 10 kinds of brochures to raise awareness of them to animal disease control and to let them know the function and mission of the DIC Subang. In addition to them, the Project published disease map, the video and calendars to introduce the DIC Subang for the Public, manuals (see the Activity 401 for more information). 	
4-2. Each laboratory chief in DIC Subang is able to make annual plan of technical support activities to the laboratory workers, field vets and farmers in the pilot site by December 2013.	 The DIC Subang launched biannual coordination meeting from September 2011, and discusses amongst the stakeholders with regard to planning and evaluation for awareness raising activities as well as technical assistances. As was described in the Activity 4-2, the Project provided seminars and workshops geared to the staff of type-B/C laboratories, PUSKESWAN and dairy cooperatives from June 2013. Staff member of the DIC Subang provided 7 lecture courses at seminars and workshops with a total of 171 participants as of the time of the Terminal Evaluation. JICA experts also provided many lectures and seminars. The DIC Subang conducted field activities under active surveillance more than 100 times in one year in accordance with the annual plan, and is taking opportunities of field activities to conduct awareness raising activities and technical assistances toward field veterinarians and paravets, dairy farmers, etc. continuously. 	
4-3. Achievement rate of annual activity plan (set in 4-2) becomes more than 90% in the pilot site.	 Though the annual activity plan is subject to change due to financial constraints, planned activities are almost fulfilled basically. 	





Before the commencement of the Project, the DIC Subang had not actively conducted information sharing via newsletters, routine-run meetings etc., awareness raising activities and technical assistances geared to veterinarians and paravets in the jurisdiction area of the DIC Subang. After the commencement, those activities have been conducted by means of the website and brochures for raising awareness of animal and livestock diseases in accordance with the activities under the Output 4. Moreover, Activity plans are discussed biannually at the coordination meetings; that is to say, a system was founded to continue those activities even after the end of the project period.

On the other hand, the livestock industry bureaus in district DINAS bears responsibility to provide awareness raising and technical assistances to farmers for better control of animal and livestock health, whereas neither DICs and type-B laboratories can provide such activities directly to them. Under such circumstances, the staff of the DIC Subang is taking opportunities of field activities in the active surveillances, implemented over 100 times a year, to conduct awareness raising and technical assistance activities toward farmers as much as possible. Besides, the coverage of districts and cities for disease monitoring in the jurisdiction areas of DKI Jakarta, West Java and Banten has increased from 78% (32/41) to 100% (41/41) in 2010 and 2014, respectively.

As has been described, the DIC Subang established the system to continue information sharing, awareness raising and technical assistances to field veterinarians/paravets and dairy farmers, and the staff of the DIC Subang has acquired capacity to implement such activities properly. For these reasons, the achievement level of the Output 4 is deemed to be appropriate at the time of the Terminal Evaluation.

Having said that, as was pointed out at the Achievement of Output 2, the DIC Subang has encountered difficulties for ideal implementation of comprehensive diagnosis due to the problem of the quality of samples brought into the DIC Subang. Even though this issue is beyond the framework of the Project and the project activities under the Output 4 regarding technical assistances to clients have limitations, it is strongly suggested that the DIC Subang should continue efforts to conduct awareness raising and technical assistance activities perseveringly even after the end of the project period.

3) Achievements of the Project Purpose

Achievements of the OVIs for Project Purpose are as indicated below.

[Project Purpose]		
The quality and quantity of animal disease diagnosis service at DIC Subang are improved.		
OVIs	Achievements	
1. The number and the kind of animal disease diagnosis at DIC Subang becomes more than 35,000 samples in a year and 16 kinds at the end of the Project.	 As the technical transfer activities progressed, the number of diseases that the DIC Subang can test greatly increased, and consequently, the number of tests performed increased significantly. The number of tests performed in the DIC Subang in 2014 was 61,156, far exceeded the target value of the OVI already, the same goes for the number of diseases to be tested at DIC Subang (32 kinds of diseases that were actually tested), implying that the number is approaching the capacity limit of the DIC Subang. 	
2. The feedbacks of diagnosis (Passive Surveillance) to the customers are returned promptly in prescribed days set by the Project.	 The results of the baseline survey conducted in 2011 showed that the time needed to feedback the test results to clients was one (1) week on average, and 20% of those was even more than 3 weeks; indeed, far beyond the standard duration even though it is dependent on the type of test. The Project had been working on the improvement of the flow of samples from the reception to diagnosis as well as transferring diagnostic technologies; eventually, seven (7) chiefs of laboratories 	



	acquired capacity to provide proper final diagnoses. As a result, the time needed to give the results back to clients was shortened to standard duration. Though it takes approximately two weeks in bacteriological culture testing and histopathological diagnosis, other tests such as serological diagnosis and parasite examination takes two days on average to obtain the results.
3. The DIC Subang staff are ready to conduct Active Surveillance (Planning, Implementing, Monitoring and Feedback the results to next survey) on animal health considering with livestock / poultry industry promotion in the pilot sites more than 2 times/site in a year.	 The Project planned the active surveillance targeting bovine brucellosis and abortion in cattle in consideration of the characteristics of the jurisdiction areas of the DIC Subang, and conducted its field activities in 2012 and 2014. Planning, implementation, monitoring and feedback were shared with the stakeholders through the opportunities such as meetings and workshops every year. The DIC Subang provided recommendations based on the results of active surveillance regardless of that conducted as project activities or as daily activities of the DIC Subang.
4. Eighty percent (80%) of inquired customers (stakeholders such as DINAS staff, Field vets, and Farmers) recognize improvement of diagnosis services of DIC Subang by the end of the Project.	 The survey on the satisfactory of clients showed that respondents who answered "satisfied" or "almost satisfied" was increases from 87.4% to 94.8% in 2011 and 2014, respectively.

After the commencement of the Project, instruments for testing and diagnosis, equipment and materials necessary for the project activities were properly installed to the DIC Subang. Technical transfer activities such as hands-on training at the DIC Subang as well as the "Training in Japan" or "Training in Third Countries" were conducted in parallel, resulting that the staff improved their knowledge, techniques and experiences. Consequently, the number of diagnosable diseases as well as the number of tests performed at the DIC Subang has substantially increased with high accuracy of testing (Output 1). The streamlining of workflow (standardization of sample flow from reception to feedback, establishment of reporting system, etc.) as well as the capacity raising of the staff to provide recommendations based on the diagnosis results (Output 2) were seemed to contribute significantly to the increase of the number of samples dealt with at the DIC Subang with high reliability of test results. Under the Output 3, the Project had selected bovine brucellosis and abortion in cattle as target diseases for active surveillance, and revealed the actual situation and burden of the diseases, and challenges for ideal control of animal and livestock diseases. In addition, the Epidemiology laboratory has played a central role to establish a system that many laboratories of the DIC Subang participate the active surveillance, and enhanced the capacity to organize a sequence of the surveillance in terms of planning, implementation and data analysis/interpretation. This has also impacted other routine surveillance positively. Furthermore, the DIC Subang improved the collaboration with the stakeholders such as DINAS, type-B/C laboratories and dairy cooperatives through the project-led active surveillance; as a consequence, work-sharing amongst the stakeholders are being progressed for efficient implementation of surveillance activities. Meanwhile, the Project has established the system to carry on the activities for information dissemination, awareness raising and technical assistance continuously in a structured way, and developed various types of learning materials such as posters and brochures, and the website as well.

Table 2: Performan	of DIC Subang in	Diagnostic Services

		-		Year		
	<u>. </u>	2010	2011	2012	2013	2014
Number oftests performed		14,875	32,016	47,466	50,544	61,157
Number of samples	Passive	1VA	N/A	10,392	9,841	N/D
	Active	N/A	N/A	19,555	41,052	N/D
Kinds of diagnosable diseases		15	22	22	31	32





The DIC Subang has been putting great efforts to realize ideal quality control and operation of the organization to meet the international standards and gained accreditation of ISO9001 in 2013 and certification of ISO17025 in 2014. The DIC Subang is supposed to continue the quality control and operation of organization in accordance with the stipulation of ISO after the end of the project period. However, the Project had encountered several challenges such as improper sample collection/preservation, necessity of further reinforcement of collaboration and work-sharing with stakeholders such as DINAS and type-B/C laboratories, expansion of coverage of technical assistance for the stakeholders, even though those are recognized as the issues beyond the framework of the Project. Therefore, the DIC Subang has commenced the new system as a countermeasure to conduct comprehensive diagnosis ideally (see the Achievement of Output 2). The DIC Subang is required to control the system whether it works properly for increasing the number of comprehensive diagnosis at DIC Subang. The DIC Subang is also expected to continue testing and diagnosis services steadily, and is required to enhance the collaboration with the stakeholders further for better animal and livestock disease control in West Jaya region in future.

For these reasons, it is deemed that the quality and quantity of animal disease diagnosis service at DIC Subang has improved; thus, the Project Purpose is achieved at a high level at the time of the Terminal Evaluation.

3.3 Implementation Process

1) Project Management and Communication Amongst Parties Concerned

After the commencement of the Project. JICA experts assisted the DIC Subang to launch monthly meeting. Though the experts withdrew from the meeting a couple of months after its establishment, it is continued to date without any assistances of the JICA experts. The Project do not have an official meeting opportunities for the management of the project, JICA experts held meetings with the administration and/or technical staff of the DIC Subang as the need arise to discuss the plan of operation, progress monitoring and evaluation of performance of the Project adequately in general. Project's performance and achievements were shared to the member of the Joint Coordinating Committee (JCC) annually. In addition, daily activities of JICA experts and the progress of the Project are shared monthly with all laboratories of the DIC Subang and DGLAHS as well. Furthermore, the coordination meeting was launched from September 2011 biannually with external partners such as DGLAHS, DINAS, type-B/C laboratories, dairy cooperatives, with the participation of JICA experts. Meanwhile, a total of 17 JICA short-term experts had been dispatched to the DIC Subang, and shared information regarding their terms of references and plan of technical assistance at their arrivals and results and achievements at their resignations with DGLAHS and the DIC Subang for a total of 32 times at the time of the Terminal Evaluation. The staff of the DIC Subang and JICA short-term experts continuously communicated by email as needed. JICA experts had attended the development partners' meeting for 5 times to date, and shared the performances and achievements of the Project. Through the aforementioned meetings and active surveillance, preferable communication amongst JICA experts, counterparts and the stakeholders has been maintained throughout the project period. For these reasons, it is considered that the management of the Project has been appropriate.

Meanwhile, two thirds of JICA short-term experts dispatched to the DIC Subang were young specialists with insufficient experience for working in abroad. They sometimes encountered the language barrier to communicate with counterpart personnel; as a result of mutual efforts, necessary knowledge and techniques were properly transferred eventually. The Coordinator of the Project (JICA expert) sometimes acted as an interpreter when the JICA experts could not communicate with the external stakeholders who were not good at English.



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2) Ownership and Autonomy

The Project has been implemented by strong ownership and commitment of the Indonesian side, both implementing agencies and related organizations. It is particularly worth noting that project activities have been implemented at the initiative of the Indonesian side after the "Training in Japan" and hands-on training in DIC Subang, while JICA experts, both long- and short-term experts, have provided technical support with the project activities as requested.

The Indonesian side has also placed the significance to strengthen the function of the DIC Subang, and demonstrated the strong commitment by increasing the budget of the DIC Subang from 5.6 billion IDR in 2010 to 14.4 billion IDR in 2014. The Project trained to incorporate the project-led active surveillance into daily surveillance activities of the DIC Subang in light of future sustainability. Further, even the project-led seminars and field trip requiring overnight stay, those were conducted as joint hosting with the DIC Subang to share the budget. The DIC Subang has bore travel cost and daily allowance for their staff as well as meeting costs that JICA could not bear. Most of reagents and consumables were procured by the DIC Subang; to be more specific, contribution percentage of the Indonesian side for the procurement was 82% for 5 years from 2011 to 2015. The Government of Indonesia constructed dormitory for trainees, Veterinary Public Health Laboratory, generator but and building for training and enlargement of poultry houses by their own budget.

As was described above, DIC Subang has been implemented the project activities with autonomy and demonstrated high financial commitment throughout the project period.

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CHAPTER 4 EVALUATION RESULTS

4.1 Relevance

The relevance of the Project is highly maintained as of the time of the Terminal Evaluation

 Consistencies of the Project Purpose with the Indonesian livestock and animal health policies and the needs of the Target Group

With regard to the consistency of the Project Purpose with the Indonesian livestock and animal health policies, the needs of the target groups, and Japan's aid policies that were confirmed at the Ex-ante Evaluation of the Project conducted in October 2010, there has not been any alteration of the Indonesian livestock and animal health policies since then as well as the needs of the target group. The Team can therefore conclude that there has not been any change that may have undermined the relevance of the Project, and therefore the consistencies have been maintained at the time of the Terminal Evaluation

In particular, as were confirmed at the time of the ex-ante evaluation and the mid-term review of the Project, "the Livestock Industry Development Mid-term Plan (2010-2014)" stated that the establishment of novel system for animal health program is one of the prioritized areas to address as the decentralization progresses in Indonesia. The Project is assisting the DIC Subang to enhance the function of disease investigation for the betterment of animal and livestock health in the West Java region as the Project Purpose through the achievement of 4 Outputs as follows: reinforcement of testing and diagnostic capacity (Output 1); reinforcement of passive surveillance (Output 2); reinforcement of active surveillance (Output 3); and strengthening collaborative relationship and capacity of the stakeholders such as DINAS and type-B/C laboratories (Output 4). For this reason, the Project Purpose is still consistent with related policies in Indonesia as of the time of the Terminal Evaluation. Though the next policies for the livestock industry development after 2015 is still in the process of preparation, the officers of DGLAHS clearly stated that the significance of animal and livestock disease control would be maintained in the next policies. In this context, DGLAHS has been putting political efforts for effective animal and livestock disease control: in particular, the Integrated Animal Health Information System (iSIKHNAS) is developed and in operation from 2012, and the roadmap for the eradication of brucellosis by 2025 was published.

After the detection of human infection cases of Avian Influenza H5N1 (HPAI) in July 2005 in Indonesia, AI human cases has been reported continuously and resulting in 159 cases of the world's highest number of human fatalities as of the 10th of August, 2012. The situation raises deep concern about emerging novel influenza virus attributed to the mutation of AI virus in the process of spread of HPAI human infection, and pandemic not only in Indonesia but also all over the world. Thus, it is required not only Indonesia but also international society to minimize the social influence of novel influenza through the early detection and rapid response. Since HPAI is a zoonosis, the implementation of surveillance and early containment should be done not only for human cases but also for animal and livestock cases to realize ideal HPAI control. The Project is designed to enhance the capacity of the DIC Subang that bears a part of responsibility of infectious disease control in Indonesia, and intended to enhance disease surveillance capacity for the National Priority Diseases including HPAI through the project-led active surveillances targeting bovine brucellosis and abortion in cattle (brucellosis is also listed in the National Priority Diseases). JICA's "Country Analytical Work" for Indonesia (2012) states that the significance of assistances to raise the capacity for responding global issues including infectious disease control. For these reasons, the consistency of the Project Purpose with Japan's aid policies has been maintained as of the time of the Terminal

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Evaluation, and the Project Purpose is considered to meet the international demands in terms of the response for the global issues.

Appropriateness of Implementation Method

① Appropriateness of Assistance Approaches

The Project assisted the DIC Subang to increase and/or strengthen the testing and diagnostic capacity (Output 1) as well as passive and active surveillances (Output 2 and 3), all of which are the functions to have as an investigation center. These approaches cover necessary elements to achieve the Project Purpose of the improvement of diagnostic services in quality and quantity at the DIC Subang with no logical error.

On the other hand, in order to realize the enhancement of animal and livestock disease control in West Java region (Overall Goal), it is inevitable for the DIC Subang to closely work together with the stakeholders such as DGLAHS, DINAS, type-B/C laboratories and dairy cooperatives. To this end, the Project set the project activities to enhance the collaboration with the stakeholders through the Output 4 (the activities of awareness raising and technical assistances) in the PDM. For these reasons, the assistance approaches that the Project applied is considered to be appropriate.

② Special consideration for gender issues, social grades, environment, ethnic groups, etc.
There is no specific activity that requires special consideration for gender issues, social grades, environment, ethnic groups, etc.

4.2 Effectiveness

The effectiveness of the Project is considered to be high.

1) Probability of Achievement of Project Purpose

As described in the Achievements of Outputs and Project Purpose, necessary instruments as well as equipment were installed into the DIC Subang, and testing and diagnostic techniques were transferred by JICA experts and a total of 41 diseases are diagnosable at the DIC Subang as of the time of the Terminal Evaluation (Output 1). Under the Output 2, the Project established the system to provide testing and diagnostic services as the passive surveillance with enhancing capacity of the staff members. By following the progresses of Output 1 and 2, the capacity of the DIC Subang to implement whole active surveillances (targeting 10 to 12 diseases) was reinforced through the project-led active surveillance targeting bovine brucellosis and abortion in cattle (Output 3), In addition, the Project also establishment the system to conduct information sharing, awareness raising and technical assistances geared to DINAS, type-B/C laboratories, dairy cooperatives, etc. in light of realization of effective animal and livestock control in West Java region in future. As the results of those achievements, it is deemed that the DIC Subang had far improved diagnostic services for animal and livestock in quality and quantity (Project Purpose), and the OVIs to measure the achievement level of Outputs and Project Purpose were fulfilled in general. Further, it is notable that the DIC Subang gained the accreditation of ISO9001 and the certification of ISO17025, implying quality of the said achievement is secured even after the end of the project period. Therefore, the Project has achieved its purpose as of the time of the Terminal Evaluation.

The capacity of each staff member of the DIC Subang had been fostered through the implementation of the project activities; as a consequence, the DIC Subang has increased the number of diagnosis

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substantially without reducing the quality not only of testing services but also of other important tasks of the DIC Subang such as disease surveillance and awareness raising/technical assistance activities. As the byproducts, the Project has gained academic achievements through the implementation of the project activities. Therefore, it is deemed that human resource development was successfully made by mutual efforts between the Indonesian and the Japanese sides. The DIC Subang might still be young as a DIC in Indonesia; likewise, the median age of the veterinarians and paravets of the DIC Subang is 37 and 32.5 years old, respectively. Therefore, it is desired that the staff members of the DIC Subang will continue efforts enthusiastically to seek novel techniques and knowledge even after the end of the project period. Especially for the testing and diagnostic techniques under the Output 1, the DIC Subang can provide testing and diagnostic services for all the planned techniques; nevertheless, some tests are performed by test kits or simple antibody detection tests using ELISA. Further, several diseases cannot be isolated and identified whereas serological testing can be done for it. In order to conduct comprehensive diagnoses, even simple diagnoses, the staff should accumulate knowledge and experiences of diagnostics as well as obtain novel diagnostic techniques further. These matters can be recognized as challenges to be solved in future.

On the other hand, the Project encountered the problem regarding the quality of samples brought into the DIC Subang to conduct comprehensive diagnoses in terms of insufficient parts of organs and/or fluid, improper sample preservation methods and insufficient epidemiological information as was described in the Achievement of Output 2. To counter this, the DIC Subang took a countermeasure to introduce a new operational system from January 2015. Since appropriate operation of the system for comprehensive diagnosis is inevitable for ideal control of animal and livestock diseases in future, this issue will be discussed in the "Impact" section hereafter.

- Important Assumptions for the Achievement of Outputs and Project Purpose
 - ① Current status of the important assumption of "The staffs of DIC Subang who have been transferred techniques by the Project are not transferred to other office during the Project period" for the achievement of Outputs
 - One (1) veterinarian staff of the DIC Subang who had participated the Training in the Third Country resigned the post to move other organization as of the time of the Terminal Evaluation. As of the time of the Mid-term Review, the DIC Subang was suffering from the shortage of staff and assigned several technical staff to the general affairs section doubled as their laboratories; however, the DIC Subang increased the staff thereafter, and the situation was almost resolved as of the time of the Terminal Evaluation. On the other hand, the Project encouraged the staff to share and disseminate the knowledge and techniques through a total of 65 diagnosis seminars (133 presentations). Further, the DIC Subang carried out the quality management system in conformity to the requirements of ISO9001 including the development of SOPs for testing and diagnostic techniques that were established in the DIC Subang. As a result of those efforts, the influence of staff turnover on the achievement of Outputs was kept to the minimum.
 - ② Current status of the important assumption of "Enough budget and personnel are allocated to DIC Subang for sustaining outcomes of the Project" for the achievement of Outputs.

As was described above, in spite of the staff shortage in the DIC Subang, the number of staff who can perform various tests were increased by the technical transfer of the Project, and even the number of diagnosis was greatly increased without decreasing quality of services. Moreover, the budget for the DIC Subang has increased from one year to the next, and that in 2015 was 3-fold higher than that in 2011. As a result of the financial contribution of the Indonesian side, the costs for procuring consumables including reagents were greatly covered

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by the DIC Subang.

③ Current status of the important assumption of "The measures and policies concerning of animal disease control will be implemented by the government of Indonesia continuously" for the achievement of Outputs.

As was described in the "Relevance" section, there was no major alteration of measures and policies for animal and livestock disease control enough to affect the achievement of Outputs or project Purpose throughout the project period.

3) Contributing Factors for Effectiveness

Academic Achievements through the Project Activities

Through the implementation of the daily duties, the Project has published 6 scientific papers of which first authors are Indonesian counterpart personnel in peer-reviewed international journals. The staff of the DIC Subang had good experiences to summarize the results into a scientific article by undergoing a process of hypothesis formation, determination of research method/protocol, data collection and analyses, and interpretation of the results through the said research activities. This will contribute the infectious disease control in Indonesia; simultaneously, will great help to conduct active surveillance by following same process from the planning to the summarization of results into a report.

2 Willingness of Indonesian Counterpart Personnel for New Knowledge and Techniques

Through the implementation of the project activities, the Project has published six (6) scientific journals of which first authors were the staff of the DIC Subang in peer-reviewed international journals. The said staff had acquired experiences of a series of process academic research; hypothesis formulation; determination of research procedure; data collection; analysis and interpretation of results; and summarization of outcomes into an article. These efforts and experiences is anticipated to contribute the infectious disease control in Indonesia and simultaneously, to be a good help for the effective management of active surveillance in terms of similar process from planning (hypothetical formulation) to summarization of analysis results into the reports (academic articles).

4) Hindering Factors Against Effectiveness

No major hindering factor against effectiveness was observed throughout the project period.

4.3 Efficiency

The efficiency of the Project is high in general

1) Progress Management of the Project Activities

After the commencement of the Project, instruments and equipment necessary for the project activities were procured and installed to the DIC Subang, and in parallel, the baseline survey was conducted to grasp the actual situation regarding animal and livestock control in the region, operational system, the capacity of testing and diagnostic services and so on. On the basis of the results of the survey, the Project developed the "Project Technical Target Sheet" at each laboratory, stipulating techniques and services to be achieved by the year of 2015. The technical transfer activities were progressed in accordance with the Sheet and the Plan of Operation of the Project, and



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as a result, the basic technologies were transferred to the DIC Subang in general. After the time of the Mid-term Review, those techniques were consolidated through the daily duties, and other project activities such as active surveillance as well as awareness raising/technical assistances also progressed steadily.

On the basis of the guidance from JICA experts, the monthly meeting was launched after the commencement of the Project. Though there is not regular meeting for the management of the project activities, it is considered that information sharing and progress management were properly made through occasional consultation and meetings, as well as project monthly report.

2) Beneficial Utilization of Provided Equipment and Materials

Testing and diagnostic instruments and equipment provided under the support of the project were properly used as intended though the frequency in usage is varied with the tests or diagnosis performed. Those instruments and equipment were properly maintained on a daily basis in accordance with the stipulation of ISO. With regard to the facilities, the DIC Subang is also doing maintenance activities on the basis of the maintenance manual that was prepared by a JICA short-term expert. However, some instrument such as Microtome and Gas Chromatography are put in the waiting list for repair. Meanwhile, instrument, equipment and facilities in the DIC Subang are relatively new and working properly at the current moment. In order to maintain the lifespan of them, the DIC Subang is required to continue the preventive maintenance, and also, to take the cost of renewal especially for testing and diagnostic instruments into consideration hereafter.

 Beneficial Utilization of Knowledge And Skills Acquired at The Training in Japan or Third Countries

A total of 16 Indonesian counterpart personnel have participated the Training In Japan as of the time of the Terminal Evaluation. Those personnel effectively utilized knowledge and techniques acquired at the Training not only to the project activities but also to their daily duties.

On the other hand, the knowledge and techniques acquired at the Training in Japan and hands-on training at the DIC Subang were shared not only with other staff of the DIC Subang but also with the external stakeholders. Moreover, the Project has developed SOPs for testing and diagnostic procedures established through the said trainings to consolidate them at the DIC Subang.

4) Contributing Factors for Efficiency

D Beneficial Utilization of Existing Resources

The facility of the DIC Subang was constructed by the support of the Japan's Grant Aid Project in 2009. The Project was implemented in the DIC Subang and fully utilized existing facilities, equipment and instruments.

Moreover, the Project was designed to utilize local resources (professors of universities, etc.) to give lectures at seminars and workshops. The list of lecturers is updated occasionally. In addition, the Project utilized manuals and references developed by other JICA Technical Cooperation Project to elaborate 2 types of manuals in this Project (see the Activity 4-1).

② Implementation of the Project Activities in consideration of Daily Duties in the DIC Subang With regard to technical transfer of basic techniques for testing and diagnosis, improvement of operational system for testing and diagnosis, activities for awareness raising and technical assistances, all were regarded as daily duties of the DIC Subang. Likewise, the project-led active surveillances targeting bovine brucellosis as well as abortion in cattle were also



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implemented in light of future sustainability, and conducted as a part of active surveillances conducted in the DIC Subang as routine activities. It is considered that this assistance approach has contributed to enhance the sustainability and simultaneously, efficient implementation of project activities.

The activities of awareness raising and technical assistances under the Output 4 were also conducted by taking opportunities of field activities of active surveillances jointly conducted with the stakeholders under the Output 3. This case is also considered to be a contributing factor for effectiveness of the Project.

3 Cost Sharing of Project Activities

Ownership of the Indonesian organizations to the Project is high, and best of all, they demonstrated high financial committed to the Project. This can be one of the reasons for strong commitment of the Indonesian organizations to the Project, resulting in an ideal cost sharing for the project activities as a joint project in addition to the independent-minded project operation.

5) Inhibitory Factors against Efficiency

As was described in the "3) Beneficial Utilization of Knowledge And Skills Acquired at The Training in Japan or Third Countries" section above, one (1) counterpart personnel who had participated in the Training in the Third Country was transferred to other DIC. It is considered that this case somewhat reduced the efficiency of the Project from the viewpoint that the input of the Project has not fully turned into the achievement of Outputs. The achievement of Outputs, nevertheless, has not been influenced by that incidence eventually.

6) Others

Some young JICA short-term experts were not always well experienced for working in abroad. Some young staff in the DIC Subang had difficulties to communicate with them in English. Accordingly, they sometimes encounter the difficulties to make presentation and technical transfer in English. However, necessary techniques and knowledge were properly transferred by the mutual efforts eventually, and negative influence has not been caused on the achievement of Outputs.

4.4 Impact

The following positive impacts are confirmed and/or expected by the implementation of the Project.

1) Probability of Achievement of the Overall Goal

As has been described, the Project realized the enhancement of diagnostic function of the DIC Subang in terms of the number of diagnosable diseases and the increase of testing or diagnosis techniques, and simultaneously, the function of passive surveillance are strengthened successfully. The quality of testing and diagnostic services as well as the appropriateness of facility management as a testing agency is deemed to be guaranteed internationally since the DIC Subang has gotten certified by the ISO. Meanwhile, it is inevitable to enhance the capacity of stakeholders such as type-B/C laboratories further for effective and efficient animal and livestock diseases throughout the region; to this end, the Project assisted the DIC Subang to consolidate cooperative relationship amongst the parties in charge of animal and livestock health in West Java region and to establish the foundation to continue awareness raising and technical assistance activities.

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As was described in the Achievement of Output 2, the testing and diagnosis system was established in the DIC Subang in general by the mutual efforts; nevertheless, the Project encountered some challenges, to be specific, the quality of specimens brought into the DIC Subang in terms of insufficient epidemiological information, insufficient part of organs or fluids collected as specimens, improper sample preservation method, and so on, for implementing comprehensive analyses. As a countermeasure, the DIC Subang has applied a novel SOP as follows: the samples that do not meet the requirements for comprehensive diagnosis are sent back to clients with instruction with regard to the parts of organs/fluids for sampling, proper preservation methods, etc. and put it into effective in January 2015. It might be concerned about the increase of cost burden for clients for the said operation; however, the DIC Subang has it in mind to avoid hesitation of clients over the cost burden by instructing them to report the incidence (only dead cases) to the DIC Subang via DINAS. On the basis of the report from the DINAS, the DIC Subang will be dispatched to the client for sampling as a part of disease investigation in the field. This measure has been running for 4 months to date without major trouble; nevertheless, the DIC Subang should keep an observant eye on it in parallel with steady implementation of awareness raisig and technical assistance activities.

Meanwhile, as the technical transfer of testing and diagnostic techniques progresses, the number of diagnosis at the DIC Subang has substantially increased from approximately 15,000 to 61,000 in 2010 and 2014, respectively. This number is supposed to be approaching the capacity limit of the DIC Subang. In light of the achievement of the Overall Goal of the Project (effective animal and livestock disease control in West Java) after the end of the project period, it is considered necessary to increase the number of comprehensive diagnosis as passive surveillance at the DIC Subang and to strengthen the activities for awareness raising and technical assistances geared to the stakeholders. Having said that, it seems distant to increase the number of diagnosis further in consideration of the capacity limit of the DIC Subang. On the other hand, the capacity of type-B/C laboratories was also improved through the collaborative work with the Project to a certain extent enough to provide testing and diagnostic services for major animal and livestock diseases. Discussions on tasks sharing amongst testing facilities has just commenced at the coordination meeting, but already, some DINAS and type-B laboratories has independently started field activities of active surveillance unaccompanied with neither the DIC Subang nor JICA experts. It is desired that such task sharing will further be enhanced after the end of the project period.

On the other hand, as was described in the "Effectiveness" section, the capacity of the staff of the DIC Subang has improved to an expected level. However, animal and livestock sciences as well as diagnostics are making steady progress. During the project period, the staff of the DIC Subang has many opportunities to receive guidance from JICA experts by means of hands-on training and/or email. The opportunities of the staff to touch latest techniques and technologies might be limited after the end of the Project. The DIC Subang is planning to continue staff training even after the end of the project period; nevertheless, the staff should continue efforts to seek latest techniques and technologies by means of Internet or others. Meanwhile, animal and livestock diseases contain many zoonotic diseases like AI. Therefore, it seemed necessary to work more closely with the public health sector to realize effective animal and livestock disease control.

2) Other Positive Impacts

Academic Achievements through the Project Activities and Contribution to the Testing and Diagnostic Services

After the commencement of the Project in 2013, academic research was added to the functions of the DIC Subang; accordingly, DGLAHS as well as the DIC Subang is encouraging the staff to conduct research activities through their daily duties and to land a degree. As of March 2015, a total of 6 staff members are studying in the bachelor, master or

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Ph.D. courses in universities. Meanwhile, the Project had yielded many academic achievements through the project activities as follows: isolation of cryptosporidium from cattle (1st case in Indonesia) and subsequent success in the experimental infection with it in mice (3rd case in the world); isolation of Akabane virus (1st case in Indonesia); Evaluation of a fluorescence-based method for anti-babesial drug screening; and others (see Annex 5.), and published them in international journals. These academic achievements are anticipated to contribute the daily duties of DICs directly, and enhance the capacity of the DIC Subang as a testing and diagnostic facility. For instance, the DIC Subang can investigate the incidence of ant-Akabane virus antibody in cattle by neutralization reaction to the virus isolated. Since the academic research is expected to contribute to better animal and livestock health not only in West Java but also in the whole country, it is desired that the DIC Subang will continue these research activities even after the end of the project period.

② Development of Precise Disease Map

Before the commencement of the project, epidemiological data with regard to the incidence of animal and livestock diseases was gathered not only by the DIC Subang but also by other testing or inspection organizations such as type-B/C laboratories and animal quarantine offices, and the reliability of analysis results were not fully secured because of some problems in operation such as duplication of investigation areas and/or subject animal. After the commencement of the Project, forms and norms used in the jurisdictional area of the DIC Subang were unified, and the data was accumulated in the DIC Subang. As the result, the reliability of the disease map was far improved enough for DINAS to come up with activity plan on the basis of it. For these reasons, it is expected that the animal and livestock disease control in West Java will be more effective and efficient using such disease map hereafter.

The Reinforcement of Coalition of the DIC Subang with Stakeholders such as DINAS, Type-B/C laboratories, PUSKESWAN and Dairy Cooperatives

The DIC Subang has reinforced the cooperative relationship with external stakeholders through the collaborative activities of active surveillance as well as the activities for awareness raising and technical assistances. The Project has focused on the functional improvement of the DIC Subang. In light of effective animal and livestock disease control in future, nevertheless, it is inevitable to reinforce the capacity and coalition amongst the stakeholders. For this reason, the reinforcement of the coalition is anticipated to provide positive influence on animal and livestock disease control in future. As of the time of the Terminal Evaluation, indeed, coordination of organizations in charge of surveillance was appropriately done at biannual coordination meeting, of which establishment was supported by the Project. The said duplication of sampling isn't happened any longer. Moreover, budget sharing amongst stakeholders for awareness raising and technical assistance activities is also effectively discussed at the coordination meetings. This can be recognized as a currently-observable positive impact on effective and efficient implementation of infectious disease control.

Capacity Development of Indonesian and Japanese Young Human Resources

The Project encouraged the staff of the DIC Subang to raise English proficiency, and gave them opportunities to give presentations in English at seminars and workshops. As a result, their English proficiency was improved especially in young staff and became capable of accessing scientific articles and reference documents written in English easier than before; thus, it is expected for them to enhance the capacity further hereafter. On the other hand, the young Japanese who were dispatched to Indonesia as JICA short-term experts had gained



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working experiences in abroad, and is expected that they raised capacity as technologists to deal with exotic diseases.

3) Negative Impact

No negative impact attributed to the implementation of the Project was observed as of the time of the Terminal Evaluation.

4.5 Sustainability

Self-sustainability as well as self-deployment of the benefits provided by the Project can be expected to some extent as of the time of the Terminal Evaluation.

1) Political and Institutional Aspects

As was described in "Relevance" section, DGLAHS has been putting political efforts to the control of animal and livestock diseases; accordingly, established the integrated information for disease surveillance and presented a roadmap for the eradication of bovine brucellosis. Even though DGLAHS is still on the preparation work for the next "the Livestock Industry Development Mid-term Plan", however, they clearly stated that the significance of animal and livestock disease control under the umbrella of livestock industry. In addition, the MOA expected the DIC Subang to function as a training facility, and constructed a dormitory by their own budget for overnight stay. For these reasons, the political commitment is expected to be continued for the reinforcement of animal and livestock disease control in West Java (Overall Goal) after the end of the project period.

On the other hand, the Project selected brucellosis as a target disease of the project-led active surveillance, and showed the prevalence of it by investigating several pilot sites. In order to realize brucellosis-free, there are many agenda remaining such as the development of institutions regarding compensation for slaughtering infected animals and importation of disease-free animals. However, it is anticipated that the DIC Subang will help the stakeholders to discuss about the proper measure to achieve brucellosis-free by providing accurate information regarding its prevalence and incidences continuously.

Financial Aspects

As was described in the "Effectiveness" section, both the Indonesian and the Japanese sides went ahead with the project activities such as training seminars and disease surveillance requiring overnight stay under the clear cost sharing in consideration of future sustainability. Meanwhile, the diagnostic techniques transferred by JICA experts are used for their daily testing and diagnostic services, and the same goes for the active surveillance on bovine brucellosis and abortion in cattle. Therefore, those activities are highly expected to be continued by their own budget after the end of the project period. In addition, more than 80% of costs for procuring consumables including reagents were covered by the budget of the DIC Subang, and the operational budget of the DIC Subang were tripled from 2011 to 2014. For these reasons, the financial sustainability is anticipated even after the end of the project period.

The DIC Subang is advancing the coalition with the stakeholders such as type-B/C laboratories and PUSKESWAN. Since activity plans with cost sharing are discussed amongst the stakeholders at the coordination meeting, financial sustainability is anticipated not only at the DIC Subang but also at partner agencies that the Project needs to work with for the achievement of the Overall Goal.

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3) Technical Aspects

As was describes at the "Effectiveness" section, SOPs were prepared for the testing and diagnostic techniques and services that were established at the DIC Subang, and the quality of the testing and diagnostic services are secured in accordance with the stipulation of ISO. Though the civil-service workers including the staff of the DIC Subang are subject to transfer to a certain frequency, the technical sustainability is anticipated to be highly maintained under such quality management system. Having said that, the testing and diagnostic technologies are ever-improving; therefore, the staff should continue the efforts to keep in touch with novel technologies. Needless to say, it is important that the DIC Subang is required to discuss about the measures to consolidate the testing and diagnostic techniques transferred by JICA experts in consideration of staff turnover.

Meanwhile, as was described at the "Impact" section, the IC Subang has just started a countermeasure to perform comprehensive diagnosis as the passive surveillance. Consequently, it is expected that samples are properly collected and preserved to meet the requirements to perform comprehensive diagnosis. Having said that, it is necessary for the DIC should steadily continue the activities of awareness raising and technical assistances toward technical staff at type-B/C laboratories and PUSKESWAN in parallel. A staff of the DIC Subang at a managerial level declared to continue those activities after the end of the project period at the time of interviewing with the Team. Meanwhile, DINAS has charge of awareness raising activities dairy farmers. Since it is obvious that it will take long time and need efforts to increase knowledge and subsequently alter attitude and practice for epidemic prevention and to cover a lot of dairy farmers scattered widely in their jurisdiction areas. To this end, DINAS is required to continue efforts steadily, and the DIC Subang and type-B/C laboratories are desired to continue the support to DINAS as heretofore.

DIC Subang is supposed to prepare the plan of mastering diagnostic techniques in each laboratory at every half-decade, and is under a preparation work of them at the time of the Terminal Evaluation.

4) Comprehensive Sustainability

Nevertheless there is a limitation in extrapolating the sustainability at the time of the Terminal Evaluation, securing the comprehensive sustainability within the period of the Project would be anticipated to some extent due to the reasons mentioned above.

4.6 Conclusion

As the results of the technical cooperation, the number of diagnosable disease was increased in the DIC Subang (Output 1), and the system was established to provide testing and diagnostic services as the passive surveillance with enhancing capacity of the staff members. Further, their capacity to implement whole process of active surveillances (planning, implementation, analysis and feedback) was reinforced through the project-led active surveillance targeting bovine brucellosis and abortion in cattle. In parallel, the coalition of stakeholders was also established for the effective control of animal and livestock diseases in the region (Output 4). In addition to those achievements, it is notable that the DIC Subang was accredited by the ISO, implying that the quality management of testing and diagnostic services of the DIC Subang is conducted in conformity to the international standards. Therefore, it is deemed that the DIC Subang had far improved diagnostic services for animal and livestock in quality and quantity (Project Purpose) as of the time of the Terminal Evaluation.

As the Joint Terminal Evaluation Team analyzed the performance and achievements of the Project with the Five Evaluation Criteria, "Relevance", "Effectiveness", "Efficiency" and "Sustainability"

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were found to be high in general. Besides, the Team observed several positive impacts derived from the Project with regard to the academic achievements as well as the younger human resource development.

Meanwhile, concerning to the "Impact" of the Project, the feasibility of the achievement of Overall Goal (effective animal and livestock disease control in the region) is anticipated to a certain extent; nevertheless, the Team will present recommendations to relevant parties concerned in Chapter 5.



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CHAPTER 5 RECOMMENDATIONS AND LESSONS LEARNT

5.1 Recommendations

1) Maintenance and Enhancement of Knowledge and Techniques

The DIC Subang has far enhanced the capacity regarding testing and diagnostic techniques, passive surveillance, active surveillance and activities for awareness raising/technical assistances for stakeholders. The staff of the DIC Subang should maintain those fruit of the Project properly and even continue the efforts to gain new knowledge and techniques further.

Continuation of Awareness Raising and Technical Assistance Activities for the Enhancement of Comprehensive Diagnosis System

In order to realize effective animal and livestock disease control in the region, it is required that the comprehensive diagnosis system is functioned properly. However, there were some cases that comprehensive diagnosis could not be performed due to the problems in sample quality, in terms of improper parts of organs and/or fluid collected, improper sample preservation and insufficient epidemiological information. In this regard, the DIC Subang had started a countermeasure to improve the situation on the basis of new SOP. The DIC Subang, nevertheless, should continue the activities of awareness raising and technical assistances to obtain samples having sufficient quality for comprehensive diagnosis.

3) Eradication of Zoonotic Animal Diseases

In order to realize brucellosis-free, there are many agenda remaining such as the development of policies whether in central and local governments regarding compensation for slaughtering infected animals and importation of disease-free animals. Under the situation, the DIC Subang should continue the efforts to provide accurate information on the incidence as well as prevalence, in order to help the stakeholders to take appropriate measures for it. Additionally, the Team recommends the high authority in the central and local governments to exert strong commitment on eradicating zoonotic animal disease such as brucellosis and rabies to utilize the results from the Project optimally.

4) Maintenance and Management of Testing Instruments, Equipment and Facilities

The DIC Subang is performing proper management of laboratories and facilities in accordance with the requirements of ISO. In this regard, the DIC Subang should continue the preventive maintenance to delay the deterioration of testing instruments, equipment and facilities, and should discuss about the budget for renewal, especially for the testing and diagnostic instruments in advance.

5) Revision of PDM

With regard to the Objectively Verifiable Indicator to measure the achievement level of the Overall Goal (OVI-1) of "the number of test samples for animal disease diagnoses at DIC Subang in West Java region increases 10% by the year of 2018 in comparison with the number in 2015", the number of diagnosis performed is approximately 61,000 in the year of 2014, approaching the capacity limit of the DIC Subang. To counter this, the DIC Subang is discussing with the stakeholders to share the simple tests with type-B/C laboratories in consideration of the enhancement of diagnostic capacity in the whole region for effective and efficient animal and livestock disease control. Meanwhile, in order to raise the diagnostic capacity in collaboration with type-B/C laboratories, the DIC Subang should conduct the activities of awareness raising and technical assistances steadily as described in the OVI-3 of "the number of awareness and technical support activity concerning animal health conducted by DIC Subang in West Java region goes up 20% by the year of 2018 in comparison with the number in 2015" For these reasons, it is considered that OVI-1 and OVI-3 should be evaluated in

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an integrated manner. Moreover, the Joint Terminal Evaluation Team suggests that the unit of the target value of the OVI regarding the performance of tests should be changed from "the number of test samples" to "the number of tests" in consideration that one sample might be subject to multiple tests and the DIC Subang counts the number of tests practically due to the difficulty in grasping the performance with the number of samples.

Concerning the above-mentioned matters, the Team proposes to put a new OVI of "the number of tests performed for animal disease diagnoses at the DIC Subang, type-B/C laboratories and PUSKESWAN in the jurisdiction area of the Center increases 10% by the year of 2018 in comparison with that in 2015" to measure the achievement level of the Overall Goal (See Annex 17)...

5.2 Lesson Learnt

The Project has implemented a series of activities such as improvement of diagnostic capacity and operation system as a part of routine work of the DIC Subang in light of future sustainability. In particular, the project-led pilot site activities targeting bovine brucellosis as well as abortion in cattle were conducted as a part of active surveillances routinely conducted in the DIC Subang. This assistance approach had allowed the Project and the DIC Subang to secure budget and promote cooperation easily, and contributed to enhance the sustainability and efficient implementation of project activities.

In this wise, the project activities should be conducted in the operation system of duties at the counterpart organization(s) in light of the technical and financial sustainability. In this regard, however, project activity/-ies that should be newly started or continued as new operations of counterpart organization(s), the project should have done a cost analysis of them including necessary human resources by the end of the cooperation period.

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Schedule of The Terminal Evaluation

Annex 1

As of 25,	May	2015
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						V	As of 25, May 2015	
					Japanese Member			
Di	ato	J!CA Leader	JICA Planning & Management	Veterinary Epidemiology	Livestock Disease Diagnosis	Evaluation & Analysis	Hotel	
7-May	Thu	Move from Tokya to Jakarte					Jakarta	
						8:30 - 9:00 Visit to JICA Office		
8-May	Fri					9:00 - 10:30 TV Meeting	Jakarta	
						11:00 - 14:00 Meeting with JICA Expert		
9-May	Sat					Documentation	Jakaria	
10-May	Sun					Documentation	Jakarta	
	Mon		<u> </u>	/		10:00 - 11:00 Interview with DGLAHS	<u></u>	
11-May						13:00 - 14:00 Interview with B type Labo (Jakarta Province)	Subang	
						14:00 - 19:00 Move from Jakarta to Subang		
12-May	Тио					8:00 - 16:00 Interview with DIC Subang (Center President / Executives / Markenance Stalls / Respective Laboratory Starfs.)	Subang	
						8:00 - 12:00 Interview with DIC Suban (Respective Laboratory		
13-May	Wed					13:00 - 16:00 Site visit of DIC Suban	Subang	
14-May	Thu		<i></i>	erija Lingvija i jara	, , , , , ,	9:00 - 17:00 Move from Suban to Serang (Banten Province)	Serang	
				····		9:00 - 10:00 Interview with DINAS Banten		
15-May	Fri		-			11:00 - 12:00 Interview with B type Labo (Banten)	Jakarta	
			; 			13:00 - 16:00 Move From Sarang (Banten Province) to Jakarta		
16-May	Sat					Documentation	Jakarta	
17-May	' Sun	Move from Tokyo lo				Documentation	Jakaria	
18-May	Mon	10:00 - 11:30 Intervi	1:30 - 10.00 Visit to DGLAHS Visit to JICA Office 10:00 - 11:30 Interview to the Head of DIS Subang : Ms.Liliek Indrayani 17:30 - 18:00 Visit to JICA Indenesia Office					
		8:00 - 12:30 Move fro	om Jakarta to Suban	3				
19-May	Tue	13:00 - 16:00 Intervie	ew with DIC Subang	(Center President /	Executives / Respec	tive Laboratory Staffs.)	Subang	
		8:00 - 10:00 Move fr	rom Subang to Lemb	ang (West Jawa Pro	ovince)			
Ì		9;30 - 11:00 Interview	wwith KPSBU Lemb	ang (Dairy Cooperat	tive)		:	
20-May	Wed	11:00 - 12:30 Site Vi	sit to dairy farmers (2 farmers : Mr.Ermi	in/ Mr. Diki)		Subang	
		14:00 - 15:00 Interview with B type Labo (West Jawa Province)						
		15:00 - 17:00 Move f	from Lembang (Wes	t Jawa Province) to s	Subang			
24 3400	76	8:00 - 12:00 Tour of	DIC Subang facilities	& Interview with Ok	C Subang researche	rs.	Bulana	
21-May	Thu	13:00 - 15:30 Check	the contents of the t	erminal evaluation re	eport within JICA Eva	luational Team	Subang	
22.15	Fri	8:00 - 11:30 Joint re	view team meeting (Prepare draft of JTE	R)		falsest	
22-May		14:00 - 19:00 Move (from Subang to Jaka	rta			Jakarta	
23-May	Sat	Documentation					Jakarta	
24-May	Sun	Documentation					Jakarta	
25-May	Mon	9:00 - 15:00 Joint re	9:00 - 15:00 Joint review team meeting (Prepare final draft of JTER and M/M)					
20-May	WOH	15:00 - 16:00 Signin	g on the JTER				Jakarta	
		9:00 - 12:00 JCC (S	igning on WM)					
26-May	Tue	14:00 - 15:00 Repor	4:00 - 15:00 Report to JICA Office					
		21:25 Leave from Ja	akarta					



Project Design Matrix (PDM)
Project Name Project on
Target Group Staff of Dis
Project Duration Four (4) ye Project on Capacity Development of Animal Health Laboratory Staff of Diseases Investigation Center (DIC) Subang Four (4) years, July 17, 2011 – July 16, 2015 DIC Subang

Project Site

Directorate of Animal Health DGLAHS-MoA and JICA Implementing Agency

Annex 2

Date: May 28, 2013 Version 2

Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal Measures for animal disease control in West Java region (Jurisdictional area of DIC Subang)	1 Number of test samples for animal disease diagnoses at DIC Subang in West Java region increases 10% by the year of 2018 in comparison with the number in 2015.	1 Monitoring Report	
are strengthened.	2 Number of district where the animal disease control is monitored by DIC Subang amounts to all district required in West Java region by the year of 2018.	2 Monitoring Report	
	3 Number of awareness and technical support activity concerning animal health conducted by DIC Subang in West Java region goes up 20% by the year of 2018 in comparison with the number in 2015.	3 Monitoring Report, Survey on target groups in West Java region by DIC Subang (Terminal evaluation survey and final survey)	
Project Purpose The quality and quantity of animal disease	1 The number and the kind of animal disease diagnosis at DIC Subang becomes more than 35,000 samples in a year and 16 kind at the end of the Project.	1 Monitoring Reports	The measures and policies concerning of animal disease control
diagnosis service at DIC Subang are improved.	2 The feedbacks of diagnosis (Passive Surveillance) to the customers are returned promptly in prescribed days set by the Project.	2 Diagnosis records at DIC Subang	will be implemented by the government of Indonesia continuously.
	3 The DIC Subang staff are ready to conduct Active Surveillance (Planning, Implementing, Monitoring and Feedback the results to next survey) on animal health considering with livestock / poultry industry promotion in the pilot sites more than 2 times/site in a year.	3 Observation at the time of mid-term review and terminal evaluation.	Enough budget and personnel are allocated to DIC Subang for
	4 80% of inquired customers (stakeholders such as DINAS staff, Field vets, and Farmers) recognizes improvement of diagnosis services of DIC Subang by the end of the Project.	4 Monitoring Reports, The results of questionnaire survey on users at the time of mid-term review and terminal evaluation (questionnaire survey to be done by the project monitoring activity 2-5).	sustaining outcomes of the Project.
Outputs Output 1 The DIC Subang staff obtain basic and systematic diagnosis for animal diseases.	1-1 The technical levels acquired on diagnostic tests in each laboratory (8 laboratories) of DIC Subang attain to the target levels set up in the "Project Technical Target Sheet" by June 2013.	1-1 The results of examination by the Project	The staff of DIC Subang who have been transferred techniques by the Project are not
Output 2 The capacity to provide the customer oriented diagnosis services (Passive Surveillance) of	2-1 More than one staff in DIC Subang are certified by the Project he/she is able to make a final diagnosis based on the result of tests in each laboratory.	2-1 Records of comments for diagnosis results	transferred to other office during the Project period.
DIC Subang staff is strengthened.	2-2 Each laboratory chief in DIC Subang he/she is able to make an appropriate comments based on the result of tests in each laboratory.	2-2 The results of certification by the Project	



The capacity to conduct the surveys and the technical support of animal disease control (Active Surveillance) in the pilot sites of DIC Subang staff is strengthened.

3-1 Active surveillances on animal health are conducted annually | 3-1 Record of surveys with a framework (Planning, Implementing, Analyzing and feedback) by the staff of DIC Subang.

3-2 Each laboratory chief in DIC Subang are able to make 3-2 Records of Recommendations for recommendations of animal disease control in the pilot sites for the animal disease control measures

Output 4

The DIC Subang staff conduct the continuous technical support activities for laboratory workers, field vets and farmers, including information exchange, awareness on animal health improvement in the pilot sites.

4-1 DIC Subang (Vet. Information section) issues periodical Newsletter of animal health 2 times a year for laboratory workers, field vets and farmers in the three provinces by June 2012.

veterinary officers and laboratory workers.

4-2 Each laboratory chief in DIC Subang is able to make annual plan of technical support activities to the laboratory workers, field vets and farmers in the pilot site by December 2013.

4-3 Achievement rate of annual activity plan (set in 4-2) becomes more than 90% in the pilot site.

4-1 Records of issued Newsletter

4-2 The plan and records of awareness and technical support activities

4-3 The plan and records of awareness and technical support activities

Activities

Output 1

1-1

The Staff of DIC Subang surveys the current capacities and needs in the diagnostic techniques at DIC Subang.

Based on the results of the survey, the staff of DIC Subang sets the necessary diagnostic techniques (kind of disease. diagnostic method etc.) and target levels of the techniques for each laboratory.

The staff of DIC Subang makes the plan of mastering diagnostic techniques for each laboratory in DIC Subang.

The staff of DIC Subang makes the list of trainer resources, for example, staff of other DICs, IRCVS, NVDAL. Vet Faculty of university, foreign experts etc.

The staff of DIC Subang learns the planned diagnostic techniques from the resources trainers through training in Indonesia, Japan or third country.

The staff of DIC Subang receives the diagnostic capability evaluation (including the proficiency tests) by resource trainers about the transferred diagnostic tests.

Output 2

The staff of DIC Subang analyzes the current situation of sample flow and examinations at DIC Subang.

The staff of DIC Subang analyzes the current situation of sample submission from the fields.

The staff of DIC Subang makes the plan of improved sample flow and examination system at DIC Subang. (Measures for the sample senders will be planed in Output 4)

The staff of DIC Subang conducts the improved diagnostic services.

The staff of DIC Subang monitors the improved diagnostic services (sample reception, diagnostic flow and customer's comment etc.) and conducts the feed-back to the system.

Inputs

Indonesian side

1. Assignment of counterpart personnel

2. Salary, Travel expense, accommodation cost and daily allowance of counterpart personnel

3. Project office space and communication device etc.

4. Budget for operational cost for the Project implementation (electricity etc.)

5. Procurement of Reagents and consumables.

Japanese side

1. Dispatch of Experts

(1) Long-term Experts:

- Chief Advisor / Animal Health Administration

framework of the Project.

- Project Coordinator / Animal Health Information

- Veterinary Diagnosis / Epidemiology (assigned in half period of the project) (2) Short-term experts: from Japan or from

third country Relevant experts in specific subjects of animal health will be dispatched, when necessity arises, for the smooth implementation of the Project within the Sufficient budget conduct the necessary diagnosis is secured by Indonesian side.



Output 3

3⊶(

The staff of DIC Subang conducts preliminary surveys to select pilot site(s) from livestock / poultry industry promoted areas.

3-2

The staff of DIC Subang specifies the pilot site and some animal diseases for the surveys and control.

3-3

The staff of DIC Subang plans and conducts the surveys on animal health considering the specificity of promoted livestock / poultry sectors in the pilot site through cooperation with B/C type laboratories.

3-4

The staff of DIC Subang analyses the results of surveys and develops the recommendation reports to the authorities for the improvement of animal health situation.

3-5

The staff of DIC Subang organizes and conducts the monitoring of the animal health improvement for the follow-up of recommended activities and the feed-back.

Output 4

4-1

The DIC Subang issues periodical Newsletters to provide and exchange information on animal health for laboratory workers, field vets and farmers in the 3 provinces of West Java region.

4-2

The staff of DIC Subang examines and conducts necessary measures of information exchange (on site meetings, etc.) for veterinary officers, laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type laboratories.

4-3

The staff of DIC Subang makes plans of sustainable activities of awareness and technical supports for improvement of animal health and production, which are necessary for laboratory workers, field vets and farmers in the pilot site. (Utilize other JICA projects outcomes such as a Flip-chart for dairy farmers.)

4-4

The staff of DIC Subang conducts sustainable activities of awareness and technical support for the laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type laboratories.

4-5

The staff of DIC Subang organizes and conducts the monitoring and the feed-back of the results to the next actions.

- Counterparts training in Japan or in third country
- 3. Provision of machinery / equipment
- Budget for operational cost for the Project implementation

Pre-Conditions

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Evaluation Grids

Annex 3-1

1		Evaluation Classification	Criteria	Necessary data and	Data Source	Means of
· ·	Major	Small	0,100118	Information	Data Sparce	Verification
	Overall Goal	Whether "Measures for animal disease control in West Java region (Invisdictional area of DIC Subang) are strengthened" is logically correct as the Overall Goal.	Verification of logical relationship	Verification by the Evaluation Team	Project documents Views of related players	① Document re ② Interview
		Whether it is expected that the benefit/onfcomes derived from the Project is autonomously doployed or disseminated to non-targeted areas after the termination of the Project.	Verification of sustainability	Information indicating their sustainability	Project documents JICA Experts, C/P	① Document ro ② Questionnai ③ Interview
	Project Purpose	Whether the Project Purpose of "The quality and quantity of animal disease diagnosis service at DIC Subang are improved" is expected to be achieved by the end of the project period.	Degree of achievement of Objectively Verifiable Indicators (OVIs) Comprehensive analysis	Achievements of OVIs Views of related player	① Project documents ② IICA Experts, C/P	① Document re ② Questionnain ③ Interview
	Ontputs	Whether the Output 1 of "The DIC Subang staff obtains basic and systematic diagnosis for animal diseases" is achieved or expected to be achieved by the end of the project period.	Degree of achievement of OVIs	Achievements of OVIs Views of related players	① Project documents ② JICA Experts, C/P	Document r Questionnai Interview
		Whether the Output 2 of "The capacity to provide the customer oriented diagnosis services (Passive Surveillance) of DIC Subang staff is strengthened" is achieved or expected to be achieved by the end of the project period.		Achievements of OVIs Views of related players	Project documents JICA Experts, C/P	① Document r ② Questionnai ③ Interview
		Whether the Output 3 of "The capacity to conduct the surveys and the technical support of animal disease control (Active Surveillance) in the pilot sites of DIC Subang staff is strengthened" is achieved or expected to be achieved by the end of the project period.		Achievements of OVIs Views of related players	① Project documents ② JICA Experts, C/P	Document r Questionnai Interview
		Whether the Output 4 of "The DIC Subang staff conduct the continuous technical support activities for laboratory workers, field vets and farmers, including information exchange, awareness on animal health improvement in the pilot sites" is achieved or expected to be achieved by the end of the project period.		Achievements of OVIs Views of related players	Project documents IICA Experts, C/P	Document r Q Questionnai Interview
	Inputs from the Japan Side	Whether JICA Experts were dispatched as scheduled.	Comparison of plan with actual result	Results of Input	① Input records ② Project reports	Document revie
	р.ш. от т	Whether equipment for project activities was provided as planned.		Results of Input (incl. Information for status of utilization)	① Input records ② Project reports	① Document ro ② Direct obser
1		Whether C/Ps' training in Japan and/or third countries were implemented as planned.		Results of acceptance of trainees	Input records Project reports	Document revie
		Whether local cost from JICA side were implemented as scheduled.		Budget and implementation result	① Input records ② Project reports	Document ravie
- 1	Inputs from the Indonesian Side	Whether C/Ps were appropriately allocated enough to implement project activities.	Comparison of plan with actual result	Achievement of Input Views of related players	① Input records ② JICA Experts, C/P	① Document r ② Interview
		Whether office space for JICA experts was provided.		Achievement of Input	① Input records ② JICA Experts, C/P	① Document r ② Interview
		Whether local cost from Indonesian side were implemented appropriately.		Achievement of Input Views of related players	① Input records ② JICA Experts, C/P	① Document re ② Interview

I Verification of Implementation Process The Project on Capacity Development of Animal Health Laboratory

Enliquin		Evaluation Classification	0-1-1-1	Necessary data and	llata Source	Means of
Itim	la jor	Small	Criteria	Information	nara conice	Yerification
L						
lin in	Planned activities	Whether the project activities were implemented as scheduled.	Comparison of plan with actual result	Accomplishment of project activities	Project reports	Document review Questionnaire
Implementation Process		Whether the PDM was updated in accordance with surroundings of the Project under the agreement amongst relevant parties.		Vicissitude of PDMs and its reasons for modification	Meeting minutes of the Joint Policy/Steering Committee (JCC)	Document Review Questionnaire Interview
ion Pr	Technical transfer	Whether methods and/or approaches of technical transfer were appropriate.		Methods and contents of technical transfer	Project reports ICA Experts, C/P	Document review Interview
ocess	Management system	Who, how and how often the progress of the Project was monitored, and consequent findings were reflected to the operation of the Project.		Progress monitoring system Feedback system	① Project reports ② JICA Experts	Document review Questionnaire
		How the decision-making process for modification of the project activities, assignment of personnel, etc. was.		Process for decision-making	① Project reports ② JICA Experts	Document review Questionnaire
		How the communication and cooperative relationship amongst players in the Project was.		JCC and other meeting	Project reports Views of related players	① Document review ② Questionnaire
		Whether Project information was effectively shared.		JCC and/or other meetings	Project reports Views of related players	Document review Questionnaire
	Ownership and Autonomy	How ownership and autonomy of implementing bodies including C/Ps and beneficiaries were.		Contribution, attitude, etc. for the project activities.	Project reports Views of related players	Document review Questionnaire Interview
	中間レビュー時の 扱言へのフォロー	Recommendations 1 Longer assignment of C/Ps to appropriate position in DIC Subang during the project period		Countermeasures taken by the Project and current status	Information from parties and/or persons	① Questionnaire ② Interview
	アップ状況	[Recommendations 2] Systematical collaboration among DIC Subang, provincial and district DINAS including B/C-type Lab		Countermeasures taken by the Project and current status	Information from parties and/or persons	① Questionnaire ② Interview
		[Recommendations 3] Application of new methods introduced by the Project should be referred to the national manual		Countermeasures taken by the Project and current status	Information from parties and/or persons concerned	① Questionnaire ② Interview
		[Recommendations 4] - Revision of OVIs of PDM		Countermeasures taken by the Project and current status	Information from parties and/or persons concerned	① Questionnaire ② Interview
		[Reconnendations 5] Implementation of Laboratory Management		Countermeasures taken by the Project and current status	Information from parties and/or persons concerned	① Questionnaire ② Interview
	Problems on implementation process	Whether there were obstacles or problems for the implementation of the project activities.		Contributing and inhibitory factors	Project reports Views of related players	Document review Questionnaire Interview





Evaluation Grids

Annex 3-2

o T		Evalu	ation Classification	- Criteria	Necessary data and	D-4- 8	1.6 CTC 112 12	
ria	Major	Middle	Small	Cinterns	Information	Data Source	Means of Veritica	
<u>1</u>		1		Consistency				
Relevance	Priority		of the Project Purpose with policies for livestock and animal health in Indonesia Consistency verification National Purpose with policies for livestock and animal health in Indonesia Consistency verification	National policies	Document for livestock and animal health-related policies Directorate General of Livestock and Animal Health Services, the Ministry of Ministry of Agriculture (DGLAHS-MOA)	① Document re		
		Priority of the strengthening of animal disease diagnosis services in Type-A labs in the policies for livestock and animal health in Indonesia Consistency with Japan's ODA policies and JICA's aid policies Relativity with prioritized area in Japan's ODA policies Relativity with prioritized area in JICA's aid policies		National policies	Document for livestock and animal health-related policies DGLAHS-MOA	Document re Interview		
					Prioritized area in Japan's ODA policies for Indonesia	Japan's ODA policies for Indonesia	Document review	
				Place of agricultural assistance in the JICA's aid policies	Position Paper, Thematic Guidelines, Rolling Plan, etc.	Document reviev		
	Necessity	Relevance of larget group	Consistency of needs of target group with the Project Purpose			① Experiences /performances of C/Ps ② Competency of DIC Subang for testing/diagnostic service provision	Project documents JICA Experts, C/P	Document re Interview Direct Obser
	Appropriateness of implementation	for the control of livestock and animal diseases			Background and/or process for selection of assistance approach	JICA ex-ante evaluation report JICA Experts, C/P	Document re Questionnair Interview	
	method	Special consideration	Special assiduities for gender issues, social grades, environment, ellmic groups, etc.		Views of related players	① JICA Experts ② JICA HQ	① Document re ② Questionnair	
		Japan's technical superiority			Japan's Assistance experiences for livestock and animal health area Skills and experiences of experts	Project documents JICA HQ JICA Experts	① Document re ② Interview	
Effective	Achievements	Status of the achievements of Outputs	Status of the achievements of OVIs for Outputs		Status of achievements of OVIs Project activities and	① Project documents ② HCA Experts, C/P	① Document re ② Interview	

its accomplishments





[Five Explustion Criteria] The Project on Capacity Development of Animal Health Laboratory

Five	dictor Cliteria; 11	ne Project on Capacity Development o Evalua	tion Classification		Necessary data and		
Criteria	Major	Middle	Small	Criteria	Information	Data Source	Means of Verification
				•			
			<output 1=""> Whether the DIC Subang staff obtains basic and systematic diagnosis for animal diseases</output>	Comprehensive confirmation of actual status	Outputs other than the scope of the project activities	① Project reports ② JICA Experts, C/P	Document review Interview Direct observation
			<output 2=""> Whether the capacity to provide the customer oriented diagnosis services (Passive Surveillance) of DIC Subang staff is strengthened.</output>		Outputs other than the scope of the project activities	⊕ Project reports⊕ JICA Experts, C/P	Document review Interview Direct observation
			<output 3=""> Whether the capacity to conduct the surveys and the technical support of animal disease control (Active Surveillance) in the pilot sites of DIC Subang staff is strengthened.</output>		Outputs other than the scope of the project activities	① Project reports ② JICA Experts, C/P	Document review Interview Direct observation
			<output 4=""> Whether the DIC Subang staff conducts the continuous technical support activities for laboratory workers, field vets and farmers, including information exchange, awareness on animal health improvement in the pilot sites.</output>		Outputs other than the scope of the project activities	Project reports JICA Experts, C/P	Document review Interview Direct observation
		Probability of the achievement of the Project Purpose	Whether the quality and quantity of animal disease diagnosis service at DIC Subang is or is expected to be strengthened to an expected extent.	Systematic judgment	Status of achievements of OVIs Outputs other than the scope of the project activities	Project reports ICA Experts, C/P	Document review Interview Direct observation
	Cause-and-offect relationship	Whether the Project Purpose was attained as a result of the achievements of Outputs	Whether there was no logical error from the aspect of cause-and-effect relationship.	Verification of logical relationship	Verification by Evaluation Team	Project documents IICA Experts, C/P	Document review Questionnaire Interview
			Whether there was any other effective approaches for the achievement of the Project Purpose	Verification of implementation approaches	Verification by Evaluation Team Views of related parties	① Project documents ② JICA Experts, C/P	① Document review ② Questionnaire ③ Interview
	Contributing and hindering factors	Appropriateness of the important assumptions	Whether important assumptions are appropriate from aspects of current situation.	Confirmation current situation	Verification by Evaluation Team	① Project documents ② JICA Experts, C/P	① Document review ② Interview
			Whether important assumptions are appropriate from aspects of current situation and logical relationship	Verification of logical relationship	Verification by Evaluation Team	① Project document ② JICA Experts, C/P	① Document review ② Interview
		Whether important assumptions are fulfilled,	Confirmation of the current status of "Sufficient budget to conduct the necessary diagnosis is secured by the Indonesian side".		Budget allocation of the Indonesian side to the Project	Project documents ICA Experts, C/P	Document review Questionnaire Interview
			Confirmation of the current status of "The staffs of DIC Subang who have been transferred techniques by the Project are not transferred to other office during the Project period".		Tumover of C/Ps	① Project documents ② JICA Experts, C/P	Document review Questionnaire Interview
,			Other expected and/or unexpected external factors		Other expected and/or unexpected external factors	JICA Experts, C/P Project documents	Interview Questionnaire Document review



[Five Evaluation Criteria] The Project on Capacity Development of Animal Health Laboratory

Five Evaluation Classification

ve _			tion Classification	- Criteria	Necessary data and	Data Source	Means of Verification
eria	Major	Middle	Small		Information	Data Source	recans of vernicate
Efficiency	Тіше гезоптсе	Whether Outputs were attained	as scheduled.		Progress control of the project activities	① Project documents ② Views of related players	Document review Questionnaire Interview
юу	Quality, quantity and timing of inputs	Whether quality, quantity and timing of inputs were appropriate.	Whether the number and period, areas of expertise and timing of dispatch of JICA expert were appropriate.	Comparison of results and plan	Record of dispatch of experts Attitude and performance of experts	Input records Project documents JICA Experts, C/P	Document revi Questionnaire Interview
			Whether types, quantity and timing of installation were appropriate.		Record of equipment provision Utilization status of equipment	Input records If CA Experts, C/P	Document rev Questionnaire Direct observe Interview
	-		Whether equipment and materials provided by the Project are appropriately utilized for achieving Outputs.		Utilization status of materials Input records and operational status	Project reports Input records	① Document rev ② Questionnaire ③ Direct observa
			Whether timing, contents and duration of training in Japan and/or third countries were appropriate, and how the training contributed for the achievement of Outputs.		Acceptance of trainees Views of related parties	① Input records ② Trainees ③ JICA Experts	① Document rev ② Questionnaire ③ Interview
			Whether timing, contents, duration follow-up of on-site trainings were appropriate.		Records of on-site trainings Accomplishments of trainings	Project documents JICA Experts, C/P	Document rev Questionnaire Interview
			Whether the overseas activities costs from Japanese side has been appropriately implemented.		Overseas activities cost from Japan side	① Input records ② JICA Experts	Document re- Interview
			Whether allocation of Indonesian C/Ps and budget for the Project were appropriate.		Allocation of C/P personnel and local costs from Indonesia side	① Input records ② JICA Experis, C/P	Document re- Questionnaire Interview
	Collaboration with existing resources	Utilization of Japanese resources	Whether recommendations and/or points of note at the JCC and/or the Project Assistance Commission in Japan contributed for the achievement of Outputs.		Accomplishment of the project activities	Project documents JICA Experts	① Document rev ② Questionnaire ③ Interview
			Whether there was any collaboration with other Japanese resources contributed for the achievement of Outputs.		Accomplishment of the project activities	Project documents JICA Experts	Document rev Questionnaire
		Collaboration with other development partners	Whether there were any collaboration with other development partners contributed for the achievement of Outputs.		Benefits derived from collaborative activities with other development partners.	Project documents JICA Experts Other development partners	① Document red ② Questionnaire
	Contributing and hindering factors	Whether there were any contrib			Views of related parties	Project documents JICA Experts, C/P	① Document rev ② Interview
		Whether there were any hinderi	ng factors to efficiency.		Views of related parties	Project documents JICA Experts, C/P	① Document rev ② Interview





[Five Evaluation Criteria] The Project on Capacity Development of Animal Health Laboratory

Five		Evalua	ntion Classification	Criteria .	Necessary data and	Data Source	Means of Verification
Criteria	Major	Middle	Small	Criteria .	Information	Data Source	Means of Ventication
		•					
Impact	Cause-and-effect relationship	Whether there are any discrepa (OVIs for Overall Goal will be	ncy between Overall Goal and Project Purpose. verified.)	Verification of logical relationship	Policies related to livestock and animal health, etc.	Policies related to livestock and animal health Verification by Evaluation Team	Document review
	Probability of achievement of the Overall Goal		disense control in West Java region (Jurisdictional area of DIC desired level, by Indonesian self-help endeavor in 3 to 5 years	Exploration based on the current status	Degree of achievement of the Project Purpose Verification of Sustainability	Project documents Views of related players	Document review Questionnaire Interview
		Hindering factors for the achievement of the Overall Goal	Whether the important assumption of "The measures and policies concerning of animal disease control will be implemented by the government of Indonesia continuously" is appropriate at the time of the Terminal Evaluation, and expected to be fulfilled in 3 to 5 years time after the end of the project period.	Verification of logical relationship	Possibility of unfulfillness of the assumption	① Views of related players ② Verification by Evaluation Team	① Document review ② Interview
			Whether the important assumption of "Enough budget and personnel are allocated to DIC Subang for sustaining outcomes of the Project" is appropriate at the time of the Terminal Evaluation, and expected to be fulfilled in 3 to 5 years time after the end of the project period.	Verification of logical relationship	Possibility of unfulfillness of the assumption	Views of related players Verification by Evaluation Team	① Document review ② Interview
			Whether other hindering factor for the achievement of Overall Goal are envisaged.		Other necessary information	Views of related players Verification by Evaluation Team	① Document review ② Interview
	Other impacts	Whether there are any positive and/or negative impacts confirmed and/or expected to be generated other than Overall Goal	Positive impacts	•	Other necessary information	Project reports ICA Experts, C/P Views of related players	Document review Questionunire Interview
			Negative impacts		Other necessary information	Project reports ICA Experts, C/P Views of related players	Document review Questionnaire Interview
Sustainability	Probability of maintaining the benefits derived from the Project	anintaining the aspects aspects	Whether policies related to livestock and animal health would be maintained and/or enhanced in Indonesia.		Policies related to livestock and animal health in Indonesia	DGLAHS-MOA JICA Experts, C/P Views of related players	① Questionnaire ② Interview
nability			Whether political assistance to enhance the benefits derived from the Project will be discussed for the dissemination of them to other area in Indonesia.		Policies related to livestock and animal health in Indonesia Disposition and policies of DGLAHS-MOA	DGLAHS-MOA JICA Experts, C/P Views of related players	① Questionnaire ② Interview
		Financial aspect	Whether the budget and human recourse allocation for maintaining activities will be secured.		Policies to livestock and animal health and budget allocation	① DGLAHS-MOA ② JICA Experts, C/P ③ Views of related players	① Questionnaire ② Interview





Wive Evaluation Criterial The Project on Capacity Development of Animal Health Laboratory

ivo		Evalua Ev	ntion Classification	Criteria	Necessary data and	Data Source	Means of Verification
iteria	Major	Middle	Small		Information	Data donice	recans of vertication
			Whether the budget and personnel for the enhancement of the benefit will be allocated.		Policies and budget allocation	DGHALS-MOA JICA Experts, C/P Views of related players	(1) Questionnaire (2) Interview
		Technical aspect	Whether the improved capacities of DIC Subang in diagnosis service provision for livestock and animals will be maintained and enhanced autonomously after the end of the project period.	_	Possibility of continuation of monitoring activity Opportunities to update technical skills	Project reports IDA Experts, C/P Views of related players	① Document review ② Questionnaire ③ Interview
			Whether personnel for the deployment of the benefits are natured.		Administrative ability for deployment of the benefits	Project reports JICA Experts, C/P Views of related players	① Document review ② Questionnaire ③ Interview
		Contributing and hindering factors	Whether the important assumptions for sustaining the benefits will be maintained.		Views of related players	① Project reports ② JICA Experts	Document review Interview
			Whether countermeasures against contributing and hindering factors for sustainability were discussed by the Project and C/Ps.		Views of related players	① Project reports ② JICA Experts	① Document review ② Interview
	Comprehensive sustainability	Whether the comprehensive st aspects.	ustainability is secured or not, in the view of above-mentioned		Analytical evaluation by the Evaluation Team	Project documents ICA Experts, CIP Views of related players	① Document review ② Interview





Experts

(1) Dispatch of Experts							
(long-term)			2011	2012	2013	2014	2015
No Names	Field	Term of assignment	7 8 9 10 11 12 1 2 3	4 5 6 7 2 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
1 Dr. KISHIMA Masalo	Chief Advisor / Animal Health Administration	2011.7.17 - 2015,7.16					
2 Mr. MAEDA Yasuyuki	Coordinator / Animal Health Information	2011.7.17 - 2015.7.16					
3 Dr. KOIKE Ikuo	Veterinary Diagnosis / Epidemiology	2011.7.17 - 2013.7.16					

(sliort-term)			_		20					_			112							,,	201	3						_		2(11	Ŧ		_	\neg	7	2015	, 7
No Names	Field	Term of assignment	7 8	9	10 1	1 32	1 :	3	4	5 6	7	3 9	10	11 22	11	2 3	1	5	6/7	8	9 1	0 11	12	1	2 3	[4]	5 (7	8	9 1	0 11	12	1 2	1	4	5 6	7
1 Dr. SHIBAHARA Tomoyuki (1)	Pathological Diagnosis	2011.7.24 - 2011.9.16	3 (36.4)																																	T	
2 Dr. KOBAYASHI Soin (1)	Veterinary Epidemiology	2011.10.31 - 2011.11,12			**************************************	S. Con																														T	
3 Dr. MATSUBAYASHI Makoto	Diagnosis of Parasitic Disease	2011.11.7 - 2011.12.17			2000年	17 XV																												П			
4 Dr. MIKAMI Osamu	Pathological Diagnosis	2012.2.8 - 2012.4.26					44.0		形成物																									П		T	П
5 Dr. KOBAYASHI Soin (2)	Veterinary Epidemiology	2012.5.27 - 2012.7.21								10 8	300																							\prod			
6 Dr. FUJISAKI Kozo	Diagnosis of Parasitic Disease	2012,10,7 - 2012,12,1	\perp			Ш							2					-															Ī		Π	Ţ	
7 Dr. SHIBAHARA Tomoyuki (2)	Pathological Diagnosis	2013.1.20 - 2013.3.16													188			ļ									T	Γ				П		П		T	
8 Mr. MIYAMOTO Toru (1)	Veterinary Public Health	2013.2.24 - 2013.4.20												-	2	9 76		***************************************																П	П	T	Γ
9 Dr. ANRI Akim	Clinical Dingnosis	2013.6.9 - 2013. 8.3																Sections	1									П					T			T	
10 Dr. SHIRAFUJI Hironki	Serologici Dingnosis	2014.1.12 - 2014.3.20																									T		П				Τ	П		T	
11 Mr. MIYAMOTO Toru (2)	Veterinary Public Health	2014.3.2 - 2014.3.22																							27.44							T				1	
12 Dr. KOBAYASHI Soan (3)	Veterinary Epidemiology	2014.3.9 - 2014.4.12																	-							1548.00		П	П	T	Γ		T	П			Γ
3 Mr. OKADA Motohico (1)	Laboratory Facility Maintenance	2014.8.24 - 2014.9.2										I							-			L						Γ	-	200							
Dr. TAGUCHI Masaji	Comprehensive Diagnosis	2014.8.24 - 2015.1.24																	-								-				1	No.	10000	П		T	
S Mr. OKADA Motuhiro (2)	Laboratory Fecility Maintenance	2014.11.16~2014.12.2																										П					T	П		T	
16 Mr. OKADA Motohiro (3)	Laboratory Facility Maintenance	2015.1.18 - 2015.1.30			I																											PROSESSES.	K. S.	П	T		П
17 Dr. TAKAHASHI Yuji	Biochemical Diagnosis	2015.1.18 - 2015.3.14			T				T										T		T	Γ		Ī			T				П	7. 表表					





(2) Results of Experts' Activities

	g-(erm)	Intell	Organization	Results of Activity
	Or. KISHIMA Masata	Field Chief Advisor / Animal Health Administration	National Institute of Animal Health, Japan	< As a Chief Advisor > 1) Started the seminor in DIC Subang, 2) Made report meeting at DGLAHS at the end of the period of short-term experts, 3) Made an action plan in pilot sites, 4) Made a study of how to collect diagnostic material. 5) Advised on the efficient operation of active surveillance, 6) Third-country training in Thailand, 7) Attended meetings < As a Expert of Bacteriology > 1) Introduction of the basic concepts for the implementation of diagnosis of animal diseases and surveillance, 2) Isolation and identification of pallogenic agents from the specimens collected from the field, 3) Isolation of bacteria and mycoplasmas from organs of chicken collected from the field continuously, 4) System for the storage and management of isolated bacteria strains, 5) Introduction and manufacture of materials, required for the diagnosis of bacterial diseases of livestock
2 [Or. KOIKE Ikuo	Veterioory Dingnosis / Epidemiology	Unaffiliated	< Techiniques related to the diagnosis of viral disease > 1) Transfer the diagnostic techniques of viral disease, 2) Transfer the techniques of isolation and identification of virus from the diagnostic samples
41.	vir. MAEDA Yasuyuki	Coordinator / Animal Health Information	лса	Coordination to implement the project > 1) Administration, 2) Budget management & procurement, 3) Accounting, 4) Equipment provision, 5) Management of Project progress, 6) Coordination of Project Monthly & Quarterly report, 7) Arrangement for short-term expert disputch, 8) Arrangement for counterpart training in Japan and third country, 9) Arrangement and coordination of diagnostic seminar in DIC Subang, 10) Other arrangement. 11) Coordination of inhouse diagnostic seminar, 12) Coordination with related organization, 13) Establishment of internet environment & Web site of DIC Subang, 14) Making project leaflet, 15) Project baseline survey, - Research on the current diagnostic situation, -Research on the field disease situation, - Training demand of the stakeholders

(short-term)		15	The state of the s
No Names	Field	Organization	Results of Activity -
1 Dr. SHIBAHARA Temoyoki (1)	Pathological Diagnosis	National Institute of Animal Health, Japan	<necropsy, (he="" and="" basic="" histopathology,="" making="" method="" observation="" of="" sections="" staining)="" theory="" tissue=""> 1) Handling of animals, 2) Method of blood collection, 3) Autopsy techniques, 4) Sampling, 5) Macroscopical photography, 6) Recording, 7) Trimming, 8) Tissue processing, 9) Embedding, 10) Making sections, 11) HE staining. Special stains (Gram stain, acid-fast stain, stained Grocott's stain), 13) Immunohistochemistry (avian influenza), 14) Mounting, 15) Using a microscope, 16) Microscopical photography, 17) Creating a presentation, 18) Methods of the output, 19) Presentation, 20) Writing a paper</necropsy,>
2 Dr. KOBAYASHI Sota (I)	Veterinary Epidemiology	National Institute of Animal Health, Japan	Introduction and survey to select the pilot site canondale farm by epidemiological technique > () Investigation of needs in epidemiology lab - Environment of pilot site - Facility / capacity in the lab - Technical issues, 2) Setting up of the grand design on the activities for coming years cooperating with team members, 3) Role of epi lab so far, 4) Member's needs, 5) Surveillance in future, 6) Experience of data analyses, 7) Next action for brucellosis, 8) Principle of epidemiology, 9) Evaluation of diagnostic tests, 10) "R" was installed in the PC in epi lab, 11) Some basic data analyses, 12) Reference documents to start self-learning, 13) Paper reading started, 14) Somiole size for the prevalence estimation, 15) Random sampline technique by sorcadsheet.
3 Dr. MAYSUBAYASHI Mokoto	Diagnosis of Parasitic Disease	National Institute of Animal Health, Japan	Techniques to examine cryptosporidium parasites in the feces and making poper for international journal > 1) Floating methods using sugar for the diagnosis of intestinal parasite, 2) Sedimentation methods, 3) Floating methods using NaCl, 4) Identification for Nematoda and Cestoda eggs, 5) Detection and identification of protozoan coysts, 6) Iodine staining of protozoan cysts and its identification, 7) Counting number of cocysts, cysts, and eggs of parasites, 8) Taking pictures of cocysts, cysts, and eggs of parasites, 9) Measuring of cocysts, cysts, and eggs of parasites in diameter, 10) Immunefluorescent staining using specific monoclonal antibody, 11) Identification of Trenatoda eggs, 12) Histopathologocal diagnosis of intestine infected with protozoa, 13) Collecting samples in livestock fields, 14) Summarization of sample information
4 Dr. MIKAMi Osamu	Pathological Diagnosis	National Institute of Animal Health, Japan	< Introduction of special staining methods such as specific immune staining method and observation techniques of tissue sections > 1) IHC (specific detection of influenza A virus in chicken), 2) Grant staining (Hucker-Conn method), 3) Ziehl-Neelsen staining, 4) Löffler's methylene blue staining, 5) PAS reaction, 6) Masson's trichrome staining, 7) Berlin blue staining, 8) Rapid embedding method, 9) Decalcification method (preparation of bone sample), 10) Necropsy procedure, 11) Sampling procedure for histopathological examination, 12) Sampling procedure for BSE examination, 13) Trimming procedure for brain (mammal and chicken), 14) Embedding, 15) Sectioning, 16) H&E staining (adjustment of automatic stainer), 17) Knowledge necessary to histopathological diagnosis, 18) Basics of presentation







No	Names	Field	Organization	Results of Activity
5	Dr. KOBAYASHI Sola (2)	Veterinary Epidemiology	National Institute of Animal Health, Japan	< Training and the transfer of the basic theory of epidemiology, Seminar on veterinary epidemiology, Data collection system on brocellosis surveillance, Sampling methods and procedures, Data analyzing method, Pilot site activity planning> 1) Transferring techniques in epidemiology, - Knowledge & techniques, - Collection of the prior information, - Data analysis on the specific software (SPSS & R) 2) Support on planning and implementation of the activities for the pilot sites, - Database preparation - Activity plan in Banten & Jakarta, - Drafting questionnaire for Banten province, 3) Training course on veterinary epidemiology and data analysis for the participants from all DICs and B/C type labs in West Java area (2 weeks)
6	Dr. FUJISAKI Kozo	Diagnosis of Parasitic Disease	Unaffiliated	Diagnostic techniques on Theileria disease and chicken Leucocytozoonosis, Observation of protozoa in the blood smear, Detection of antibodies, Anatomy of nites for the sample preparation of PCR methods. 1) Diagnostic techniques of leucocytozoonosis in chicken by Giemsa staining of blood smears and serological methods, 2) Collection of blood from chicken for determination of leucocytozoon parasites in the blood and the presence of antibodies, 3) Diagnostic techniques of theileriasis in cattle by Giemsa staining of blood smears and PCR technique, 4) Dissection of ticks under dissecting microscope for preparation of specimens for PCR.
7	Dr. SHIBAHARA Tomoyuki (2)	Pathological Diagnosis	Nutional Institute of Animal Health, Japan	Improvement of theory and techniques related to the pathological diagnosis: HE staining and immunostaining, Special staining and positive control production for immunohistochemical staining, Sample collection method for BSE diagnosis > 1) Diagnostic criteria (OIE standard), 2) Handling of animals, 3) Autopsy techniques (cattle, goat, pig), 4) Sampling, 5) Macroscopical photography, 6) Recording, 7) Trimming, 8) Improved dissue processing, 9) Embedding 10) Making sections, 11) HE staining, 12) Special stains (Improved Gram stain and noid-fast stain), 13) Immunohistochemistry (e.g. Salmonellosis, infectious bronchitis), 14) Method for producing the positive control (e.g. Salmonella O4, O9 and Avian influenza), 15) Mounting (AEC), 16) Using a microscope, 17)Microscopical plutography, 18) Creating a presentation, 19) Methods of the output, 20) Presentation, 21) Writing a paper (Indonesian Journal of veterinary pathology (IVP) (Jurnal Patologi Veteriner Indonesia)), 22) Method of creating manuals
8	Mr. MIYAMOTO Toni (1)	Veterinary Public Health	National Institute of Animal Health, Japan	< Analytical techniques of residual pesticides and antibiotics in livestock products using high-performance liquid chromatography (HPLC)> 1) Basic theory of Chromatography, 2) Basic theory and basic operating procedure of HPLC, 3) Basic theory and basic operating procedure of GC, 4) Basic theory and basic operating procedure of GC, 4) Basic theory and basic operating procedure of GPLC, 3) Basic theory and basic operating procedure of GPLC, 3) Basic theory and basic operating products using HPLC, 6) Analytical method for organization posticides in animal products using GC, 7) Validation method for analysis, 8) How to arrange data and to make reports, 9) How to make presentation
9	Dr. ANRI Akira	Clinical Diagnosis	Unattifiated	< Transitering techniques of bacteria culture in milk that is necessary to mastitis control of cattle > Survey of current status and issues of mastitis control measures in the pilot site, 2) Transfer of bacteria examination techniques in milk necessary for mastitis control, 3) Conducting seminars on mastitis control for dairy farmers, 4) Making "Monural of mastitis control for entite" (Indonesian)
10	Dr. SHRAFUJI Hiroaki	Serologici Dingnosis	Mational Institute of Animal Health, Japan	< Culture techniques of cell lines, isolation of arboviruses, identification of virus by genetic test, antibody testing by neutralization test > 1) Cell culture, 2) Virus isolation, 3) Virus isolation and identification, 4) Antibody test (neutralization test), 5) Pilot surveillance of arbovirus, 6) Seminar on arbovirus infection
11	Mr. MIYAMOTO Toru (2)	Voterinary Public Health	National Institute of Animal Health, Japan	< Transfer the detection (echnique of hormone (Trenbolone) remaining in the beef and eattle liver> Aquiring techniques of analysis of the residual hormone (Trenbolone) using HPLC, 2) Verification and improvement of measuring techniques and protocols
12	Dr. KOBAYASHI Sota (3)	Veterinary Epidemiology	National Institute of Animal Health, Japan	< Transfer the Epidemiological concepts, theory, method, Brucellosis surveillance and abortion surveillance, sampling method, Data collection and analyzing method> Analysis of risk factors on feeding management related to abortion occurrence of buffolo in Bonten, 2) Formulated the abortion surveillance plan for the dairy cooperatives in West Java, 3) Hierarchy structure of diognostic reporting system of DiC Subang. 4) Statistical analysis techniques
13	Mr. OKADA Motohiro (1)	Laboratory Facility Maintenance	Nihon Sekkei, Inc.	Investigation of current situation of Laboratory Facility Maintenance in DIC Subang, Medan and Lampung > 1) Confirmation of maintenance staff (educational background and experience), 2) Situation of equipent management, 3) Implementation status of funigation, 4) Exchange status of HEPA filters, 5) Utilization status of manuals and dawing, 6) Confirmation of issues reported b the project
14	Dr. TAGUCHI Masaji	Comprehensive Diagnosis	Unaffilialed	< Technical transfer of comprehensive diagnosis especially for the viral disease> 1) cell culture techniques, virus isolation and neutralization test, 2) Implementation of abortion surveillance in terms of the viral disease, 3) Abovirus isolation, 4) Akabane virus neutralization test, 5) Research on prevalence of Akabahe virus antibody in West Java Province, 6) Recomendations on comprehensive diagnosis in DIC Subang





Ne	Names	Field	Organization	Results of Activity
Γ	Mr, OKADA Motultiro (2)	Laboratory Pacility Maintenance	Nihon Sekkei, Inc.	Conduct training on Laboratory Facility Maintenance in DIC Subang, DIC Medan and DIC Lampung (Air conditioning, Automatic control system, Funnigation and HEPA exchange) > Adjustment of air volume balance in BSL Lab, 2) Formalin funnigation, 3) Exchange of HEPA filter, 4) Training by contractors, 5) Training by manufacturers
10	Mr. OKADA Motohiro (3)	Lobountary Facility Maintenance	Nihon Sekkei, Inc.	Conduct training on Laboratory Facility Maintenance in DIC Subang, DIC Medan and DIC Lampung (Air conditioning, Water supply and drainage, Water treatment system and Generator) > 1) Training and repairing of the air conditioner, 2) Failure check and training on wastewater treatment system, 3) General training on plumbing system, 4) Improvement of air filters in Poultry House, 5) Checking failure of ATS equipment, 6) Award the Training Certification, 7) Hearing of training outcomes
17	Dr. TAKAHASHI Yuji	Bjochemical Diagnosis	National Institute of Animal Health, Japan	< Transfer the techniques of Biochemical diagnosis > Transfer the biochemical diagnostic technique using a spectrophotometer and ELISA reader, 2) The mesuring method of serum component (Albumin, ASAT (GOT), Bilirubin, Cholesterol, Gamma-GT, NEFA, β-Hydroxybutyrate (Ketone body), Ca, Mg, P, method of measuring Urea), Application of biochemical diagnostic techniques in abortion surveillance of entite



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(1) Counterpart Training In January

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Annex 6

/	(1)	Counterpart Training in Japa	313					11 Lewinset of Temper T11 cetts				
		Name of Consistrant	Field to charge	Name of training Course		Tradulus.	Supporting	Remarks	2011	2012	2013	2014 2015
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/	1	Dr. Sztriyo Setyo Utomo	Staff of Epidemiology Laboratory, DIC Subarre	Zomotis Control kt/Japan	2011.8.15	2011.9.15	IICY	Hottaido University	超			
	12	Dr. Ali Rohnswini	Staff of Bacteriology Laboratory, DIC Sakons	Zoonoris Control in Japan	2011,8.15	2011.9.15	JICA	Holdwide University	88			
	3	Dr. Pinto Sukoco	SIET of Pales beg Laboratory, DIC Subarg	Research on Veteriumy Tecknology in I apar	2010_3.16	2011.10.15	IICA	NIAH				
	4	Dr. – Isrok Malikus Sufi	Staff of Bioleclasology Laboratory, DIC Surana	Research on Veterinary Technology in Japan	2010_3.16	2011.10.15	lica	NIAH	888			
	5	Dr. Bagymingsyas Anggovowaki	Head of Bacteriology Laboratory, DIC Subara	Research on Veterinary Technology in Japan	2012.3.27	2012-10-27	NCA	HIVK				
	6	Dr. Trian Molassas	Siaff of Virology Laboratory, DIC Suburg	Zacanniks Central In Japan	2012.8.12	2012.9.13	JICA	Hokknido University		接		
	7	Mr. Afif Ibrahim	Sinflof Variety Laboratory, DiC Subung	Zeonosis Cerarel in Japan	2012-8.12	2012.9.13	JICA	Hokknido University				
	s	Mr. Guswzulo	Staff of Trickle Health Laboratory, DIC Subare	Advanced Research Course on International Animal Health	2012.10.22	2013.8.24	JICA	Obidiro University of Apriculture and V.A.				
	9	Dr. Suryo Pameno Edi	SETT of Scrology Laboratory, DIC Schools	Research on Veterinary Technology in Japan	2013.3.27	2013.10.30	JICA	HLAH			e singular	
	19	Dr. Pixilk Allamanda	Staff of Public Health Laboratory, DIC Submit	Advanced Research Course on International Animal Health	2013.10.22	2014.8.22	11CV	Oblisiro University of Agriculture 2014 V.M.				
	11	Mr. Eka Mahpedin	Staff of Palishery Laboratory, DIC Strong, Treasure Dation Rept Contact (1): DIC	DESCRIPTION OF THE PROPERTY OF	2014.2.2	2014.1.26	JICA.	NIAH				
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	и	Mr. Afff Herzbin	Staff of Viralogy Laboratory, DIC Subarg.	Training on Veterinary Diagnosis for Presenties	2015.1.18	2015,4.11	IICA	NIAR				
	15	Mr. Lukum	Staff of Biotechnology Laboratory, DiC Subarte	Training on Veterinary Diagnosis for Parametics	2015.1.18	2015,4,11	JICA	HAIM				
	16	Dr. Aprizal Panus	Staff of Epikeratology Laboratory, DIC Seleme	Research on Veterkery Technology in Lyan	2015.3.29	2015.10.31	IICA.	HAH				

(2) Counterpart Training in Indonesia and Third country From To Supporting
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Requirest (CCTF) Name of trataing Course Remarks Name of Counterpart Fieki in charge Disposed of Aviza Miluster & Source in 2011.10.7 2011.10.31 I Dr. Suryo Pumosno Edi Staff of Services Laboratory, DIC Subsus Southeast Asia Reniss in Afabraia Training on olograssis & surveillance of Staff of Batteriology Laboratory, DIC 2012,5.29 2012.6.7 4 Dr. Ali Ralmawau JICA Staff of Epidemioogy Laboratory, DIC Bracellosis in Thedaski Training on diagnes is de surveillance of 2012.5.29 2012.6.7 JICA 5 Dr. Witnakını Sodis Bracellosis in Theiland

(3) Seminars, Workshops or Trainings conducted in Indonesia (More than 2 days)

N	Name of Traince	Venue	Name of training Course	Теги в	Training	Suldintina	Remarks			2011					1912					25	113					2914		-	21	* 15
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2	Dr.Putot, Dr.Aji	Head Section of Veterinary Information.	Triming on Zoonesis Disease and Bio- enfety (Jakasta)	2011.9.5	2011.9.9	Indonesian Government			18.2										Π		П		T			П		П		П
,	staff in DIC Subarg and 3 provinces	Ciater, Subang	Coordination Meeting of Animal Health	2011.9.12	2011.9.13	ludonesiwa Governanea	T 59, LT 7 (Prof.Drit. Set)awar Buddanta, AIPIL Pl.D. et al.)		AND REAL PROPERTY.								•										-			
4	Haff of Parasitology Inb in All DICs	DIC Surbourg	Miseting for Improvenient of competence of Pannitology Laboratory	2011.10.27	2011.10.30	ludoserien Government	T-40, LT 1 (Dr.Dd. Uzci Chlywingsil, AlS)		24.0.24.1.24.																					
5	staff of DIC Subseq and DINAS		Coordination Meeting of Animal Health and Veterinary Public Health in DIC Subang converses area	2011.11.7	2011.11.9	Indonesiaa Government	T75, LT4 (Drh. Kornia Adğadi, MS, et al.)			1452																				$\prod_{i=1}^{n}$
6	staff in DIC Sulvang and 3 provinces	Cinter, Sutrang	Coordination Meeting of Veterinary Public Health	2011.12.13		Indonesian Government	T40, LT S (Drh. Ewing Ekowati, et al.)			184% p. 17					-													П		П
7	all staff in DIC Solving and participant in DIC coverage area		Annual meeting of Subang DIC and Stakeholder in DIC coverage area	2011.12.19	3011.12.21	Sadenesias Governous. NCA				1000																				
s	all staffin DIC Subang	DIC Salons	Biosufety Training in DIC Sulvang	2011.12.26	2011,12,28	Indonesian Government				40.00																				П
\$,	all staff in DIC Subseq	DJC Solong	lu-house Training Workshop on principles & Practices Biosafety	2012.1.9	2012.1.16	Indonesiaa Government					100																П	\prod		

Νo	Name of Counterpart	Fickl in charge	Name of Indular Course	From	f Training To	Supporting Organization	Remarks	177		2011 Male	1117	13/4	3 6	7 6	2012 -111	11 12	नान	7	राज		2013	11 12		. l.	ar:	त्रज्ञ	211	4	1
10	Haff of Palesbery lake in all DICs	DIC Salvesg	Veterinary Pathology Workshop and National Scientific Meeting XI	2012.3.25	2012.3.31	Indencian Government	T 70, LT 5 (Drh DAR) Dierre, M.Sc., Ph.D. et al.)	П	Ħ		1	107	H	Ť		T		1	1	11	Ť	ΪŤ	+	ďΞ	Ħ	Ħ	Ħ	T	-
	Dr. Isrok and Dr.Aji	Bali	Asia Pacific Biosafety Confference & Workshop	2012-1-24	2012-1-27	Internas Governos, IICA		П	П	П	П	100	П			1	\parallel			T			+		$\dagger \dagger$	Ħ	Ħ	\parallel	1
12	Dr. Soomun and 40 Pautequal from Animal Health Centers	Ciarr. Subang	Coordination Meeting with Heal Hall in	2012.5.14	2012.5.15	ladatemas Gornmand, RCA	T.50, LT 7 (Urot, Dr. Date brown Standardson of al.)	lt	††	11	#	- 4	5	-1-	\forall	- -	++	╁	+1	-	- -	ŀΗ		H	+	H	11	+	7
	staff in DIC Subang and DIHAS. B'C type labs	DIC Sulvare	DIC Concerns. Training of human resource improvement for field and laboratory staff in DIC Subara concerns; area	2012.5.22	2012,5,25	Indonesian Government	T39, LT4 (Orle Susses M Nocce et al.)		Ħ	Ħ	Ħ				T						\parallel	\parallel			Ħ	Ħ	Ħ	1	Ì
14	off DICs in Indonesia and DINAS Animal Health Services	DIC Salvang	Laboratory Competency Improvement meeting for Diotechnology laboratory	2012.5.29	2012.5.31	fadonosion Government	T.M. UT 2 (Dr. Dels IGN Mahmika and Dels Adjic. ALSI)	\prod	Ħ	Ħ	\dagger		100			П	+	Ħ		Ħ	+1		- -		\dagger	\parallel	+	\dagger	1
15	Dr. Sariye, Dr. Sodik and 20 panlelpans from other DICs & BC types labs	DIC Subratg	Training Course on Veterinary Epidemiology and Data Analysis in DIC Subang (Dr.Kobayashi)	2012,6.18	2012.6.29	JICA	KLŞLJ						1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1																
16	Dr.Sodiem, Dr.Risto, Dr.Suryo, Dr. Summo, Dr.Brok, Dr.Kolke	Vegyakasia	Rupat Teknis dan Pertembas Ilmiah Kesebalan Bewan	2012.6.20	2012.6.22	DOLAHS		Ħ	Ħ	Ħ	\Box	П		П	Ti	11	11	1	7	71	+			Π	\dagger	Ħ	1	+	1
17	all staff in DIC Sulvang	DIC Subang	In-Jourse Training Identification and Deepening of SHI/IEC 17025/2008	2012-9.17	2012-9.19	loderarias Government, NCA									A STANCE OF THE	manufactor manufactor													-
13	staff from DIC Subarya, BIB Lembarya BET Cipelang and BP211K Cikule	DIC Subraig	Parasiology seminar lectured by Dr.Emisaki	2012.10.12	2012,10.12	IICA		П	П	П		П	П	\sqcap	Ç,	П	П	77	Ti	71	П	П	П	ſΓ		П	Π	11	1
19	rki staff in DIC Sulvang	DIC Subang	In-house Training for SNI I ISO 9801:2003	2012,10,29	2012.11.1	kalancias Covernosa. RCA	T-17, LT 1 (Air. Roitsan Shokang, AGA1)				Ħ				57875											\prod	\parallel	Ħ	1
	ali staff in DIC Salvang and participants in DIC coverage area	Bandung	Armed Coordination Meeting of Antrust Health and Veteriner Public Health	2012.11.7	2012.11.9	Indonesian Government, JICA				\parallel				7	Ï										T	П	П	Ħ	1
	nii DiCs in Indonesia and DINAS Animal Heddit Services	DIC Sulvang.	In-house Training Centrel and Prevention of BSE and FAID in Indonesia	2013.2.19	2013.2.20	Indeperion Government, JICA					T			11				T		$\uparrow \mid$				- -	1	Ħ	\parallel	Ħ	1
221	Asianal Healfu Services of Hartes Province and Districts, B type lak, Dr.Praut, Dr. All, Dr.Salriya	Servig	Workshop for Brucellosis surveillance in Busten province	2013.4.1	2013.4.2	Provincial Government, Indonesian Government, JICA			T	\parallel				1	T				1	1					\parallel	\parallel	\parallel	Ħ	†
23	stall in DIC Subang. B type labs, other DICs	DIC Subsus	hafelata Weetutop	2013.7.22	2013.7.26	la-kesesian Gerenana), JiCA	T41. LT I (Dr. Socgčenka, DVAL FaD)			П										A District									Ī
21	RAIT IN DIC SWEAR AND DINAS, B type lake, Dairy everyemities, BRPTUSPR, BBPAISON, DID	DIC Subarg	JICA Short-term Expert's semiour - Current Concept and Practice on Martinic Control (Dr. Juni)	2013.6.14	2013.6.14	лса	T-10		Ì					\prod			T	Ħ	M				\parallel			Ħ	Ħ	\parallel	†
	etaff in DIC Subaug and 3 provinces	Clater, Subaug	August Coordination Meeting for Assistal Health, Public Health and Assistal Health Center in Beaut	2913.9.17	2013.9.19	helecesiza Government, JICA	T 170, LT 2 (delt M. Azkur, ProC Dr. delt. I Wayne Tegsik Wilstward									П			П		37,128						П	T	1
26	all staffer DIC Substag	DIC Subang	Training of Internal Audit for ISO 9001	2013.[0,23	2013.10.25	kalenesias Gorensons, JICA	T40. LT2 (Drh. Sri Bistary Kusumowindon, klSi, Scriet Synnabak)														\$250,550								
27	stoff in DIC Sulvang. B. C type labs and Puskerman	DIC Sultang	Training on Parasitic Disease Diagnotis	2013.11.12	2013.11.14	Erdenesias Gavernment	T30, LT2(88AL/TVET)				-									П		(N. Laweren							
	elaff in DIC Subscag. B, C type ists	DIC Subsute	Training on Sangeling & Hecropsy of Arian and Russianat livestock	2013.11.25	2013,11,27	koloniska Gaveraneas,	T25, LT1 (DrhD.M.N Disania, M.Sc., Pl.D)	П							Ţ				\prod	П					T			Ħ	Ī
ادا	naff of Paliology Laboratory in DIC Subsug	DIC Subsug	Training on Pathylogical Diagnosis by Local Expert	2013.11.25	2013.11,29	яса	T J. LT I (Dik DALN Diama, ALSe., Fa D)								,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,										П	П	П	П	
30	livge-scale fami, stamphenhouse, livestock market, field veterinaries, dainy cooperative	DIC Subang	Livestock feature in String district (Creative Communication Meeting)	2013.12.11	2013.12.11	Edwarian Gavennungs	T 60, LT 1 (Saleng District)															450.07							
3t	DBIAS DAT Jahata, D-type Lab, System & Subang	Jakana (Pendok Rangen)	Westelop for Bracellods suvellince in East Jahren	2013.12.13	2013.12.13	hxkratsian Government	T.U., LT I (Dris Paramsersię, KPSOU)												-			3.62							
32	Dr.Sunanin, Mr.Lukaian, Siaff Inon all DICs	DIC Subarg	Refresher Training on PCR	2014.1.27	2014.1.30	PAO	T25, LT2 (FAC: Dr.Chrimmini dul)																S. Carrier						
	est in DIC Subare, Basten www.nce.and.districts	СПерен, Панен	Coordinates Meeting for Asimal Health in Barres Province	2014/4/29	2014.4.30	lukrusian Governmet. NCA	Tien, Lie ideel abendeen Palkata, 1844, 18 D. (1960). Cellen Doody (1870). Et Jesé Washan, 8178, 1450, 1410 (1804).																	Jan Selly					
	deff in DIC Subarg and 3 workers	Tangerang, Bindru	Assual Coordination Meeting for Assurat Health and Public Health	2014.5.20	2014.5,23	Endonesian Government, JICA	t 19, lita divalab Copusa Polikata, 1891, 18 D-QURG, Prime Scape (URG, Dr. 45 I Wym 19, 24 Websia (Tralityei), Cr. Politski Bolthalityei),															\prod							





ſ	No	Name of Counterpart	Field in charge	Name of training Course		Training	Supporting	Remarks			2611		\mathbf{T}			2017						201			Т			914			2015
				,	From	To	Organization	Remarks		2 10	111 13	112	3 .1	3 4	770	2 10	110 12	1 2	1717	नगर	ान	2 3	n in i	ılz	314	5 4	2101	Telli	121 1	217	Gian
, [35	REPTROCE DROWN, TORT INCS	DIC Subwig	Workshop of Toxicology in 201-1	3014,3,18	2014.9.22	Indonesian Government	T21, LT2 (IPD)	IΠ	П	П	\Box		П	П	1-1-	11		П	11	17	77	11		-1-1		131	1-1-1	11	#	1111
		nd I in DIC Subang, edler DICs ad I provinces	DIC Subaug	ToT tecinical training on Laboratory Field Liniuses	2014.9.15	2014.9.19	ใหร่งแดงโลง Government	T25, LT2 (FAO, DGLAHS)	П	П	П	77		П	П		П	П	\sqcap	Ħ	П	Π	$\dagger \dagger$	Ш	7		T	H	H	† -	
、I	37 FI	laff in Puskeswan		Surveillance Training for Puskeswarestaff	2014.10.27	2014.10.30		T 10, LT 2 (Fred Craft Tilym Toph Vil 2011, 15 (TB), 45 April Enterla, FM Fh In (U)Ali		П				П			П		П	П			T -				1	200		\prod	
}	15	faintennice staff in DIC Sukurg. DIC Medan and DIC Lampung	DIC Subarg	Propiettico Classics HEPA filette)	2014,11,18		nex	TIO, IICAI, LT2 (PT.Kioden, PT.Azbil)		П								T		П	Ħ	Ħ	\parallel		T		1	25025		T	
	39 1		Training Center in Bekani	TOT PURENTANA	2014.12.10	2014.12.14	Indonesian Government, JICA	T30, LT7 (IPB, UGA))	П	П		77	_	П	Π	П	П	T	\sqcap	Π	11	1	T	Ш	1	\Box	\top	H	計	††	
	- ("	Ininterrance staff in DIC Subarra. DIC Medan and DIC Lampung	DIC Suboug	(imerator)	2015.1.20			T10, SCAT, UTS (PEKinder, PEDakin, PEAnda Bira Chra)	П	П											П		П				\parallel			\parallel	
		nil of Parasitology Lab in Dic ubang and other 3 Dics	DIC Subrate	Research meeting on Pararilology and Joint Research in DIC Solome	2015.3.9			T15, Japanese expert 2 (Obibico Univ., Japanese Expert 2		П											\coprod	Ħ						-		lo.	

(4) Counterpart Educational Degree

No	Name of Counterpart	Dillo shares	Name of University	Period	of study	Place		
ao	tankse of Commedital	Field in charge	traine or University	Fren	To	ruce	Supporting Organization	Remarks
ī	Dr. Aprical Pares	Staff of Epidenkology Laboratory, DIC Substite	Bogot Agriculture University	2011.2	201-L10	Водог		Master Degree ht Graduate School
2	Dr. Iwok Malikus Sufi	Staff of Parasitology Laboratory, IXC Subma	Bogor Agriculture University	2014.1	2016.1	Boger		Marter Degree kt Graduate School
3	Dr. Surya Pantous Eth		Gajalı Alada University	2014.9	2016.8	Yegottoria		Master Degree is: Graduate School
4	Mr. Firmen Duk K.		Bolal Bear Pelatikan Kesebatan Hewan BRPKH Chapter Bosec	201-1.9	2016.8	Bagar		Bachelor Degree in University
5	Mr. Eka kteleptetin	Shall of Pathology Loboratory, DIC Subang	Boloi Besse Pelatilan Kerelatan Herran BBPKH Cimpura Bagar	20[-1,9	2016.8	Dogor	Indonesian Government	Bachelor Degree in Gaiversity
5	Mr. Duči Widi, And	Strictor	Balsi Berar Pelatihan Kerebatan Herran BBPKH Cinagara Bogor	201-1.9	20168	Gogor	kulonesias Government	Bachelor Degree in University
6	Mr. Gunano	Staff of Veterinary Public Health Laboratory, DIC Strians	Oblices University of Agriculture and Veterinary Medicine	2014.10	2017.9	Holdefido, Fapan		Doctor Degree in Graduate School
7	Ms. Katika		Universitas Diponegoro Jawa Tengalı	2614.9	2017,8	2वातज्ञाह		Master Drysee in Graduate School
s	Mr. Koner		Scholal Thegi llum Ekonomi Gotcog Russus Islania	2808.6	2012.9	Jakoria	ludracsicu Governmak	Bachelor Degree in University





Provision Equipment by the Japan side

Annex 7

(1) Major Equipment Provided by JICA (based on the A4 form or more than 5 million rupiah)

(1)1111101 134	I TOTAL OF VICES (Based of the Astronia of more than 3 mine	1						Maint		
Ref. No.	Item	s, Model, Specifications	QTY	Unit Price (Rp, S)	Amount (Rp. S)	Amount (¥)	Place	Oper ation	enanc e	Delivery	Remarks
F.Y. 2011	1		1					<u></u>	L		
PI 109281	Copy machine	SHARP MX-2301N		44,750,000	44,750,000	386,282	DIC Subang	Α	٨	28/09/2011	Project Office
P11112401	Desktop PC	HP Pro 3300	4	\$965	\$3,860	304,274	DIC Subang	A	Α	24/11/2011	Project Office, Parasitelogy, Bacteriology, Pathology
P11112402	Notebook PC	Lenovo Thinkpad L420	2	\$930	\$1,860	146,619	DIC Subang	A	Λ .	24/11/2011	Project Office, Epidemiology
P11112403	Color Printer	Canon Pixma MX886	4	\$350	\$1,400		DIC Subang	Α	Λ	24/11/2011	Bacteriology, Epidemiology, Administration, Pathology
P11112404	UPS	Ica CKE1200	4	\$37	\$348	27,432	DIC Subang	Α	A	24/11/2011	Project Office, Parasitelogy, Bacteriology, Pathology
P11112405	Server	Hp Compaq Preliant ML350	1	\$3,150	\$3,150	248,306	DIC Subang	A	A	24/11/2011	Maintenance
P11112406	CCTV	Sony SSC-N20	8	\$165	\$1,320	247,124	DIC Subang	A	A		Majudenance
P11122801	Digital Video Recorder and Monitor for CCTV	GANZ DR8H-DVD	1	\$1,815	\$1,815	247,124	DIC Subang	Α	Α	28/12/2011	Maintenauce
P11120701	Vehicle	DAIHATSU Terios TX-MT-MC	1	188,100,500	188,100,500	1,623,684	DIC Subang	A	Α	07/12/2011	Project Office
P11120702	Digital Camera	Panasonic Digital Camera LUMIX DMC-FPI	4	1,391,000	5,564,000		DIC Sobang	В	В		Project Office
P11120703		Sony Handycam Camcoder HDR CX130	1	5,457,000	5,457,000		DIC Subang	В	В		Project Office
P11121901	ELISA Reader	THERMO Multiskon EX Blisa System Work Station	i	104,592,500	104,592,500	<u>-</u>	DIC Subang	В	В	19/12/2011	
P11121901	GPS Terminal	GARMIN GPSMAP 62s	4	4,173,000	16,692,000	.,	DIC Subang	В	В		Project Office, Epidemiology
P11121902 P12032901	Microscope CCD camera and	Nikon NI-U, DS-Fi2-U3		228,400,000	228,400,000		DIC Subang	\ \(\bar{\lambda}\)	A		Pathology Lab
P12022301	8 channel Propetor 20-200ul	CMSL C200 - 8A-SL	3	6,412,400	19,237,200		DIC Subang	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	A	23/02/2012	
P12022301 P12031901	Vacuum pump	Membrane solution: VP10332	lii	9,625,000	9,625,000	95 903	DIC Subang	В	B	19/03/2012	
P12031901 P12032701	Sikle Staining Set	Finetek 4451	i i	8,325,000	8,325,000	74.301	DIC Subang	В	В		Pathology Lab
F.Y. 2012	DIRGO CRAININE COL	2 1504-01. 114-3	J1				in the contract				11
P12050401	SPSS	IBM SPSS Statistics v.20	7	33,646,500	33,646,500	300 205	DIC Subane	В	В	04/05/2012	Epidemiology Lab
P12050301		Mitsubishi Pajero Sport 4GX 4WD MT		458,000,000	458,000,000		DIC Subang	l ~	Ā		Project Office
P12050301	Centrifuno	TOMY LC-230	\Box	135,543,000	135,543,000		DIC Subang	Ā	A	22/05/2012	Parnsilology Lati
Pt 2052202	Autoclave	TOMY ES-215	1	45,928,500	45,928,500	409.912	DIC Subang	Ā	A	22/05/2012	Bacteriology Lab
Pt 2052901	Cliest Freezer	Nihon VT-208 & TN-208		91,491,000	91,491,000	816,557	DIC Subons	A	Α	29/05/2012	Bacteriology Lub
P12071001	8 channel Pippetor 20-20001	CMSL C200 - 8A-SL	1	6,412,400	6,412,400		DIC Subang	Λ	Α	10/07/2012	Parasilology Lab
P12100401	Robbit Retminer	Natsume KN-317		6,470,625	6,470,625	57.750	DIC Subous	В	B		Bacteriology Lab
P12110601	UPS for Thermal Cycler	APC Smort UPS 1500VA & Serial 230 Volt type	1	5,950,000	5,950,000		DIC Subaug	В	В		Bacteriology Lab
P12111201	Thennal Cycler	Bio-Rad T100	1	\$2,000,000	82,000,000	681,174	DIC Subang	В	В	12/11/2012	Bacteriology Lab
P13012501	Refrigemted Micro Centrifuge for PCR	Tomy MX-107	1	145,000,000	145,000,000	1,290,355	DIC Subang	В	В	12/11/2012	Bacteriology Lab
F.Y. 2013											
13-3-001483	Stabilizer for Safety Cabinet	MATSUYAMA AVR-KD-2GS	1	5,600,000	5,600,000	54,432	DIC Subang	Α	_A	11/04/2013	Bacteriology Lab
13-3-001480	Grass Chopper	ITB		9,000,000	9,000,000		DIC Subang	A	Α		Experimental Animal
13-3-001481	Mupid-exU	Mupid (Advance)	1	7.300.000	7.300,000		DIC Subang	В	В		Bacteriology Lab
13-3-001482	Fune Hood	2150x740,5x1050	1	38,115,000	38,115,000	328.056	DIC Subana	<u> </u>	A	20/01/2014	Pathology Lab
F.Y. 2014											
14-3-001484		signa-Aldrich Z675733-1EA Eyela 1000-S	لبا	16.300.000	16,300,000		DIC Subang	Α	Α		Virology Lab (Cell Preparation)
14-3-001485	Differential Pressure Gauge	lesio 510	1	5,100,000	5,100,000		DIC Subang	В	В	06/11/2014	Мяйненопсе
14-3-001486	Formalin Funigation Sterilizer	BIOBASE FX-100	3	5,400,000	16,200,000	145,395	DIC Subang, DIC Medan, DIC Lampung	В	В	20/11/2014	Maintenance
14-3-001487	Annuanium Hydrogen Curbonate Neutralizer	BIOBASE TZ-100	3	5,400,090	16,200,000	145,395	DIC Subong, DIC Medan, DIC Language	В	В	20/11/2014	Maintenance
	<u> </u>				n 1 015 (20 220	***********	apprilling				

Total Rp1,815,470,779 ¥16,833,045







* Classification of the frequency of use of the equipment (by the manual for JICA coordinators)

(by the manua	(or fic A coordinators)		
rank	statement	frequency	others
A	used frequently	almost daily	
В	used well	I-3 times per week	
С	used in specific season(s)		needs rensons
D	not so much used	3-11 times per year	needs reasons
E	not used by specific reason		needs reasons





Local Cost Implementation

Annex 8

(1) Indonesia Unit: Rupiah 2015 2011 2012 2013 Budget Rem 2014 Total Amount (budget plan) 420,510,000 2,564,753,000 3,446,591,000 3,356,988,000 3,614,822,000 1 Salary 13,403,664,000 75,240,000 1,602,833,000 1,633,363,000 1,716,677,000 1,517,273,000 Base salary for all stell 6,545,386,000 311,110,000 1,046,898,000 Additional salary for all staff 716,981,000 850,769,000 2,925,758,000 265,200,000 402,720,000 497,040,000 618,000,000 Payment for Outsourcing Staf 936,000,000 2,718,960,000 \$0,070,000 180,590,000 171,440,000 238,180,000 254,780,000 Operational fee for stall 925,060,000 Honorarium for lecturer 67,500,000 97,850,000 67,150,000 56,000,000 288,500,000 2 Staff training and capacity building 255,100,000 1,010,936,000 489,800,000 862,617,000 1,024,920,000 3,643,373,000 152,900,000 Administration 152,900,000 Technical (outside training) 407,300,000 407.300.000 450,736,000 Inhouse training 450,736,000 3,636,456,200,00 2,612,927,000.00 9,442,017,400.00 2,793,510,000.00 4,357,254,000 3 Consumable, Reagentia and Equipment 22,842,164,600 7,291,221,000 1,911,026,000 1.942.452.000 2,911,943,000 1,526,602,000 15,586,244,000 for Diagnostic for reagents and small instruments 3,681,569,600 1.893.526.400 1,307,968,200 165,075,000 95,000,000 215,000,000 255,000,000 232,000,000 305,800,000 For field surveillance 1,033,098,000 939,701,000 2,765,599,000 111,662,000 250,400,000 17,270,000 138,810,000 290,610,000 For Administration and biosecurity 808,752,000 334,400,000 431,450,000 800,385,000 874,700,000 1,596,500,000 4,037,435,000 4 Field survey 699,000,000 5 Utilities (electricity, water, etc) 420,000,000 558,490,000 591,600,000 707,400,000 2,976,490,000 468,000,000 570,000,000 523,200,000 540,000,000 2,101,200,000 Electricity Water 10,200,000 35,400,000 6,000,000 72,000,000 123,600,000 3,600,000 2,290,000 3,600,000 5,400,000 14,890,000 Newspaper 78,000,000 90,000,000 58,800,000 90,000,000 316,800,000 Telp and Internet 6 Equipment for others (Dormitory, Guest house etc.) 77,211,008 325,494,000 402,705,000 257,452,000 523,060,000 532,752,000 473.130.000 823,280,000 7 Uncilities maintenance 2,614,674,000 78,000,000 184,700,000 165,000,000 123,500,000 122,000,000 673,200,000 for Vehicles 6,480,000 7,560,000 7,560,000 13,080,000 34,630,000 for Motorcycle 179,452,000 331,880,000 360,192,000 342,070,000 693,200,000 1,905,794,000 for Building Facilities 450,000,000 37,500,000 487,500,000 3 Vehicles 66,960,000.00 112,560,000.00 52,080,000.00 130,560,000 9 Additional foud 33,252,000.00 395,412,000 36,960,000 36,960,000 18,252,000 22,030,000 66,960,000 for Laboratory technician 181,212,000 15,000,000 30,000,000 30,000,000 75,600,000 63,600,000 214,200,000 for Others 10 Computer and Equipment for office 65,000,000 200,000,000 15,000,000 280,000,000 3,227,634,000 1,120,810,000 1,131,284,000 855,171,000 1,275,946,000 7,610,845,000 1) Infrastructure (Building, Book, Furniture etc) 328,500,000 489,550,000 455,300,000 421,200,000 252,200,000 1,946,750,000 12 Annual Coordination Meeting and Confirmation Test 96,025,000 270,662,000 251,250,000 28,500,000 20,109,000 666,546,000 13 Other 600,000,000 000,000,000 14 Project Counter Budget (for Equipment) 000,000,000 000,000,000 2.400,000,000 11.101,249,000 10,969,976,000 14.407.991.000 63,707,558,600 15,407,101,400 11,821,241,200 Total Expenditure (Rp.) Grand Total (Yen) 131.515.018 101,331,680 435,752,115 96,380,600 106.024.818 Exchange Rate (December) 0.008536 0.008572 0.008727 0.009665

(2) Japan						Unit: Rupinh
Budget Hem	2011	2012	2013	2014	2015 (from Jan to Feb)	Total amount
1 General operating expenses	276,124,209	1,064,864,371	824,703,800	786,246, <u>3</u> 00	77.578.900	1,340,983,580
for reagents and small instruments	45,407,900	735,702,629	613,294,870	347,668,450	24,237,500	781.110,529
2 Air lares	1,615,000	22,037,900	7,646,300	62,321,400	5,501,300	99,121,900
3 Travel expenses (except airline fares)	26,650,000	84,913,800	\$0,401,900	120,196,000	31,496,800	343.568,590
4 Reward & compensation	13,630,000	93,640,100	105.854.900			399,088.500
5 Eneagements (local consultants)	<u> </u>		. 0	76.300.000	74,050,000	150,350,000
6 Engagements (local NGO)		0		0		0
7 Business agreement	0	0	0	0		0
8 Meeting cost	18,105,000	42,225,000	1,325,000	410.000		62,095,000
Total Expenditure (Rp.)	336,124,209	1,307,681,171	1,019,931,900	1,218,115,000	201.889.200	4,083,741,480
Grand Total (Yen)	2,869,156	11,209,443	8,900,946	11,773,081	0	34,752,626
Exchange Rate (Dec.2011, 2012)	0.008536	0.008572	0.008727	0.009665		

^{*} Total amount (2011) Indonesia: from Jan to Dec 2011, Japan: from Jul to Dec 2011



^(2012 - 2014) From Jan to Dec 2012

⁽²⁰¹⁵⁾ Indonesia: from Jan to Dec 2015 (Budget), Japan: from Jan to Feb 2015 (Actual)



Land, Building, Office and Facility provided by the Indonesia side

No.	Item	Place	Component
I	Project Office	DIC Subang	Office, Room, Desks, Chairs, Air Conditioners
2	Desks for experts in laboratories	DIC Subang	Desks, Chairs



List of Products

Annex 10

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6	Feb 2012	Annual Excess Frenchen Black Electron	Laftet	Contraction of the Contract of States	1600
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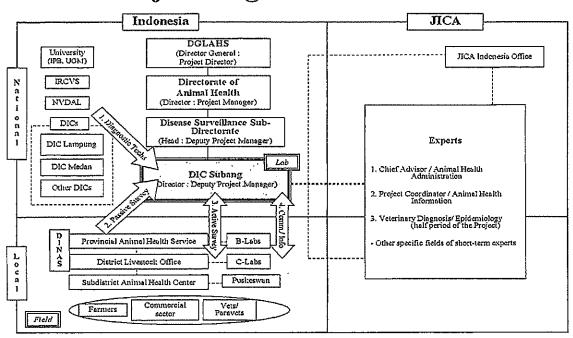


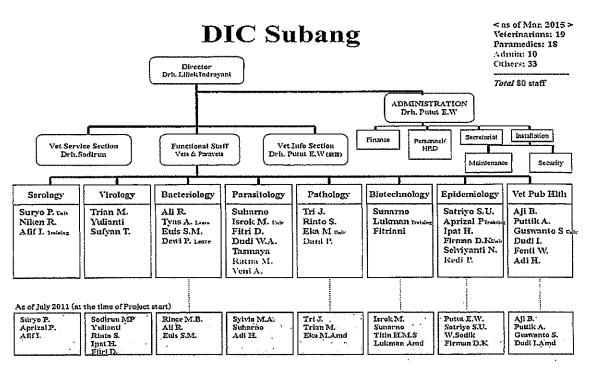
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Project Organization Chart









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Accon	nplishment Grid																		A 1	nnex 14
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	Outputs and Activities							7 I			W	I				ΙΙ		Progress	Issues / Plan	Accomplishment (%)
Output	The DIC Subang staff obtain basic and systematic diagnosis for animal diseases.					T	Т	7												
Activity 1-1	The Staff of DIC Subang surveys the current capacities and needs in the diagnostic techniques at DIC Subang.	Planned Actual	X O	œ														Conducted a baseline survey in DIC Subang and grasped the situation.	•	100%
1-2	Based on the results of the survey, the staff of DIC Subang sets the necessary diagnostic techniques (kind of disease, diagnostic method etc.) and a target levels of the techniques for each	Planned Actual	X 0	2000									!				1	Already conducted surveys at each laboratory and set target levels.	-	100%
1-3	The staff of DIC Subang makes the plan of mastering diagnostic techniques for each laboratory of DIC Subang.	Planued Actual		XX 00	œ	X		٥		x		D		×	,			Already made the draft mastering plans for each lab.	DIC Subang reviews the mastering plans every 5 years.	100%
1-4	The staff of DIC Subang makes the list of trainer resources, for example, staff of other DICs, IRCVS, NVDAL, Vet Faculty of university, forcing experts etc.	Planned Actual		, , , ,	00		0				0				۰			Already made the resource, list of each fields.	Many local experts were invited as a trainer and the relationship with othe institutes has been established.	
1-5	The staff of DIC Subang learns the planned diagnostic techniques from the resources trainers through training in Indonesia, Japan or third country.	Planned Actual		222 2000	X2X X	22 22 00 00	CX XX	x xx	x xxx o eoc	000	000	000	8	900	000	000		Diagnostic techniques have been transferred by IICA and local experts.	The planned techniques have been transferred. But CPs must continue learning after the project.	100%
	The staff of DIC Subang receives the diagnostic capability evaluation (including the proficiency tests) by resource trainers about the transferred diagnostic tests.	Planued Actual		υo	× 0	o	0 00	N 00	0 0	٥	C40	X OO	80	00	000	x	ŀ	The proficiency test and diagnostic comparisons with other DIC were conducted.	In order to apply for accreditation of ISO, DIC Subang is required to have proficiency test periodically.	
Output 2	The capacity to provide the customer oriented diagnosis services (Passive Surveillance) of DIC Subang staff is strengthened.																			
Activity 2-1		Planned Actual		x o			1				000	00			0			Conducted a baseline survey in DIC Subang and grasped the situation.	<u>.</u>	100%
2-2	The staff of DIC Subang analyzes the current situation of sample submission from the fields.	Planned Actual		N O	X o		۱,				٥				٥		(ditto	•	100%
2-3	The staff of DIC Subang makes the plan of improved sample flow and examination system at DIC Subang. (Measures for the sample senders will be planed in Output 4)	Planned Actual		o	200 U						000	00					ŀ	DIC Subang staff are making procedures of sample reception & diagnosis flow related to the application of ISO	-	100%
2-4	The staff of DIC Subang conducts the improved diagnostic services.	Planued Actual			x	XX X	221 22	CX XXX	000 000	x xxx	000	X02X	900 22	, XXX 000	72CX ;	XXX 000	ŀ	According to the above plan of improvement, we developed the new reporting system and continue improving.	Sometimes it is difficult to collect epidemiological information of the sample. It is also necessary to teach t methods to customers.	100%
2-5	The staff of DIC Subang monitors the improved diagnostic services (sample reception, diagnostic flow and customer's comment etc.) and conducts the feed-back to the system.	Planued Actual				z o	٥	X O	٥	x o	a	X o	D	X O	0 0	3	ŀ	DIC Subang conducts the customer satisfaction survey every year to improve the service.	The end-line survey will be conducte to evaluate the improvement of services in detail.	90%
Output 3	The capacity to conduct the surveys and the technical support of animal disease control (Active Surveillance) in the pilot sites of DIC Subang staff is strengthened.																			
Activity 3-1	The staff of DIC Subang conducts preliminary surveys to select pilot site(s) from livestock / poultry industry promoted areas.	Planned Actual		XXX 000	00			o				e		٠			5	Conducted a baseline survey of the stakeholders and grasped the situation.	-	100%
3-2	The staff of DIC Subang specifies the pilot site and some animal diseases for the surveys and control.	Planned Actual			XX 000 0	٥						٥					_ {	Picked up some candidate place and target disease.		100%
3-3	The staff of DIC Subang plans and conducts the surveys on animal health considering the specificity of promoted livestock / poultry sectors in the pilot site through cooperation with B/C type laboratories.	Planucd Actual			69 0	000	7.5 00 00	zz c	0000	000	222X 000	00	XXX 000	1000	00	~	1	The surveillance considering the specificity of the pilotsite situation was planed and conducted colaborating with DINAS and B-type labs.	Active surveillance has already been carried out as a routine work, but the purpose of the survey should be more cleared after the project.	100%
3-4	The staff of DIC Subang analyses the results of surveys and develops the recommendation reports to the authorities for the improvement of animal health situation.	Planned Actual						×eX		x	00	x		x	00		1		Conducted the coordination meeting every year, and the survey results are presented to there. But the abortion surveillance is still on going and Dr.Aprizal will develop the reports 1	90%

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			20			2012				013			203			2015			Accomplist
→	Outputs and Activities		Щ	ĬΔ	I	II	I IV	7 I	П	Ξ	IV	Ι	Π		V :	I I	Progress .	Issues / Plan	ent (%)
	The staff of DIC Subang organizes and conducts the monitoring of the animal health improvement for the follow-up of recommended activities and the feed-back.	Planned Actual						x	o	x	٥	х	×	x		٥	DIC Subang develops and distributes disease map every year as a feed-back of surveillance to improve the disease control situation and make next surveillance plan.	DIC Subang is expected to continue making disease control plan and its evaluation according to the results of the surveillance.	100%
Outpul 4	The DIC Subang staff conduct the continuous support activities for laboratory workers, field vets and farmers, including information exchange, awareness on animal health in the pilot sites.																		
,	The DIC Subang issues periodical Newslotters to provide and exchange information on animal health for laboratory workers, field yets and farmers in the 3 provinces of West Java area.	Planned Actual		X O	,	X 00 0		X 0 0	N o	0	X O	٥	X O	o	X O		Web site of DIC Subang has been developed and the news of the activity is released periodically.	We focused on the web site developing other than the newsletter. The technical information in web site is going to be developed more.	1000
4-2	The staff of DiC Subang examines and conducts necessary measures of information exchange (on site meetings, etc.) for veterinary officers, laboratory workers, field vets and farmers in the nilot site through cooperation with B/C type laboratories.	Planned Actual	o	00	EXX	0		o XXX		0		;cex	ю.		X:	ex o	DIC Subang holds annual coordination meeting 2 times a year. Also, meeting with B/C lab and puskeswan has been conducted frequently.	-	100%
4-3	The staff of DIC Subang makes plans of sustainable activities of awareness and technical supports for improvement of animal health and production, which are necessary for laboratory workers, field vets and farmers in the pilot site. (Utilize other JICA projects outcomes such as a Flip-chart for dairy farmers.)	Pianned Actual		0	20			ç	XXX	٥	0		eex e		D	xx	DIC Subang built the accommodation facilities in 2012, and conducts trainings. At the time of active surveillance, awareness support has been done for the farmers.	-	100%
4-4	The staff of DIC Subang conducts sustainable activities of awareness and technical support for the laboratory workers, field vels and farmers in the pilot site through cooperation with B/C	Planned Actual		o	٥	0				000 XX							through cooperation with B/C type	Activities of awareness for the farmers is responsibility of DINAS district, and DIC cannot conduct directly.	1009
	The staff of DiC Subang organizes and conducts the monitoring and the feed-back of the results to the next actions.	Planned Actual						o x	٥	c		x ,	30		x	c	Activity plauning and evaluation has been made with stakeholders at the coordination meeting every year. The results of survillance are discussed and feed-backed to the next actions.	-	1009





Progress and Results on the Project Activities based on PO (Plan of Operation)

Annex 15

			At of March 2015
Nυ.	Objectively Verifiable Indicators	Status before the project	Progress at the time of review
1-1	The technical levels acquired on diagnostic tests in each laboratory (\$ laboratories) of DIC Subang attain to the target levels set up in the "Project Technical Target Sheet" by June 2013.	The target goal had not been set.	The target goal until 2014 was set in each fab. All laboratories almost accomplished the planned technical target.
2-1	More than one staff in DIC Subang are certified by the Project he/she is able to make a final diagnosis based on the result of tests in each laboratory.	The head of veterinary service section makes diagnosis according to the results of each laboratory test.	Currently, the laboratory chief conducts first diagnosis as a diagnosticism in rotation every month. All laboratory chief were certified by the short-term expert that they can diagnose almost adequately.
2-2	Each laboratory chief in DIC Subong he/she is able to make an appropriate comments based on the result of tests in each laboratory.	The understanding of field situation was not enough and the feed-back comment was not appropriate enough.	The staff have had experience to visit farmers on active surveillance, and they are become able to feedback the approprente comment. But the short-term expert recommended to make more specific comment especially for the brucellosis positive cattle.
3-1	Active surveillances on unimal health are conducted annually with a framework (Planning, Implementing, Analyzing and feedback) by the staff of DIC Subang.	Head of diagnostic service indicates the planning and implementation of disease surveillance, another member of staff was working accordingly.	The system that all veterinarian and paramedic staff participate in disease surveillance was established. The evaluation of surveillance feedback to next activity are discussed with local government every year.
3-2	Each laboratory chief in DIC Subang are able to make recommendations of animal disease control in the pilot sites for the veterinary officers and inbonatory workers.	The recommendations for the customer had not been made.	Active surveillance is conducted more than 100 times a year. The veterinary staff including laboratory chief is in charge of each surveillance. The results and recommendation is feedbacked after the surveillance every time.
4-1	DIC Subsing (Vet. Information section) issues periodical Newsletter of animal health 2 times a year for laboratory workers, field vets and famuers in the three provinces by June 2012.	Information through such as newsletter, has not been carried out.	Instead of the newsletter, web site of DIC Subang was developed to provide information on a regular basis. Also, the project issued invareness trochures of livestock disease, bulletine and disease map, and they were distributed to stakeholders.
4-2	Each laboratory chief in DIC Subang is able to make annual plan of technical support activities to the laboratory workers, field vets and farmers in the pilot site by December 2013.	Technical support activity for the stakeholder had not been implemented.	The plan of active surveillance is developed collaborating with stakeholders every year. Also, the coordination meeting combined with training is impremented twice a year by gathering stakeholders.
4-3	Achievement rate of samual activity plan (set in $4-2$) becomes more than 90% in the pilot site.	Awareness activity had not been planed.	Sometimes there are some revision of activity plan caused by the budgetary problems, but basically, almost all planned activity is impremented every year.
,			T

	Objectively Verifiable Indicators	Status before the project	Achieve prediction at the time of evaluation
	The number and the kind of animal disease diagnosis at DIC Subang becomes more than 35,000 samples in a year and 16 kind at the end of the Project.	The number of sample for diagnosis was 14,875 (15 diseases) in 2010.	2011: 32,016 samples (23 diseases), 2012: 47,466 (23), 2013: 50,554 (31), 2014: 60,156 (32)
Purpose	The feedbacks of diagnosis (Passive Surveillance) to the customers are returned promptly in prescribed days set by the Project.	According to the result of baseline survey, it depends on the kind of test, but the average is about 1 week. But 20% of the customer get the result after more than 3 weeks.	The flow of sample in DIC Subang has been improved and the feedback is returned to the customer in standard period. The culture of bacteria and pathological diagnosis take 2 weeks, but the serological test and pothological test take only 2 days.
Project P	3 The DIC Subong staff are ready to conduct Active Surveillance (Planning, Implementing, Monitoring and Feedback the results to next survey) on animal health considering with livestock / poultry industry promotion in the pilot sites more than 2 times/site in a year.	The pilot sites had not yet been set.	The pilot sites were set and disease surveillances were planned. The activity imprementation, Monitoring and Feedback have been done thorough the workshop and meeting every year, 2012: 8 times, 2013; 22 times, 2014: 17 times.
	4 \$0% of inquired customers (stakeholders such as DINAS staff, Field vets, and Fanners) recognizes improvement of diagnosis services of DIC Subang by the end of the Project.	Recognition of DIC Subang was law in 2010, there were no customer to ask diagnosis besides the local government.	The study on customer satisfaction has been conducted by DGLAHS. The percentage of satisfied customer is 87.4% in 2011 and 94.8% in 2014.
Goal	Number of test samples for minal disease diagnoses at DIC Subang in West Java area increases 10% by the year of 2018 in comparison with the number in 2015.	Until the end of the project, we assume that the diagnostic sample number increase of 5% every year. After that, it is to increase 10 percent in three years.	The number of diagnostic sample is already more than 60,000 in a year, and it is almost the limit of manpower for DIC Subang. DIC Subang has promoted to share the role of diagnosts between they and B/C type labs. For the time of Post-evaluation, increase of the diagnostic samples in B/C type labs or quality of diagnosts in DIC Subang should be considered.
Overall C	Number of district where the animal disease control is monitored by DIC Subang amounts to all district required in West Java area by the year of 2018.	The number of district monitored was 31 in 2010.	DIC Subang monitors all districts (4) districts) in 2014.
	3 Number of awareness and technical support activity concerning minnal health conducted by DIC Subang in West Java area goes up 20% by the year of 2018 in comparison with the number in 2015.	There was no awareness and technical support activity conducted by DIC Subang.	The technical support activities (Training, Seminar, etc.) for the staff of local laboratories were conducted as following, 2011; 5 times, 2012; 8 times, 2013; 15 times, 2014; 12 times, Active strucillantes conducted with DINAS were as following, 2012; 91 times, 2013; 105 times, 2014; 130 times.





Suggestion for revisions of Objectively Verifiable Indicators (OVI) on Project Design Matrix (PDM) by the Joint Terminal Evaluation Team

	Objectively Verifi	able Indicators	Reason for Change	
PDM Narrative Summary	Current OVI	Suggested OVI	Roason for Change	
Overall Goal Measures for animal disease control in West Java region (Jurisdictional area of DIC Subang) are strengthened.	1 Number of test samples for animal disease diagnoses at DIC Subang in West Java region increases 10% by the year of 2018 in comparison with the number in 2015. 2 Number of district where the animal disease control is monitored by DIC Subang amounts to all district required in West Java region by the year of 2018. 3 Number of awareness and technical support activity	1 The number of test performed for animal disease diagnoses at the DIC Subang, type-B/C laboratories and PUSKESWAN in the jurisdiction area of the Center increases 10% by the year of 2018 in comparison with that in 2015 2 Number of district where the animal disease control is monitored by DIC Subang amounts to all district	Current OVI 1 and OVI 3 are integrated as Suggested OVT 1 becase of that; The number of test performed is approximately 61,000 in the year of 2014, approaching the capacity limit of the DIC Subang. By sharing simple tests from DIC Subang to type-B/C laboratories enhances diagnostic capacity of type-B/C laboratories. DIC Suban should conduct activities of awareness raising and technical assistances steadily for type-B/C as describe on Current OVI 3. The unit of the target value of the OVI regarding the performance of tests should be changed from "the number of test samples" to "the number of tests performed" because of that; One sample might be subject to multiple tests and the DIC Subang counts the number of tests practically due to the difficulty in grasping the performance with the number of samples.	





Project Design Matrix (PDM) Project Name Project on Target Group Staff of Dis Project Duration Four (4) ye Project Site DIC Suban

Project on Capacity Development of Animal Health Laboratory Staff of Diseases Investigation Center (DIC) Subang Four (4) years, July 17, 2011 – July 16, 2015

DIC Subang

Directorate of Animal Health DGLAHS-MoA and JICA Implementing Agency

Annex 17

(Draft)

Date: May 26, 2015 Version 3

		,	
Narrative Summary	Objectively Verifiable Indicators	Means of Verifications	Important Assumptions
Overall Goal Measures for animal disease control in West Java region (Jurisdictional area of DiC Subang) are strengthened.	1 The number of tests performed for animal disease diagnoses at the DIC Subang, type-B/C laboratories and PUSKESWAN in the jurisdiction area of the Center increases 10% by the year of 2018 in comparison with that in 2015;	Monitoring Report, Survey on target groups in West Java region by DIC Subang (Terminal evaluation survey and final survey)	
	2 Number of district where the animal disease control is monitored by DIC Subang amounts to all district required in West Java region by the year of 2018.	2 Monitoring Report	
Project Purpose The quality and quantity of animal disease diagnosis service at DIC Subang are improved.	The number and the kind of animal disease diagnosis at DIC Subang becomes more than 35,000 samples in a year and 16 kind at the end of the Project. The feedbacks of diagnosis (Passive Surveillance) to the customers are returned promptly in prescribed days set by the	Monitoring Reports Diagnosis records at DIC Subang	The measures and policies concerning of animal disease control will be implemented by the government of Indonesia continuously.
	Project. 3 The DIC Subang staff are ready to conduct Active Surveillance (Planning, Implementing, Monitoring and Feedback the results to next survey) on animal health considering with livestock / poultry industry promotion in the pilot sites more than 2 times/site in a year. 4 80% of inquired customers (stakeholders such as DINAS staff, Field vets, and Farmers) recognizes improvement of diagnosis	3 Observation at the time of mid-term review and terminal evaluation. 4 Monitoring Reports, The results of questionnaire survey on users at the time of mid-term review and terminal evaluation (questionnaire survey to be done by the	Enough budget and personnel are allocated to DIC Subang for sustaining outcomes of the Project.
Outputs Output 1 The DIC Subang staff obtain basic and systematic diagnosis for animal diseases.	1-1 The technical levels acquired on diagnostic tests in each laboratory (8 laboratories) of DIC Subang attain to the target levels set up in the *Project Technical Target Sheet* by June 2013.	project monitoring activity 2-5). 1-1 The results of examination by the Project	The staff of DIC Subang who have been transferred techniques by the Project are not
Output 2 The capacity to provide the customer oriented diagnosis services (Passive Surveillance) of DIC Subang staff is strengthened.	2-1 More than one staff in DIC Subang are certified by the Project he/she is able to make a final diagnosis based on the result of tests in each laboratory. 2-2 Each laboratory chief in DIC Subang he/she is able to make an appropriate comments based on the result of tests in each		transferred to other office during the Project period.







Output 3

The capacity to conduct the surveys and the technical support of animal disease control (Active Surveillance) in the pilot sites of DIC Subang staff is strengthened.

Output 4

The DIC Subang staff conduct the continuous technical support activities for laboratory workers, field vets and farmers, including information exchange, awareness on animal health improvement in the pilot sites.

3-1 Active surveillances on animal health are conducted annually with a framework (Planning, Implementing, Analyzing and feedback) by the staff of DIC Subang.

- 3-2 Each laboratory chief in DIC Subang are able to make recommendations of animal disease control in the pilot sites for the veterinary officers and laboratory workers.
- 4-1 DIC Subang (Vet. Information section) issues periodical Newsletter of animal health 2 times a year for laboratory workers, field vets and farmers in the three provinces by June 2012.
- 4-2 Each laboratory chief in DIC Subang is able to make annual plan of technical support activities to the laboratory workers, field vets and farmers in the pilot site by December 2013.
- 4-3 Achievement rate of annual activity plan (set in 4-2) becomes more than 90% in the pilot site.

3-1 Record of surveys

- 3-2 Records of Recommendations for animal disease control measures
- 4-1 Records of issued Newsletter
- 4-2 The plan and records of awareness and technical support activities
- 4-3 The plan and records of awareness and technical support activities

Inputs

Activities

Output 1

1-1

The Staff of DIC Subang surveys the current capacities and needs in the diagnostic techniques at DIC Subang.

1-2

Based on the results of the survey, the staff of DIC Subang sets the necessary diagnostic techniques (kind of disease, diagnostic method etc.) and target levels of the techniques for each laboratory.

1_3

The staff of DIC Subang makes the plan of mastering diagnostic techniques for each laboratory in DIC Subang.

1-4

The staff of DIC Subang makes the list of trainer resources, for example, staff of other DICs, IRCVS, NVDAL, Vet Faculty of university, foreign experts etc.

1-5

The staff of DIC Subang learns the planned diagnostic techniques from the resources trainers through training in Indonesia, Japan or third country.

1.6

The staff of DIC Subang receives the diagnostic capability evaluation (including the proficiency tests) by resource trainers about the transferred diagnostic tests.

Output 2

2-1

The staff of DIC Subang analyzes the current situation of sample flow and examinations at DIC Subang.

2-2

The staff of DIC Subang analyzes the current situation of sample submission from the fields.

2-3

The staff of DIC Subang makes the plan of improved sample flow and examination system at DIC Subang. (Measures for the sample senders will be planed in Output 4)

2-4

The staff of DIC Subang conducts the improved diagnostic services.

2-5

The staff of DIC Subang monitors the improved diagnostic services (sample reception, diagnostic flow and customer's comment etc.) and conducts the feed-back to the system.

Indonesian side

- 1. Assignment of counterpart personnel
- Salary, Travel expense, accommodation cost and daily allowance of counterpart personnel
- 3. Project office space and communication device etc.
- 4. Budget for operational cost for the Project implementation (electricity etc.)
- Procurement of Reagents and consumables.

Japanese side

- 1. Dispatch of Experts
- (1) Long-term Experts:
- Chief Advisor / Animal Health Administration
- Project Coordinator / Animal Health Information
- Veterinary Diagnosis / Epidemiology (assigned in half period of the project)
- (2) Short-term experts: from Japan or from third country

Relevant experts in specific subjects of animal health will be dispatched, when necessity arises, for the smooth implementation of the Project within the framework of the Project.

Sufficient budget to conduct the necessary diagnosis is secured by Indonesian side.





Output 3

3-1

The staff of DIC Subang conducts preliminary surveys to select pilot site(s) from livestock / poultry industry promoted areas.

3-2

The staff of DIC Subang specifies the pilot site and some animal diseases for the surveys and control.

3.3

The staff of DIC Subang plans and conducts the surveys on animal health considering the specificity of promoted livestock / poultry sectors in the pilot site through cooperation with B/C type laboratories.

3-4

The staff of DIC Subang analyses the results of surveys and develops the recommendation reports to the authorities for the improvement of animal health situation.

3.5

The staff of DIC Subang organizes and conducts the monitoring of the animal health improvement for the follow-up of recommended activities and the feed-back.

Output 4

4-1

The DIC Subang issues periodical Newsletters to provide and exchange information on animal health for laboratory workers, field vets and farmers in the 3 provinces of West Java region.

4-

The staff of DIC Subang examines and conducts necessary measures of information exchange (on site meetings, etc.) for veterinary officers, laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type laboratories.

4-3

The staff of DIC Subang makes plans of sustainable activities of awareness and technical supports for improvement of animal health and production, which are necessary for laboratory workers, field vets and farmers in the pilot site. (Utilize other JICA projects outcomes such as a Flip-chart for dairy (armers.)

4-4

The staff of DIC Subang conducts sustainable activities of awareness and technical support for the laboratory workers, field yets and farmers in the pilot site through cooperation with B/C type laboratories.

4-5

The staff of DIC Subang organizes and conducts the monitoring and the feed-back of the results to the next actions,

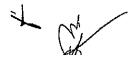
- Counterparts training in Japan or in third country
- 3. Provision of machinery / equipment
- Budget for operational cost for the Project implementation

Pre-Conditions



Annex 18

No	Disease	Diagnostic Test	Lab	Before Project Implementation (2010)	End of the Project (2014)
l	Hemorrhagic Septicemia	Isolation and identification	Bacteriology	Z	0
2	Anthrax	Isolation and identification	Bacteriology	Z	Ō
		ELISA	Bacteriology	0	0
		Pathology Staining	Bacteriology	x	00000000
3	Brucellosis	Rose Bengal Test	Bacteriology	0	0
		CF Test	Bacteriology	x	0
		Isolation and identification	Bacteriology	x	0
4	Campylobacteriosis	Isolation and identification	Bacteriology	x	0
5	Salmonellosis	Quick Test (Pullorum serum test)	Bacteriology	0	0
		Pullorum isolation and identification	Bacteriology	x	0
		Salmonella isolation and identification	Bacteriology	x	0
6	Rabies	FAT	Virology, Serology	0	0
		ELISA	Virology, Serology	0	0
		Biological Test	Virology, Serology	x	0
7	Jembrana Disease	ELISA	Virology, Serology	х	0
		PCR	Virology, Serology	X	x
8	BVD	ELISA	Virology, Serology	0	0
_		PCR	Biotechnology	x	ŏ
9	IBR	ELISA	Virology, Serology	Ö	ŏ
10	Classical Swine Fever	ELISA	Virology, Serology Virology, Serology	ŏ	ŏ
10	Classical Bittilo 1 CtCl	PCR	Biotechnology	×	ŏ
11	Avian Influenza	TET Isolation	Virology, Scrology	ô	0
11	Attain mintenza	HA/HI (Serology)		ŏ	0
		PCR (Type A)	Virology, Serology Biotechnology	-	0
				x	0
		PCR (H1)	Biotechnology	X	0
		PCR (H5)	Biotechnology	x	0
		PCR (H7)	Biotechnology	x	0
12	Newcastle Disease	TET Isolation	Virology, Serology	<u>o</u>	Õ
		HA/HI (Serological Test)	Virology, Serology	0	Ō
		PCR	Biotechnology	x	Ō
13	IBD	ELISA	Virology, Serology	x	Ō
		PCR	Biotechnology	x	0
14	Foot and Month Disease	ELISA	Virology, Serology	X	0
15	Enzootic Bovine Leukosis	ELISA	Virology, Serology	0	0
		PCR	Biotechnology	X	0
16	Mycoplasma (CRD)	Quick test	Bacteriology	0	0
		Isolation and identification	Bacteriology	x	000000
17	BSE	Histopathology	Pathology	x	0
18	Swine flu (H1N1)	ELISA	Virology, Serology	0	0
		PCR	Biotechnology	0	0
19	Blood parasite	Trypanosomiasis	Parasitology	0	Ö
		Anaplasmosis	Parasitology	X	0
		Theileriosis	Parasitology	0	Õ
		Babesia	Parasitology	×	Ö
		Plasmodium	Parasitology	X .	ŏ
		Leucocytozoon	Parasitology	z ·	ŏ
		Eperythrozoon	Parasitology	Z Z	ŏ
		Clinostomum	Parasitology	X	ŏ
20	Endoparasite	Fasciolosis	Parasitology Parasitology	Ö	00
20	Endoparastie				0
•		Paramphistomum	Parasitology	0	0
		Moniezia	Parasitology	0	O
		Eimeria (Coccidiosis)	Parasitology	Q	Q
		Nematodiasis	Parasitology	0	O
		Bunostomum	Parasitology	×	Ō
		Cooperia	Parasitology	Z	Ō
		Cotyloporon	Parasitology	X.	Ō
		Mecistocirus	Parasitology	X	000
		Oesophagustomum	Parasitology	x	0
		Strongyloides	Parasitology	x	0
		Trichostrongylus	Parasitology	x	0
		Trichuris	Parasitology	Z	0
21	Neosporosis	ELISA	Parasitology	x	0
22	Toxoplasmosis	ELISA	Parasitology	×	ŏ
23	Trichomoniasis	ELISA	Parasitology	x ·-	ŏ
				••	



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24	Colibacillosis	Isolation and identification	Bacteriology	X	0
25	.fohne's disease	ELISA	Bacteriology	x	0
		PCR	Biotechnology	x	0
26	Akabane disease	Isolation and identification	Virology, Serology	x	0
		Neutralization test	Virology, Serology	×	0
27	Food-borne poisoning	Total Plate Count	Public Health	x	0
		Pig containing	Public Health	x	0
		Antibiotics residue	Public Health	x	0
		Boran residue	Public Health	X	0
		Coliform culture	Public Health	x	0
		Salmonella culture	Public Health	x	0
		Formalin Test	Public Health	х	O







Project Design Matrix (PDM)

Project Name Target Group

Project on Capacity Development of Animal Health Laboratory Staff of Diseases Investigation Center (DIC) Subang Four (4) years, July 17, 2011 – July 16, 2015 Project Duration

Project Site DIC Subang

Implementing Agency Directorate of Animal Health DGLAHS-MoA and JICA Appendix 2

Date: May 26, 2015 Version 3

Narrative Summary	Objectively Verifiable indicators	Means of Verifications	Important Assumptions
Overall Goal Measures for animal disease control in West Java region (Jurisdictional area of DIC Subang) are strengthened.	1 The number of tests performed for animal disease diagnoses at the DIC Subang, type-B/C laboratories and PUSKESWAN in the jurisdiction area of the Center increases 10% by the year of 2018 in comparison with that in 2015.	Monitoring Report, Survey on target groups in West Java region by DIC Subang (Terminal evaluation survey and final survey)	
	2 Number of district where the animal disease control is monitored by DIC Subang amounts to all district required in West Java region by the year of 2018.	2 Monitoring Report	
Project Purpose The quality and quantity of animal disease diagnosis service at DIC Subang are improved.	1 The number and the kind of animal disease diagnosis at DIC Subang becomes more than 35,000 samples in a year and 16 kind at the end of the Project.	1 Monitoring Reports	The measures and policies concerning of animal disease control will be implemented by
	2 The feedbacks of diagnosis (Passive Surveillance) to the customers are returned promptly in prescribed days set by the Project.	2 Diagnosis records at DIC Subang	the government of Indonesia continuously.
	3 The DIC Subang staff are ready to conduct Active Surveillance (Planning, Implementing, Monitoring and Feedback the results to next survey) on animal health considering with livestock / poultry industry promotion in the pilot sites more than 2 times/site in a year.	Observation at the time of mid-term review and terminal evaluation. Monitoring Reports, The results of	Enough budget and personnel are allocated to DIC Subang for sustaining outcomes of
	4 80% of inquired customers (stakeholders such as DINAS staff, Field vets, and Farmers) recognizes improvement of diagnosis services of DIC Subang by the end of the Project.	questionnaire survey on users at the time of mid-term review and terminal evaluation (questionnaire survey to be done by the project monitoring activity 2-5).	the Project.
Outputs Output 1 The DIC Subang staff obtain basic and systematic diagnosis for animal diseases.	1-1 The technical levels acquired on diagnostic tests in each laboratory (8 laboratories) of DIC Subang attain to the target levels set up in the "Project Technical Target Sheet" by June 2013.	1-1 The results of examination by the Project	The staff of DIC Subang who have been transferred techniques by the Project are not
Output 2 The capacity to provide the customer oriented diagnosis services (Passive Surveillance) of DIC Subang staff is strengthened.	2-1 More than one staff in DIC Subang are certified by the Project he/she is able to make a final diagnosis based on the result of tests in each laboratory.	2-1 Records of comments for diagnosis results	transferred to other office during the Project period.
	2-2 Each laboratory chief in DIC Subang he/she is able to make an appropriate comments based on the result of tests in each laboratory.	2-2 The results of certification by the Project	





Output 3

The capacity to conduct the surveys and the technical support of animal disease control (Active Surveillance) in the pilot sites of DIC Subang staff is strengthened.

Output 4

The DIC Subang staff conduct the continuous technical support activities for laboratory workers, field vets and farmers, including information exchange, awareness on animal health improvement in the pilot sites.

- 3-1 Active surveillances on animal health are conducted annually with a framework (Planning, Implementing, Analyzing and feedback) by the staff of DIC Subang.
- 3-2 Each laboratory chief in DIC Subang are able to make recommendations of animal disease control in the pilot sites for the veterinary officers and laboratory workers.
- 4-1 DIC Subang (Vet. Information section) issues periodical Newsletter of animal health 2 times a year for laboratory workers, field vets and farmers in the three provinces by June 2012.
- 4-2 Each laboratory chief in DIC Subang is able to make annual plan of technical support activities to the laboratory workers, field vets and farmers in the pilot site by December 2013.
- 4-3 Achievement rate of annual activity plan (set in 4-2) becomes more than 90% in the pilot site.

- 3-1 Record of surveys
- 3-2 Records of Recommendations for animal disease control measures
- 4-1 Records of issued Newsletter
- 4-2 The plan and records of awareness and technical support activities
- 4-3 The plan and records of awareness and technical support activities

Inputs

Activities

Output 1

1-1

The Staff of DIC Subang surveys the current capacities and needs in the diagnostic techniques at DIC Subang.

Based on the results of the survey, the staff of DIC Subang sets the necessary diagnostic techniques (kind of disease, diagnostic method etc.) and target levels of the techniques for each laboratory.

1-3

The staff of DIC Subang makes the plan of mastering diagnostic techniques for each laboratory in DIC Subang.

1_4

The staff of DIC Subang makes the list of trainer resources, for example, staff of other DICs, IRCVS, NVDAL, Vet Faculty of university, foreign experts etc.

1-5

The staff of DIC Subang learns the planned diagnostic techniques from the resources trainers through training in Indonesia, Japan or third country.

1.6

The staff of DIC Subang receives the diagnostic capability evaluation (including the proficiency tests) by resource trainers about the transferred diagnostic tests.

Output 2

2..1

The staff of DIC Subang analyzes the current situation of sample flow and examinations at DIC Subang.

2-2

The staff of DIC Subang analyzes the current situation of sample submission from the fields,

2-3

The staff of DIC Subang makes the plan of improved sample flow and examination system at DIC Subang. (Measures for the sample senders will be planed in Output 4)

2/

The staff of DIC Subang conducts the improved diagnostic services.

2-

The staff of DIC Subang monitors the improved diagnostic services (sample reception, diagnostic flow and customer's comment etc.) and conducts the feed-back to the system.

Indonesian side

- 1. Assignment of counterpart personnel
- Salary, Travel expense, accommodation cost and daily allowance of counterpart personnel
- Project office space and communication device etc.
- 4. Budget for operational cost for the Project implementation (electricity etc.)
- Procurement of Reagents and consumables.

Japanese side

- 1. Dispatch of Experts
- (1) Long-term Experts:
- Chief Advisor / Animal Health Administration
- Project Coordinator / Animal Health Information
- Veterinary Diagnosis / Epidemiology (assigned in half period of the project)
- (2) Short-term experts: from Japan or from third country
 Relevant experts in specific subjects of

Relevant experts in specific subjects of animal health will be dispatched, when necessity arises, for the smooth implementation of the Project within the framework of the Project.

Sufficient budget to conduct the necessary diagnosis is secured by Indonesian side.



Output 3

3-1

The staff of DIC Subang conducts preliminary surveys to select pilot site(s) from livestock / poultry industry promoted areas.

3-2

The staff of DIC Subang specifies the pilot site and some animal diseases for the surveys and control.

3_3

The staff of DIC Subang plans and conducts the surveys on animal health considering the specificity of promoted livestock / poultry sectors in the pilot site through cooperation with B/C type laboratories.

3-4

The staff of DIC Subang analyses the results of surveys and develops the recommendation reports to the authorities for the improvement of animal health situation.

3-5

The staff of DIC Subang organizes and conducts the monitoring of the animal health improvement for the follow-up of recommended activities and the feed-back.

Output 4

4-1

The DIC Subang issues periodical Newsletters to provide and exchange information on animal health for laboratory workers, field vets and farmers in the 3 provinces of West Java region.

4-2

The staff of DIC Subang examines and conducts necessary measures of information exchange (on site meetings, etc.) for veterinary officers, laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type laboratories.

4-3

The staff of DIC Subang makes plans of sustainable activities of awareness and technical supports for improvement of animal health and production, which are necessary for laboratory workers, field vets and farmers in the pilot site. (Utilize other JICA projects outcomes such as a Flip-chart for dairy farmers.)

4-4

The staff of DIC Subang conducts sustainable activities of awareness and technical support for the laboratory workers, field vets and farmers in the pilot site through cooperation with B/C type laboratories.

4.5

The staff of DIC Subang organizes and conducts the monitoring and the feed-back of the results to the next actions.

- Counterparts training in Japan or in third country
- 3. Provision of machinery / equipment
- 4. Budget for operational cost for the Project implementation

Pre-Conditions



