TECHNICAL ASSISTANCE

FOR

TRANSBOUNDARY ANIMAL DISEASE CONTROL

IN THE GREATER MEKONG SUBREGION

October 2004
ABBREVIATIONS

ADB – Asian Development Bank
ASEAN – Association of Southeast Asian Nations
ASWGL – ASEAN Sectoral Working Group on Livestock
CSF – classical swine fever (also known as hog cholera)
FAO – Food and Agriculture Organization
FMD – foot-and-mouth disease
GF-TAD – global framework for the control of TAD
GMS – Greater Mekong Subregion
GMS-ECP – Greater Mekong Subregion Economic Cooperation Project
HPAI – highly pathogenic avian influenza
ILRI – International Livestock Research Institute
JICA – Japan International Cooperation Agency
Lao PDR – Lao People's Democratic Republic
NGO – nongovernment organization
OIE – Office International des Épizooties
PC/CTA – project coordinator/chief technical advisor
PMO – project management office
PMU – project management unit
PRC – People's Republic of China
PSC – project steering committee
RAP – Regional Office for Asia and the Pacific
RCF – regional coordination framework
SARS – severe acute respiratory syndrome
TAD – transboundary animal diseases
TCP – Technical Cooperation Project
VSF – Vétérinaires sans Frontières
WGA – Working Group on Agriculture

TA CLASSIFICATION

Poverty Classification – Poverty intervention
Sector – Agriculture
Subsector – Livestock
Theme – Inclusive social development, Regional cooperation
Subthemes – Human development, Regional cooperation

Following the Board approval of the R-paper, Review of ADB’s Poverty Reduction Strategy, staff instructions to replace the PI/CPI classification with a new tracking system are under preparation, in line with para. 83 of the R-paper.

NOTE

In this report, "$" refers to US dollars.

This report was prepared by A. Siddiq, Mekong Department.
I. INTRODUCTION

1. Over one third of the population in the Greater Mekong Subregion (GMS) countries live below the poverty line. The majority of the poor are women. Despite rapid economic growth in countries like the People’s Republic of China (PRC) and Thailand, 20% of the rural population live in poverty.\(^1\) In other GMS countries such as Cambodia, Lao People’s Democratic Republic (Lao PDR), Myanmar, and Viet Nam, poverty rates are 50% or higher. Nearly 23 million people (70% of the poor people) in the GMS are smallholder farmers who depend on livestock for food security. Livestock are an important and often the only source of cash income for poor farmers. They are an asset for investment and insurance against crop failure. They support crop production through draft power and produce manure to maintain soil fertility. Livestock are a particularly important source of income for women who account for over 50% of agriculture production. Introducing policy and technological options that make livestock-dependent poor farmers, especially women, less vulnerable to devastating effects of animal diseases and support their access to markets for economic growth is a major priority in GMS.

II. ISSUES

2. Livestock represent only 15% of the agricultural gross domestic product in Southeast Asia, but are a strategic part of the small-farm economy in the region. The demand for livestock products in the region is projected to increase by 3.5% to 4.0% annually to the year 2020.\(^2\) This increase—predominantly driven by high-income growth, rapid urbanization, and changes in dietary patterns—will present tremendous opportunities for reducing poverty among poor smallholders by way of improving incomes through commercialization of livestock products. However, to fully participate and exploit these market opportunities, poor smallholders in GMS countries will have to produce healthy and productive animals. Unfortunately, they are currently constrained by transboundary animal diseases (TAD), such as classical swine fever (CSF), foot-and-mouth disease (FMD), and highly pathogenic avian influenza (HPAI). These diseases kill animals and reduce productivity, threaten livelihoods of poor smallholders, drain public sector resources, hinder efforts to reduce poverty, and restrict regional and international trade. The morbidity and mortality rates of livestock due to these diseases are often as high as 50–70% in many parts of the GMS.\(^3\)

3. The poor in the developing world face particularly high risk from animal diseases. First, more diseases are present because the majority of the poor live in climates and ecosystems that favor a wide range of infections. Second, the widespread unrestricted movement of animals for marketing, social and other reasons enhances the spread of certain diseases. Third, the current livestock production systems of the poor further enhance the risk of animal and human diseases through confounding factors such as poor housing, multiple species, and poor nutrition and animal hygiene. Recent epidemics of CSF and FMD in Europe and, more recently, the spread of HPAI and Severe Acute Respiratory Syndrome (SARS) in Asia have demonstrated the enormous damage to livestock industry and loss of human lives from TAD. Participatory poverty assessment surveys have shown that 70% of producers rank animal diseases as a major constraint to their household incomes.\(^4\) Controlling such diseases is a strong incentive for regional cooperation and underscores the need for this project.\(^5\)

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\(^1\) Poverty is defined as per capita earnings of less than $1 a day.
\(^5\) The TA first appeared in *ADB Business Opportunities* (Internet edition) on 4 December 2003.
4. Cross-border trade in livestock among GMS countries—predominantly from Cambodia, southern PRC, Lao PDR, Myanmar, and Viet Nam into Thailand—is significant and rising. Recent estimates from Yunnan show that total annual trade in livestock and livestock products with Myanmar amounted to $365 million; Viet Nam, $136 million; Thailand, $32 million; Lao PDR, $20 million; and Cambodia, $1 million. Trade between Lao PDR and Thailand is estimated to be over $25 million (footnote 3). Informal trade is one of the primary reasons for the spread of TAD, limiting formal opportunities for interregional trade in livestock and livestock products.

5. Given the nature of this problem in GMS, there is a need to take a two-phase approach to contain TAD. In phase 1, it is necessary to (i) develop and operationalize a cooperation framework that entails common regional policies and regulations governing animal movement, information sharing, standardized protocols for diagnostic techniques and vaccines; and (ii) upgrade regional and national diagnostic laboratories and strengthen staff capacity. In phase 2, vaccination programs—in collaboration with the private sector—in preselected target disease control zones can be implemented to demonstrate that significantly reducing animal morbidity and mortality rates can have a tangible impact on incomes of poor livestock holders. Activities of phase 1 are crucial and cannot be implemented without effective regional cooperation.

6. The GMS Economic Cooperation Project (GMS-ECP) recently initiated investments in agriculture by creating a Working Group on Agriculture, which met for the first time in January 2003 in Manila, Philippines. During this meeting, the group reviewed several concepts prepared through extensive regional consultation, and approved some for further development. One of these concepts was livestock disease control with a focus on regional approaches and transboundary issues. This project is consistent with the goals set out by GMS-ECP that aim to (i) increase regional cooperation among its members, (ii) boost trade, and (iii) initiate interventions that reduce poverty through mutual learning and sharing of information and technology. This project will also provide complementarity to the ongoing livestock projects in the region supported by various aid sources such as European Union, Food and Agriculture Organization of the United Nations (FAO), Japan International Cooperation Agency (JICA), Office International des Épizooties (OIE), Vétérinaires sans Frontières (VSF), and World Bank. Standardized training and capacity building, information sharing, and public-private sector partnership are unique features of this project that are hitherto missing in country-specific projects. The activities of this project are consistent with ADB’s country-specific operations.6

III. THE TECHNICAL ASSISTANCE

7. This project will implement activities of the proposed phase 1 (para. 5). The main innovative feature of this proposal is the development of regional cooperation and collaboration among five GMS countries (Cambodia, PRC, Lao PDR, Thailand, and Viet Nam) to address common issues related to control of TAD that are predominantly spread by animal movement across these countries. Without regional cooperation, these diseases cannot be controlled. The project will build on existing activities in the region and aim to integrate them to focus on the three most important trade-limiting diseases: CSF, FMD, and HPAI. Regional cooperation will foster strong partnership among all stakeholders and beneficiaries including livestock farmers and traders, veterinarians, extension workers, community health service providers, nongovernment organizations (NGOs), veterinary departments, border control units, and private pharmaceutical companies.

6 For instance, a livestock development project for the Lao PDR is in the pipeline for 2004, and the loan itself for 2006. This project will also be complementary to a number of ongoing rural and agricultural development projects, funded by ADB and other partners in Cambodia, Lao PDR, and Viet Nam that have livestock components.
The project also aims, for the first time, to engage PRC as a key player and partner in the regional consortium for TAD control. Substantial live animal movements across southern PRC, Thailand, Lao PDR and Myanmar result in the spread of TAD. Without PRC's participation, these diseases cannot be effectively controlled. Following the devastating outbreaks of SARS in 2003 and HPAI in 2004, PRC recently committed to address the problem through regional collaboration. PRC's participation will also be important as it will be a key player in supporting training for many of the other poor countries in the region and also funding most of its disease control projects.

The innovative feature of the project will be the major shift in the approach to TAD control. The traditional approach of controlling diseases by applying mass, blanket vaccination to control outbreaks has been unsustainable and expensive, as shown by such practices in many parts of Asia, Africa, and Europe. In this project, the source and the flow of CSF, FMD, and HPAI infections will be targeted. Since it is well known that the source of infections for the three diseases is among poor smallholders, accurate mapping of diseases among these communities through sound epidemiological information and economic impact studies will ensure targeting of resources to benefit resource-poor farmers. This major shift in paradigm of disease control in the long run will be cheaper and more sustainable, and also provide a more rational basis for the OIE zoning approach.

A. Purpose and Outputs

The long-term goal is to control TAD in GMS to enhance food security, safety, and augment local, regional, international trade in livestock and livestock products. The immediate purpose is to develop a regional cooperation framework, upgrade regional and national laboratories, and strengthen staff capacity in the participating countries to control TAD.

The main outputs of the project will include (i) a regional cooperation framework (RCF) adopted under the Association of Southeast Asian Nations (ASEAN); (ii) identification of national and regional policies supporting CSF, FMD, and HPAI control among poor livestock communities in GMS; (iii) installation of regional and national disease information systems and enhanced capacity in TAD control as indicated by the number of trained veterinarians, technicians, extension workers, and farmers; (iv) upgrading of regional reference diagnostic laboratories and a network of national diagnostic laboratories supporting control of CSF, FMD, and HPAI; and (v) strengthening of staff capacity. The project framework is in Appendix 1.
B. Methodology and Key Activities

12. The project will be implemented over 2 years. It will comprise two main components. Under component A, a formal RCF will be developed and adopted. The activities of component B will upgrade the regional and national laboratories, train the relevant staff, and build institutional capacity in the participating countries.

13. **Component A: Develop a Regional Cooperation Framework.** TAD cannot be controlled without common regional policies and regulations governing animal movement, mechanism for sharing disease information, and standardized protocols for the use of diagnostic techniques and vaccines. Therefore, the primary objective of this component will be to establish an RCF among the five participating countries specifically to (i) develop a strong formal partnership to address common issues related to TAD control and trade of livestock and livestock products in the GMS; (ii) harmonize activities of all other projects involved in TAD control in the GMS (i.e., those of JICA, OIE–Southeast Asian Foot and Mouth Disease [SEAFMD] and FAO to control CSF, FMD, and HPAI); (iii) identify enabling regional policies and regulations on management and control of animal movement, biosecurity measures, and use of diagnostics and vaccines; (iv) develop and establish uniform disease information systems to enable rapid reporting and sharing of disease information at national and international levels; (v) establish a common set of protocols to provide emergency preparedness and response to emerging threats of diseases; and (vi) constitute a project steering committee to provide guidance and technical advice in implementing TAD control. RCF at the end of the project will be adopted under the ASEAN Sectoral Working Group on Livestock (ASWGL) to ensure long-term sustainability.

14. **Component B: Upgrade Regional and National Diagnostic Laboratories and Build Capacity.** Effective animal disease control requires strengthening of veterinary services for disease surveillance and to respond fast and effectively to emerging diseases. These services are public goods and should include well-equipped regional and national diagnostic laboratories supported by trained laboratory technicians and epidemiologists. Within GMS countries, there is a substantial variation in the levels of facilities and expertise. Therefore, detailed plans for training and capacity building will be developed to support a uniform and standardized expertise across the region. This component will include (i) upgrading national diagnostic laboratories10 (one in each country with greater emphasis in Cambodia and Lao PDR) and regional diagnostic laboratories (one in Viet Nam at the National Virus Research Institute, Hanoi; and two in Thailand, linked to the Department of Livestock Development facility at Pak Chong, and National Institute of Animal Health, Bangkok) to provide diagnostic capability and characterize virus strains according to OIE-defined standards; (ii) training field veterinarians in epidemiological methodologies and the use of disease information system TAD Info to support disease transmission dynamics studies; (iii) developing a sampling framework for serological survey, and initiating sample collection for serological analysis to provide a sound basis for developing pilot disease control projects in phase 2;11 (iv) determining beforehand the economic impact to define the benefits and costs of FMD, CSF, and HPAI control using different control options; and (v) developing best-bet strategies for control and eradication of TAD in the GMS.

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10 The needs for each country will vary, with Cambodia and the Lao PDR requiring more support in equipment and training. The reference lab in Viet Nam will be different from the national lab, while in Thailand, the reference labs and the national lab are likely to be in the same premises. Budget for construction will not be required.

11 Links with epidemiological studies on the spread of the highly pathogenic avian influenza virus to humans will be established if funds are available.
C. Cost and Financing

15. The total cost of the project is estimated to be $2,000,000 equivalent (Appendix 2) comprising $1,880,000 in foreign exchange and $120,000 equivalent in local currency. ADB will provide $1,000,000 equivalent to finance part of the foreign exchange costs. The TA will be financed on a grant basis by ADB’s TA funding program. FAO has committed its Technical Cooperation Project (TCP) funds to Cambodia, Lao PDR, Thailand, and Viet Nam to control HPAI, through procurement of diagnostic equipment, establishment of a disease information system, and supply of diagnostic reagents. FAO has also committed regular program funds supporting TAD control in the GMS. FAO’s foreign exchange contribution will be $880,000 equivalent derived from the TCPs. Government contribution from GMS countries will meet the entire local costs of $120,000 equivalent to cover expenses for office accommodation, counterpart staff, part of domestic travel, survey and data gathering, and translation.

D. Implementation Arrangements

16. The project will be implemented over 2 years, from October 2004 to September 2006. The ministries of agriculture will be the executing agencies through their respective departments of livestock. FAO will be appointed by direct selection to deliver the required services and implement the project. FAO has the necessary expertise at the global, regional as well as national level to provide technical and operational inputs. In the event that it is necessary to engage experts outside of FAO, the experts will be engaged by ADB in accordance with its Guidelines on the Use of Consultants. Equipment and material will be procured in accordance with ADB’s Guidelines for Procurement.

17. A project steering committee will be set up to provide overall guidance and oversight. It will meet twice a year to monitor project progress. A project management office, headed by a project coordinator/chief technical adviser (PC/CTA), will be set up at FAO’s Regional Office for Asia and the Pacific in Bangkok to coordinate all project activities. Project management units, headed by national project coordinators, will be set up in each of the five participating countries. The project implementation flow organogram is in Appendix 3. ADB will finance 20 person-months of international (PC/CTA) and 32 person-months of domestic expert services (in epidemiology and communications). FAO will finance 8 person-months of international expert services (in TAD Info, laboratory disease diagnosis, and veterinary epidemiology). Additional technical inputs on impact assessment and FMD control will be sought from ILRI and OIE, respectively. Outline terms of reference for experts are in Appendix 4.

18. FAO will disseminate the expected outputs through the project web site, newsletters, quarterly and annual reports, expert reports, reviews and terminal reports. A comprehensive communications strategy will be developed to ensure the dissemination of the project outputs to all stakeholders.

IV. THE PRESIDENT’S DECISION

19. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of $1,000,000 on a grant basis to the Governments of Cambodia, the People's Republic of China, Lao PDR, Thailand, and Viet Nam for Transboundary Animal Disease Control in the Greater Mekong Subregion and hereby reports this action to the Board.

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12 As described in ADB-FAO Memorandum of Understanding appended to Doc. R77-81 (4 August 1981).
<table>
<thead>
<tr>
<th>Design Summary</th>
<th>Performance Indicators/Targets</th>
<th>Monitoring Mechanisms</th>
<th>Assumptions and Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal</strong></td>
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<tr>
<td>• Control transboundary animal diseases (TAD) in the Greater Mekong Subregion (GMS)</td>
<td>• Improved regional/national policies and regulations adopted to control TAD</td>
<td>• National livestock policy documents</td>
<td></td>
</tr>
<tr>
<td>• Enhance food security, safety, and international trade in livestock and livestock products</td>
<td>• Livestock products from GMS certified for export to Organization for Economic Cooperation and Development countries</td>
<td>• Participatory poverty reports</td>
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<td></td>
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<td>• Livestock trade data in reports of Food and Agriculture Organization (FAO) and World Trade Organization reports</td>
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</tr>
<tr>
<td><strong>Purpose</strong></td>
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</tr>
<tr>
<td>• Develop regional cooperation framework</td>
<td>• Regional cooperation framework adopted by GMS countries by 2005</td>
<td>• National livestock policy and disease outbreak reports</td>
<td>• Target countries remain committed to TAD control regionally.</td>
</tr>
<tr>
<td>• Strengthen regional capacity to control TAD</td>
<td>• Laboratories upgraded and staff trained by 2006</td>
<td>• Regional reports on diseases of Office International des Épizooties (OIE) and World Health Organization</td>
<td>• External support continues.</td>
</tr>
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<td></td>
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<td>• Asian Development Bank (ADB) project review reports</td>
<td>• No natural disasters occur.</td>
</tr>
<tr>
<td><strong>Outputs</strong></td>
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<tr>
<td><strong>Component A</strong></td>
<td>Regional cooperation framework adopted by five participating countries</td>
<td>Completion: October 2005</td>
<td>• GMS countries are committed to regional TAD control.</td>
</tr>
<tr>
<td></td>
<td>Activities and work plans complementary to the existing GMS TAD projects</td>
<td>Completion: March 2005</td>
<td>• GMS cooperation remains strong.</td>
</tr>
<tr>
<td></td>
<td>Policies on TAD control in GMS developed</td>
<td>Completion: August 2006</td>
<td>• There is ready access to field sites.</td>
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<td></td>
<td>Disease information system based on TAD Info installed</td>
<td>Completion: June 2006</td>
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<td></td>
<td>Protocols for emergency preparedness and response standardized and public awareness programs prepared</td>
<td>Completion: May 2006</td>
<td></td>
</tr>
<tr>
<td><strong>Component B</strong></td>
<td>National and regional diagnostic laboratories upgraded</td>
<td>Completion: August 2005</td>
<td>• More advanced GMS countries assist the less advanced.</td>
</tr>
<tr>
<td></td>
<td>30 veterinarians and extension workers trained in disease diagnostics</td>
<td>Completion: January 2006</td>
<td>• GMS cooperation remains strong.</td>
</tr>
<tr>
<td></td>
<td>TAD control strategies defined for GMS</td>
<td>Completion: August 2006</td>
<td>• There is ready access to field sites.</td>
</tr>
<tr>
<td></td>
<td>Ex ante assessment of TAD</td>
<td>Completion: June 2005</td>
<td></td>
</tr>
<tr>
<td><strong>Activities</strong></td>
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</tr>
<tr>
<td><strong>Component A</strong></td>
<td>Develop formal partnerships with GMS countries and Association of Southeast Nations Sectoral Working Group on Livestock for TAD control</td>
<td>Five target countries, Association of Southeast Asian Nations Sectoral Working Group on Livestock (ASWGL), FAO, and OIE sign Memorandums of Understanding (MOUs)</td>
<td>• Appropriate experts are recruited on time.</td>
</tr>
<tr>
<td></td>
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<td>Various reports as above</td>
<td>• Participating countries set up national project offices on time.</td>
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<tr>
<td></td>
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<td>Official MOUs</td>
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<td></td>
<td></td>
<td>“Standards” document adopted by GMS countries</td>
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<tr>
<td></td>
<td></td>
<td>Regional disease information reports through networks</td>
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</tbody>
</table>

*Continued on next page.*
## Design Summary

- Harmonize activities of other TAD control projects in the GMS
- Identify policies and regulations for animal movements, biosecurity, use of diagnostics and vaccines
- Establish a uniform web-based disease information system
- Establish common protocols for emergency preparedness and response

## Performance Indicators/Targets

- Representatives of organizations of other TAD projects become members of PSC
- "Standards " documents prepared by the project

## Monitoring Mechanisms

- TAD Info installed in GMS countries
- Emergency preparedness and response protocols adopted by participating GMS countries

## Assumptions and Risks

- Governments agree to a uniform TAD information system and reporting.
- Access to field sites and manpower is provided.
- Adequate and motivated staff is appointed on time.

### Component B

- Upgrade regional and national diagnostic labs in the GMS
- Train field veterinarians and technicians in epidemiology and diagnostic methods in the GMS
- Develop and conduct a serological survey and develop best-bet TAD control strategies in the GMS
- Conduct ex ante economic impact study

- 2 regional labs in Thailand and one in Viet Nam; and one national lab each in Lao PDR, Cambodia, and Viet Nam strengthened
- 4 courses (2 epidemiology and 2 diagnostics) and 1 inception workshop
- Best-bet control strategies identified for pilot disease control program in target countries
- Economic impact study, demonstrating importance of TAD and better targeting of disease control, undertaken

## Inputs

- International experts
- Domestic experts
- International and local travel
- Equipment
- Training (facilitators included)
- Surveys
- Meetings, reviews, workshops
- Administration, reports, and communications
- Contingencies

### ADB

- $360,000
- $80,000
- $40,000
- $50,000
- $60,000
- $150,000
- $90,000
- $70,000
- $100,000
- **Total** $1,000,000

### FAO

- $130,000
- $6,000
- $271,000
- $3,000
- $446,000
- $24,000
- **Total** $880,000

### Additional Inputs

- Quarterly reports and newsletters
- ADB’s project review report
- PSC reports
- Survey results

- Governments provide laboratory space and staff on time.
- Appropriate experts are recruited on time.
## COST ESTIMATES AND FINANCING PLAN

($'000)

<table>
<thead>
<tr>
<th>Item</th>
<th>Foreign Exchange</th>
<th>Local Currency</th>
<th>Total Cost</th>
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<tbody>
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<td>1. A. Asian Development Bank Financing&lt;sup&gt;a&lt;/sup&gt;</td>
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<td></td>
</tr>
<tr>
<td>1. Experts</td>
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</tr>
<tr>
<td>i. Remuneration and Per Diem</td>
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<td>ii. International Experts</td>
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<td>1. Experts</td>
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<tr>
<td>a. Remuneration and Per Diem of International Experts</td>
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<td>1,880.0</td>
<td>120.0</td>
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<sup>a</sup> Financed by Asian Development Bank’s technical assistance funding program.

<sup>b</sup> Cambodia, the People's Republic of China, Lao People's Democratic Republic, Thailand, and Viet Nam.

<sup>c</sup> Food and Agriculture Organization’s Technical Cooperation Project funds and regular program.

Source: Asian Development Bank estimates.
IMPLEMENTATION ARRANGEMENTS

1. The Food and Agriculture Organization (FAO) will set up a project management office (PMO) at its Regional Office for Asia and the Pacific in Bangkok to implement the project activities. All activities will be conducted according to the guidelines of the global framework for the control of transboundary animal diseases (TAD)—a joint FAO/Office International des Épizooties (OIE) initiative on global control of TAD. FAO will (i) ensure transparency and accountability, (ii) facilitate administrative procedures, and (iii) provide legal assistance, where applicable. The ministries of agriculture in the participating countries will be the implementing agencies through their respective departments of livestock. For project implementation at the country level, project management units (PMUs) will be established and national project coordinators (NPCs) appointed in each of the participating countries by their respective governments. A formal consortium of partners involving FAO, International Livestock Research Institute (ILRI), Japan International Cooperation Agency (JICA), OIE, Vétérinaires sans Frontières (VSF), a nongovernment organization (NGO), and the private sector will be formed to provide technical input. The PMO will focus on integration and coordination of project activities, and prepare project reports, annual work plans, and budgets in consultation with PMUs. The PMO will be headed by a full-time project coordinator/chief technical advisor (PC/CTA) who will (i) provide project leadership and day-to-day management, (ii) liaise with participating countries, and (iii) ensure that project funds are used in accordance with the approved work plan and budget. Outline terms of reference are in Appendix 4.

2. A project steering committee (PSC), composed of one expert representing each of the five participating countries, FAO, OIE, JICA, Association of Southeast Asian Nations Sectoral Working Group on Livestock (ASWGL), and ADB, will be established to provide: (i) overall strategic and policy directions, (ii) guidance and oversight, and (iii) implementation guidelines to the project and PMO. Given the significant policy implications of this project, the Chair of ASWGL will also be appointed to the PSC. Other representatives will be appointed by each of the member organizations and participating countries. The PSC will approve annual work plan, budget, and quarterly and annual progress reports prepared by the PC/CTA. The PSC will ensure quality control by establishing an independent peer review mechanism. The PSC will meet twice a year in Bangkok to review and monitor project progress and approve requisite documents. The PC/CTA will prepare and distribute the agenda 2 weeks prior to the PSC meeting. The cost of PSC meetings will be paid for under the project.

3. The project will also solicit community, VSF, and private sector participation on conceptualization, design, and implementation of its activities. Communities will be involved in resource assessment and project design, and contribute to preparation of feasibility studies for introducing disease control measures. NGOs and the private sector will play a key role in identifying delivery needs and supply of technology and services for disease control in the selected target zones.

4. A project performance management system (PPMS) will be set up to ensure that project resources are managed efficiently and benefits realized. The PMO will develop the PPMS with assistance from the PMUs. The PPMS will include a participatory mechanism involving beneficiaries in project monitoring. The PMO, assisted by the PMUs, will be responsible for implementing the PPMS, including the establishment of benchmarks through initial baseline physical and socioeconomic surveys, data collection, and analysis. The PMO will submit a detailed PPMS implementation plan for ADB and FAO’s review and approval within 3 months of project commencement. The PMO will include results of PPMS surveys in its annual report to ADB and FAO.
5. The PC/CTA (international) for 20 person-months, and two domestic experts, each for 16 person-months, will be engaged to implement the project activities. Outline terms of reference for experts are in Appendix 4. In the event that it is necessary to engage experts outside of FAO, the experts will be engaged by ADB in accordance with its Guidelines on the Use of Consultants. ADB-financed equipment and material will be procured in accordance with ADB’s Guidelines for Procurement.

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Figure A3: Project Implementation Flow Organogram

ADB

ASEAN (ASWGL)

Project Steering Committee

(ADB/FAO/JICA/OIE/representatives from five countries and Chair of ASWGL)

Project Management Office

(FAO-RAP, Bangkok)
(Chief Technical Advisor)

Project Management Units

(National Project Coordinators representing Cambodia, PRC, Lao PDR, Thailand, and Viet Nam)

VSF

OIE

ILRI

OUTLINE TERMS OF REFERENCE FOR EXPERTS

A. Project Coordinator/Chief Technical Advisor (international, 20 person-months)

1. Under the direction of the lead technical and operational units of the Food and Agriculture Organization (FAO), and in close collaboration with FAO’s Regional Office for Asia and the Pacific (FAO-RAP) in Bangkok and the departments of livestock in the participating countries, the project coordinator/chief technical advisor (PC/CTA) will
   (i) implement all the activities of the project as specified in the project document including preparing detailed work plan, budget, convening project steering committee (PSC) and national project coordinators’ (NPCs) meetings, and submitting reports as outlined in the implementation schedule (Table A4);
   (ii) liaise with the directors of veterinary services/animal health in each country to ensure support and commitment to the national and regional disease control programs;
   (iii) coordinate disease control activities and policies at the national and regional levels through participation of the member countries, Association of Southeast Asian Nations (ASEAN) Sectoral Working Group on Livestock, and in line with the Office International des Épizooties (OIE) regulations and procedures and compatible with the global framework for the control of transboundary animal diseases (TAD) concepts and principles;
   (iv) facilitate purchase and installation of the appropriate equipment for the national diagnostic laboratories;
   (v) establish regional reference laboratories for each of the priority diseases, regional epidemiology unit, and disease information network;
   (vi) develop epidemiological studies and oversee the implementation of the disease survey plans through the national coordinators; and
   (vii) coordinate the impact assessment studies on the control of TAD in the region.

2. The PC/CTA will be a specialist in infectious diseases with a veterinary degree and a PhD in veterinary medicine from an internationally recognized university, and have 15–20 years international experience in coordinating multidisciplinary, regional, and international development projects in animal health. He/she will have high-level contacts within the departments of veterinary services/animal health in the target countries, and OIE and FAO at the regional and headquarters levels. He/she must have proven leadership and management skills and demonstrated expertise in TAD control in Southeast Asia. A good command of English, proven ability to write clearly and efficiently, and good public speaking skills will be necessary. He/she should be able to travel frequently in the region. The PC/CTA will be based at FAO-RAP in Bangkok, Thailand.

B. Epidemiologist/Disease Information Expert (domestic, 16 person-months)

3. Under the direct supervision of the PC/CTA and in close collaboration with the departments of livestock in the participating countries, the expert will
   (i) liaise with the national coordinators to identify country-specific training needs in epidemiology, disease surveillance, and diagnosis;
   (ii) conduct a survey to identify needs of various participating countries in building laboratory capacity to support long-term control of priority TAD;
   (iii) liaise with the regional animal production and health information system group to identify a common disease information system for the Greater Mekong Subregion (GMS) countries;
(iv) assist in coordinating the training program for epidemiology and diagnosis for the GMS countries;
(v) organize the installation of the laboratory diagnostic equipment and disease information systems in the GMS countries;
(vi) assist in setting up an epidemiology unit and disease information network to support TAD control; and
(vii) assist in preparing disease survey design, and supervise the collection and analysis of data.

4. The epidemiologist will have the following qualifications: (i) a veterinary degree and a master's degree in epidemiology with a sound grounding in basic principles of modern epidemiological methodologies, (ii) computer literacy and ability to use techniques to model disease infection and transmission dynamics, (iii) experience in an infectious disease control program at the national level, (iv) good command of spoken and written English, (vii) experience in coordinating regional meetings, and (viii) willingness to travel in the region. The expert will be based at FAO-RAP in Bangkok, Thailand.

C. Public Relations/Communications Expert (domestic, 16 person-months)

5. Under the direct supervision of the PC/CTA, and in close collaboration with the departments of livestock services in the participating countries, the expert will
   (i) develop a communications plan for the project;
   (ii) prepare quarterly reports electronically and disseminate them to all stakeholders;
   (iii) provide regular inputs to maintain the project web site up-to-date;
   (iv) participate in and report on all the meetings of the project;
   (v) be the official project photographer and record all important events of the project;
   (vi) assist in preparing and disseminating communications material to all stakeholders;
   (vii) liaise with the press in communicating project outputs;
   (viii) develop a recognized corporate brand for the project;
   (ix) write media releases, newsletters, and background briefing papers, and prepare power point presentations; and
   (x) recognize newsworthy stories and act on them by providing the same to local and international media outlets with timely and accurate briefings.

6. The expert will have the following qualifications: (i) a degree in communication with 2–3 years experience in working in a development project; (ii) good writing skills in information technology (HTML, MS Word, PowerPoint, and Photoshop); (iii) good command of spoken and written English; (iv) good interpersonal skills and the ability to work efficiently and communicate effectively in a multicultural environment; (v) ability to work independently and within tight timelines; (vi) ability to plan and conduct training seminars; and (vii) willingness to travel in the region. The expert will be based at FAO-RAP in Bangkok, Thailand.
D. FAO Experts from the Technical Cooperation Project on Avian Influenza

1. TAD Info Installation and Training Specialist (international, 4 weeks)

7. Under the general supervision of the Emergency Operations Service (TCEO) and the FAO representative; the technical supervision of the chief of Animal Health Service (AGAH), FAO headquarters; in collaboration with the regional animal health and production officer in the Regional Office in Asia and the Pacific (RAP), and in close collaboration with the East Asia regional coordinator in Beijing and other experts, the Technical Cooperation among Developing Countries (TCDC) expert will

(i) install TAD Info (Java version) as a regional network database in the target countries;
(ii) train the national project coordinator and others in operating and maintaining the regional TAD Info network;
(iii) prepare a brief technical report (in English) for submission to TCEO, the regional animal health and production officer in RAP and AGAH; and
(iv) carry out any related tasks as directed by the FAO representative.

8. The expert will be a university graduate with a degree in information technology, computer science, or a related field; will have at least 5 years of relevant general experience with animal or human disease information databases and with TAD Info in particular; and will be fluent in English. The duty station is GMS countries.

2. Laboratory Disease Diagnosis Experts (international, 2 for 1.75 person-months each, divided into 2 missions each)

9. Under the general supervision of TCEO and the local FAO representative; the technical supervision of the chief of AGAH, FAO headquarters; in close collaboration with the East Asia regional coordinator, the regional animal health and production officer, RAP, and with other experts, the laboratory disease diagnosis experts will

(i) present during one or both workshops on approved diagnostic tests and methods, quality assurance routines, standard operating procedures (SOP), and reporting protocols for avian influenza and other important avian diseases; and as required, lead roundtable discussions on topics of interest during the workshops;
(ii) visit individual laboratories, as directed, to review diagnostic methods, quality assurance practices, SOP, and reporting protocols for avian influenza and other avian diseases, with the view to reach and maintain internationally accepted norms; and
(iii) prepare a brief technical report (in English) on findings in each country visited, for submission to TCEO, the regional animal health and production officer in RAP, and AGAH.

10. The experts will be university graduates with a degree in biology or, preferably, veterinary medicine, with at least 5 years of relevant experience in diagnosis of avian diseases in animal disease diagnostic laboratories. A postgraduate degree in a relevant subject and experience in the region are desirable. The experts will be fluent in English. Their duty station is Beijing, with travel throughout the region as directed.
3. **Veterinary Epidemiologists** (international, 2 for 1.75 person-months each, divided into 2 missions each)

11. Under the general supervision of TCEO and the local FAO representative; the technical supervision of the chief of AGAH, FAO headquarters; in close collaboration with the East Asia regional coordinator, the Asia Emergency Prevention System coordinator, and the regional animal health and production officer, RAP, and other experts, the veterinary epidemiologists will

(i) make a presentation, during one or both workshops, on the principles for active and passive animal disease surveillance, sample collection, public awareness, outbreak disease investigation, outbreak reporting, and monitoring the effectiveness of surveillance plans with particular reference to poultry diseases, and as required, lead roundtable or group discussions on pertinent topics during the workshops;

(ii) visit epidemiology units in individual countries, for up to 2 weeks as directed, in order to advise on and review surveillance protocols, evaluate effectiveness, and suggest improvements as needed with the view to reach and maintain internationally accepted norms; and

(iii) prepare a brief technical report (in English) on findings in each country visited, for submission to TCEO, the regional animal health and production officer in RAP, and AGAH.

12. The experts will be veterinarians and hold a postgraduate degree in epidemiology from a recognized university, with at least 5 years of relevant experience in general animal disease surveillance and control at the field level, or specific epidemiological study of a relevant animal disease, preferably an avian disease. Relevant work experience in the region is desirable. The experts will be fluent in English. They will travel throughout the subregion as directed.
<table>
<thead>
<tr>
<th>Activities, Position</th>
<th>Project Months</th>
<th>Person-Months</th>
</tr>
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<tr>
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<td>1–4</td>
<td>5–8</td>
</tr>
<tr>
<td>1. Develop Regional Coordination Framework</td>
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<td>2. Upgrade Regional and National Laboratories</td>
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<td>3. Training: Epidemiology, Diagnostics, Reporting</td>
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<td>4. Installation of Country-specific TAD/Info</td>
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<td>5. Ex ante Socioeconomic Impact</td>
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<td>6. Public Awareness Program-National/Regional</td>
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<td>a. Chief Technical Advisor</td>
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<td>c. Laboratory Disease Diagnosis Experts (2)</td>
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**Inception meeting**

**Reports**
Inception Report
Midterm Report
Draft Final Report
Final Report

**Project Steering Committee Meetings**

**Output to Purpose Reviews**

**Workshops**

Sources: Asian Development Bank and Food and Agriculture Organization staff estimates.