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TECHNICAL ANNEX

FOR A

PROPOSED CREDIT OF SDR3.5 MILLION

(US\$5 MILLION EQUIVALENT)

TO

THE SOCIALIST REPUBLIC OF VIETNAM

FOR AN

AVIAN INFLUENZA EMERGENCY RECOVERY PROJECT

July 2, 2004

Rural Development  
And Natural Resources Sector Unit  
East Asia and Pacific Region

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## CURRENCY EQUIVALENT

(May 24, 2004)

Currency Unit = Vietnamese Dong (VND)

1 VND = US\$0.000064

1 US\$ = 15,726 VND

## FISCAL YEAR

January 1 – December 31

## ABBREVIATIONS AND ACRONYMS

ADP	- Agricultural Diversification Project (IDA)
AI	- Avian Influenza
AIERP Project	- Avian Influenza Emergency Recovery Project
AFD	- <i>Agence Française de Développement</i>
AHW	- Animal Health Workers
AIRWG	- Avian Influenza Recovery Working Group
AISC	- Avian Influenza Steering Committee
APMB (MARD)	- Agricultural Project Management Board
CDC	- Communicable Diseases Center (Atlanta)
DA	- Department of Agriculture (MARD)
DAH	- Department of Animal Health (MARD)
DO	- Development Objective
ERL	- Emergency Recovery Loan
FAO	- Food and Agricultural Organization
FMR	- Financial Monitoring Report
GP	- Grand-Parent (stock)
HPAI	- Highly Pathogenic Avian Influenza
IAPSO	- Inter-Agency Procurement Service Office
IS	- International Shopping
ICARD	- Information Center for Agriculture and Rural Development (MARD)
ICD	- International Cooperation Division (MARD)
IPSAS	- International Public Sector Accounting Standards
MARD Development	- Ministry of Agriculture and Rural Development
M&E	- Monitoring and Evaluation
NAP	- National Action Plan (for AI control)

NAEC	- National Agricultural Extension Center (MARD)
NIAH	- National Institute of Animal Husbandry (MARD)
NIVR	- National Institute of Veterinary Research (MARD)
NS	- National Shopping
NVDC (MARD)	- National Veterinary Diagnostic Center
OIE	- <i>Organisation Internationale des Epizooties</i>
PMU	- Project Management Unit
PPIU	- Provincial Project Implementation Unit
PPR	- Project Preparation Report
QBCS	- Quality-Based Consultant Selection
RVC	- Regional Veterinary Center
SARD	- Sub-Department of Agriculture and Rural Development (Provincial Level)
S&M	- Surveillance and Monitoring
SOE	- Statement of Expenses
SPS	- Sanitary and Phytosanitary
SBV	- State Bank of Vietnam
TCP	- Technical Cooperation Program (FAO)
TOR	- Terms of Reference
TOT	- Training of Trainers
VBARD	- Vietnam Bank for Agriculture and Rural Development
VWU	- Vietnam Women's Union
WHO	- World Health Organization

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**THE SOCIALIST REPUBLIC OF VIETNAM**  
**TECHNICAL ANNEX FOR A PROPOSED CREDIT FOR AN**  
**AVIAN INFLUENZA CONTROL EMERGENCY PROJECT**

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**MAP**

IBRD Map No. 32922



**THE SOCIALIST REPUBLIC OF VIETNAM**

**TECHNICAL ANNEX FOR A PROPOSED CREDIT FOR AN**

**AVIAN INFLUENZA EMERGENCY RECOVERY PROJECT**

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## **I. COUNTRY BACKGROUND**

### **Background**

1. Since the Government of Vietnam declared the presence of highly pathogenic avian influenza (HPAI)<sup>1</sup>, an estimated 44 million poultry have either died of the disease or have been culled<sup>2</sup>. The disease has spread to most countries in Southeast Asia, and Vietnam is one of two countries in the region in which human fatalities from the disease occurred as the result of the direct transmission of the virus from poultry to humans. The H5N1 HPAI epidemic in Vietnam has caused at least 15 human deaths and a much larger number of suspected infections. As yet, however, the disease has not developed the capacity to spread between humans. After the first confirmed cases, occurring on 25 December 2003, the outbreak spread rapidly throughout the country, overwhelming the capacity of the veterinary services and disease surveillance systems to contain the epidemic. Lacking the necessary fine-tuned field monitoring systems and diagnostic capacity to deal with the outbreak by means of selective, strategic containment, the Government adopted a policy of depopulating large areas under which both infected and non-infected poultry were culled. All poultry movement was halted, live-poultry markets were closed, and stringent disinfection and other biosecurity measures were introduced. A new outbreak was reported on May 4 in the Ho Chi Minh area. Since early March, these measures have been relaxed on a province-by-province basis whenever it is observed that 30 days have elapsed since the last outbreak.

2. Aside from the significant public health implications, total poultry losses from the outbreak amount to nearly one-sixth of the national poultry inventory. These losses are creating serious economic hardship, not only for commercial and rural poultry owners but also for the poultry service trade. With the withdrawal of poultry meat from the market, the prices of other meats have risen by as much as thirty percent, well beyond the reach of lower-income consumers. While the epidemic appears to have been brought under control, there remains a strong possibility that with the resumption of poultry trade and the re-stocking of depopulated farms, new flare-ups will occur. Since these flare-ups may well coincide with the season of human influenza the risk of genetic exchange between the two types of virus, whilst concurrently infecting a common host, remains a remote possibility with potentially serious public health outcomes should human to human transmission result.

3. The proposed emergency recovery project would, support the National Action Plan for the control of HPAI. In particular, it would assist the government in strengthening its disease surveillance system to identify new HPAI outbreaks in a timely manner, rehabilitate affected poultry farmers and strengthen the diagnostic and field surveillance mechanisms to better guard

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<sup>1</sup> First reported to OIE on 8 January 2004.

<sup>2</sup> Culling has been imposed to control the disease but in some cases poultry producers volunteered their flock for culling due to an inability to sell as the result of closed poultry markets.

against future outbreaks (see Appendix 1 for project design summary and log-frame). Monitoring and surveillance to confirm the absence of HPAI in de-stocked areas prior to restocking is of utmost priority and needs to be undertaken immediately, well before scheduled project implementation. Similarly, all breeding farms must be certified free of infection before releasing chicks on the market. Funds from other ongoing projects (such as FAO/TCP) should be utilized to support these immediate needs.

4. The government's veterinary, diagnostic and surveillance services were overwhelmed by the recent HPAI outbreak, which has highlighted the need to strengthen the National Action Plan, implement equitable mechanisms for compensating affected farmers, institute a rapid-response surveillance system to identify and control animal disease outbreaks, establish a rapid reporting system, expand public awareness and information related to the human health hazards of zoonotic disease, and develop strategies for reorganizing the poultry sector as a means for dealing with future outbreaks.

### **Damage Assessment**

5. In terms of economic losses, the total cost of depopulating poultry from infected areas, along with the disinfection of farms and bird disposal is estimated to be VND600 billion (US\$40 million). In addition, losses of a similar magnitude resulted from upstream and downstream impacts on commercial and rural poultry holders and poultry traders, feed mills, sale of day-old chicks by breeding farms and lost production by broiler and layer farms. Containing the epidemic is estimated to have cost the government VND600 billion. The estimated total damage assessment thus amounts to VND1,800 billion (US\$120 million), equivalent to 0.3% of GNP. In comparison, the estimated project investment cost only of US\$6.2 million suggests a highly favorable economic rate of return for project interventions. [Appendix 2](#) presents an assessment of the economic impact of avian influenza epidemic.

## **II. IDA RESPONSE AND STRATEGY**

### **Response to Avian Influenza Emergency**

6. The government reacted forcefully to contain the HPAI epidemic, once its scope and ferocity became apparent. It established a multi-ministerial AI Steering Committee (AISC) chaired by the Minister of Agriculture and Rural Development, and comprising representatives of the Ministries of Agriculture and Rural Development (MARD), Health, Finance, Planning and Investment and others. A National Action Plan for the Control of HPAI was drafted to provide guidelines for containing the epidemic, to be implemented by the AI Working Group, comprising the various technical animal husbandry and animal health institutes, the two northern (Hanoi) and southern (Ho Chi Minh City) regional veterinary diagnostic laboratories, and the provincial, commune and village level veterinary services (SDAH). At the commune and village levels, Commune AI Control Committees, comprising commune leaders, law and order personnel, and animal health workers, sampled affected farms and supervised the control of animal movement, culling and disposal.

7. As a result of the wholesale culling of diseased and unaffected birds, albeit at serious cost to the poultry sub-sector, the government has been remarkably successful in containing the HPAI outbreak. However, the epidemic has highlighted several weaknesses in the animal health services system. Diagnostic laboratories were overwhelmed and the six Regional Veterinary Centers (RVCs) proved to be rather ineffective. The lack of epidemiological resources prevented strategic culling and control measures, with the result that culling was likely to have been higher than required. Operating budgets proved to be inadequate to bear the additional cost of physical and human resources to deal with the outbreak, a compensation policy for affected poultry holders was lacking and under funded, and the communications linkages between the central government and its 64 provinces were insufficient in such an emergency situation.

8. The response of the international community to the epidemic has been substantial. WHO, OIE and FAO each sent teams and experts to assist the government in containing the outbreak, and several bilateral assistance agencies and NGOs donated protective clothing, disinfectants and other goods and services. It is estimated that, by end-February 2004, some 160 person-months of expert input had been provided in order to deal with the outbreak. As the HPAI epidemic spread across Southeast Asia, FAO, OIE, and WHO called two regional emergency meetings to discuss control strategies, share information, and forge linkages between the affected and non-affected countries in the region. FAO approved regional and country-focused TCPs to provide technical assistance with disease diagnosis and epidemiological surveillance. Vietnam is presently hosting an emergency assistance TCP team (TCP/VIE/3003(E)) to assist MARD/DAH with disease containment strategies and strengthening of the diagnostic system. This TCP project would mesh with the design of the proposed AIERP, which would provide interventions to follow the TCP emergency effort now underway.

#### **Response Gap and the response by IDA**

9. The World Bank/IDA responded to a request by the Government to prepare an emergency recovery project and a World Bank/FAO Cooperative Program preparation team visited Vietnam from March 3 to 26, 2004 to work with MARD/ICD to identify and prepare the proposed project. The Team collaborated closely with a mission from *Agence Française de Développement* (AFD) that produced a report on the HPAI outbreak, its consequences and recovery strategies. The Team also liaised daily with veterinary diagnostic and epidemiological consultants, in Vietnam under the FAO/TCP to advise the government on recovery and preventive strategies. In view of the scope and timing of the FAO/TCP input, the project design will build on its immediate-term inputs by designing a medium-term project with a 2-year lifespan.

#### **Lessons Learned**

10. Relevant lessons for the design of the proposed project (AIERP) can be drawn from previous IDA and FAO-supported emergency recovery projects outside Vietnam. Most of these projects have focused on the supply of planting materials (seeds and fruit trees) and other agricultural inputs. Lessons learned indicate that project success depends entirely on the speed of the inputs supplied. In production systems, particularly for smallholders, speedy, efficient and transparent distribution of suitable key inputs is clearly a major factor in limiting the impact of a crisis and hastening recovery. In East Timor, IDA supported an Agricultural Rehabilitation Project which involved the restoration of priority assets, including poultry and ruminant livestock following the violence that preceded that country's independence. The same lessons indicated above can be useful for AIERP implementation.

11. Although IDA has not supported previous emergency projects in Vietnam, it did support two emergency projects in neighboring Cambodia: the Emergency Rehabilitation Project (Cr. 2550) approved in 1993, and the Economic Rehabilitation Project (Cr. 2781) in 1995. A performance audit of these two projects drew the following relevant lessons. Project design should: (a) be consistent and cohesive, (b) include no policy reforms, and (c) be simple in design and take account of limited Borrower capacity. Other important lessons from past emergency projects in the region suggest that: (a) speed of appraisal and implementation are crucial to project success, (b) procurement needs to be flexible and should begin at an early stage, (c)

mitigation measures should be included to minimize repeat disaster, and (d) project design should remain simple for rapid execution<sup>3</sup>.

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<sup>3</sup> From: Gilbert, Roy, and Kreimer Alcira, 1999. *“Learning from World Bank’s experience of natural disaster related assistance.”*

12. The implementation of the EU-financed Vietnam: Strengthening Veterinary Services Project (SVSP) was hampered by design complexity well beyond the capacity of MARD counterpart staff. Attempts to address structural and policy issues under the project failed because government was not ready for the structural changes proposed. Lessons learned from the project completion review of SVSP included the need for design simplicity, the need to realistically assess counterpart absorption capacity, and for effective communications. All of the above factors will play a significant role in the implementation of AIERP.

#### **Rationale for IDA involvement**

13. Soon after the onset of the crisis, MARD requested World Bank assistance to help limit the spread of the AI outbreak and to consider an emergency recovery operation for Vietnam. MARD considers that the Bank has an important role to play by helping the Government to coordinate donor assistance.

14. The Government is very much in need of expert technical advice on the strategy it should follow to recover from the present crisis and for the future control of AI. The recent epidemic clearly revealed the difficulties for veterinary and extension services to cope with an animal health epidemic of this nature. Because of its many years of close collaboration with MARD, the Bank can communicate effectively with the GoV both on agricultural policy and technical matters. On the technical aspects, the Bank has accumulated world-wide experience in the animal health sector and draws on a strong pool of expertise within the SASKI Thematic Group, and maintains strong ties to international organizations such as FAO, OIE and WHO. The Bank has also been involved in longer term matters concerning WTO accession. The build up of adequate capacity to meet SPS requirements are of critical importance for Vietnam.

15. The proposed AIERP would provide support only for two years. However, it could also provide a useful basis for possible longer-term support for development and restructuring of the livestock sector, perhaps as a component of a follow-up to the ongoing Agricultural Diversification Project.

### **III. PROJECT DESCRIPTION**

#### **Project objectives**

16. The project's overall goal is to address the short and medium-term actions to be undertaken by the Government to strengthen its veterinary surveillance and diagnostic infrastructure in order to avoid, or at least minimize, a recurrence of AI that would further damage the poultry sub-sector.

17. The development objectives of the proposed project are threefold in support of the National Action Plan for the control of Avian Influenza Epidemic: (a) to strengthen disease surveillance and diagnostic capacity in the control of HPAI; (b) to strengthen the poultry sector infrastructure to better cope with serious disease outbreaks; and (c) to safeguard human health by improving public awareness and information. A project design summary and log-frame are presented in Appendix 1.

18. Long-term involvement. The above objectives should be viewed as the first phase of a longer-term program aimed at restructuring Vietnam's poultry sub-sector and strengthening the veterinary services system to deal with other potentially destructive infectious disease outbreaks. The proposed project would therefore serve as a pioneering effort to evaluate the methodologies most suitable for emergency preparedness and longer-term intervention.

## **Project Description**

### ***Component A – Strengthening animal disease surveillance, diagnostic capacity, and highly pathogenic avian influenza virus research***

19. The Component is designed to strengthen epidemio-surveillance network for animal diseases, expand and upgrade the existing diagnostic capacity of one central and four regional veterinary diagnostic laboratories to better identify infectious animal diseases, and strengthen research on HPAI virus. A rapid-response field surveillance and reporting system will be established to assist these laboratories in better identifying and reporting animal disease outbreaks. Activities under this component would be carried out by the Department of Animal Health (DAH). The component comprises five subcomponents presented below (see detailed description in [Appendix 3](#)).

20. Subcomponent A.1 – Strengthening animal disease surveillance. This subcomponent will support both public and private veterinary services by developing effective operating procedures at all levels and training of field staff in detection and reporting of clinical HPAI disease. This subcomponent would be co- financed by the FAO TCP.

21. Subcomponent A.2 – Diagnostic capacity upgrading. This subcomponent will support diagnostic laboratory capacity upgrading of the National Veterinary Diagnostic Center (NVDC) in Hanoi, and four Regional Veterinary Centers (RVC) located in Ho Chi Minh City, Da Nang, Vinh and Can Tho. This subcomponent would be co- financed by the FAO TCP.

22. Subcomponent A.3 – Strengthening HPAI virus research. This subcomponent will support the establishment of a Virus Reference Laboratory (VRL), through the provision of technical assistance, laboratory equipment, reagent and training, to allow for HPAI detection and typing. This subcomponent would be co- financed by the FAO TCP.

23. Subcomponent A.4 – Strategic Studies. This subcomponent will finance the preparation of two strategic studies, including the preparation of a National Contingency Plan for HPAI; and self-evaluation of veterinary services. This subcomponent would be entirely financed under the FAO TCP.

24. Subcomponent A.5 – Emergency Outbreak Containment Plan. The subcomponent will support the preparation and financing of a rapid mobilization plan to respond quickly and effectively to recurring AI outbreaks in three project or non-project provinces during the project lifespan.

### ***Component B – Poultry subsector rehabilitation***

25. The Component is designed to support the rehabilitation of the poultry subsector which was severely affected by the avian influenza epidemic by providing new Grand-Parent (GP) poultry breeding stocks and upgrading the biosecurity of government-owned GP poultry breeding farms. A number of strategic studies will be also conducted to assist poultry sector development. Activities under this component would be carried out by the Department of Agriculture (DA). The component comprises three subcomponents presented below (see detailed description in [Appendix 4](#)).

26. Subcomponent B.1 – Breeding stock supply. Under this subcomponent a total of 15,000 GP poultry and ducks would be imported in PY1 and PY2 to augment the GP stock of twelve (12) poultry breeding farms under MARD.<sup>4</sup> This stock would be specifically suitable for village rearing. Replacement day-old chicks would be supplied from this stock via multiplier farms to village poultry holders. The procurement of breeding stock will be conditional on the completion of satisfactory biosecurity measures (see subcomponent B.2 below) on those GP farms in which the newly arrived GP stock would be housed.

27. Subcomponent B.2 – Upgrading biosecurity of GP farms. The subcomponent would support biosecurity upgrading of the above-mentioned 12 GP poultry farms under MARD, to reinforce their defenses against future infectious disease outbreaks. Biosecurity upgrading would encompass the installation of quarantine facilities, perimeter security fencing, improved water and waste disposal systems, personnel disinfection entry units and upgraded laboratory facilities. Following a preparation of engineering biosecurity and construction designs of all 12 GP farms by national consultants, an internationally recruited poultry farm biosecurity specialist would be contracted to review and evaluate designs, and evaluate biosecurity measures based on which project-supported biosecurity upgrading would take place. The biosecurity evaluation under this subcomponent would be financed by the FAO TCP.

28. Subcomponent B.3 – Strategic studies. The subcomponent would finance two strategy studies on compensation policy, poultry sector restructuring, and a survey of poultry losses resulting from the AI epidemic. The compensation policy study would provide a framework for an equitable national compensation policy by which to provide restitution to producers following serious animal disease outbreaks. The poultry sector restructuring study would provide guidelines to better prepare the poultry sector to withstand serious disease outbreaks. The poultry losses survey would identify the causes of poultry culled, either for disease or preventive reasons, in the ten project provinces. This subcomponent would be entirely financed under the FAO TCP.

### ***Component C – Public awareness and information***

29. The component is designed to safeguard human health, in particular for extension staff, animal health workers, poultry producers and their families, by improving public awareness and information. The component will be implemented in all ten project provinces and will provide support: (a) to carry out a needs assessment of existing poultry extension and public information programs; (b) to develop community-based extension to farmers and enhance public awareness; and (c) to enhance monitoring and evaluation of public awareness and extension activities under the project. Activities under this component would be carried out by the National Agricultural Extension Center (NAEC), in collaboration with the private sector agri-business poultry enterprises. The component comprises three subcomponents presented below (see detailed description in [Appendix 5](#)).

30. Subcomponent C.1 – Capacity Building in Communication and Public Information. This subcomponent will support the needs assessment of veterinary and livestock extension staff at the central, provincial, district, commune and village levels, the preparation of training programs

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<sup>4</sup> 5 farms managed by NIAH, 1 farm managed by the Agricultural Research Institute of South Vietnam; and 6 farms managed by the General Livestock Company

and materials, the training of trainers and the training of farmers in animal health and husbandry and the provision of technical assistance including an education specialist, an animal health specialist , a journalist and a web development specialist.

31. Subcomponent C.2 – Developing Pilot models for Community-based Rapid Communication. This subcomponent will support a training course in communications methodology for extension and veterinary staff at the provincial level, training of trainers, needs assessment on communications requirements for poultry producers, the preparation and dissemination of information materials, and the provision of communications and information equipment for provinces, districts and communes.

32. Subcomponent C.3 – Monitoring and Evaluation of Component activities. This component will support training in participatory monitoring and evaluation at all administrative levels, mid-term evaluation workshop, development of an action plan for M&E, and replication of successful models.

### ***Component D – Project Management***

33. This component covers project management and will be managed by the AIERP/PCU. This unit will be placed within the existing PCU of the IDA-funded Agricultural Diversification Project, now under implementation. The PCU will report directly to the Agricultural Project Management Board (APMB) under MARD, which oversees project implementation of all MARD-associated projects funded by international organizations. The component would finance incremental PCU investment and operating costs such as office rental, travel, office equipment, and human resource support.

### **Project Cost and Financing**

34. Project cost. The total cost of the proposed AIERP is estimated to be US\$6.20 million<sup>5</sup> equivalent, with a foreign exchange component of US\$4.20 million equivalent (about 70 percent), and taxes and duties estimated at US\$0.50 million for taxes (about 8 percent) which will be financed by Government counterpart funds.

35. Project financing. The total financing required is US\$6.2 million, of which IDA would finance US\$5 million equivalent and FAO would finance US\$0.55 million equivalent, mainly for technical assistance and training. In addition, MARD is exploring the possibility of co-financing under the on-going Danida Agricultural Sector Programme Support for a total amount of approximately US\$0.45 million which would reduce the need for IDA credit accordingly. The Government would finance the balance.

### **Table: Total Cost Estimate (including Contingencies)**

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<sup>5</sup> The total estimated cost is US\$8.0 million if a US\$1.8 million JSDF Grant is included. In the event that the JSDF Grant does not materialize, GoV has agreed to borrow additional US\$400,000 under the IDA Credit to finance animal disease surveillance and public awareness campaigns activities at the community level, which are critical for the success of the project.

Component	VND (Million)	US\$ ('000)	%
<b>A. Strengthening Diagnostic Capacity, Disease Surveillance, and HPAI Research</b>			
A.1. Strengthening Disease Surveillance	20,470	1,300	21.0
A.2. Strengthening Diagnostic Capacity	12,509	790	12.8
A.3. Virus Reference Laboratory (VRL) in NIVR	6,158	390	6.3
A.4. Strategic Studies	2,294	150	2.4
A.5. Emergency Outbreak Containment Plan	2,019	130	2.1
<b>sub-total</b>	<b>43,450</b>	<b>2,760</b>	<b>44.6</b>
<b>B. Poultry Sector Rehabilitation</b>			
B.1. Breeding Stock Supply	17,847	1,130	18.3
B.2. Poultry Farm Biosecurity	13,491	860	13.9
B.3. Strategic Studies	2,154	140	2.2
<b>sub-total</b>	<b>33,492</b>	<b>2,130</b>	<b>34.4</b>
<b>C. Public Awareness and Information</b>			
C.1. Capacity Building in Communications and Public Information	9,821	630	10.1
C.2. Community Public Awareness and Information Campaigns	2,871	180	2.9
C.3. Monitoring and Evaluation	2,135	140	2.2
<b>sub-total</b>	<b>14,827</b>	<b>950</b>	<b>15.2</b>
<b>D. Project Management</b>	<b>5,621</b>	<b>360</b>	<b>5.8</b>
<b>Total Project Costs</b>	<b>97,390</b>	<b>6,200</b>	<b>100</b>

36. Complementary Financing. In addition, on May 14, 2004, the Bank applied for a JSDF Grant, in the amount of approximately US\$1.8 million, to support smallholder recovery from Avian influenza and vigilance against further outbreaks. The JSDF Grant would complement the AIERP at the local (commune and village) level. A final decision from the Government of Japan will be made only in late July, following project negotiations. In order to meet the possible financing shortfall, the Government has agreed to borrow from IDA an additional US\$0.40 million (which increases the total to US\$5 million) to finance animal disease surveillance and public awareness campaigns at the community level, which are regarded as critical for the project as a whole. In the event that the JSDF Grant is approved, this amount would be cancelled or reallocated to other activities as mutually agreed.

37. One of the main objective of the JSDF Grant is to support selected smallholder farmers who suffered heavy losses from the avian influenza epidemic and were not compensated with the provision of replacement poultry. This Smallholder Poultry Restocking Component involves the utilization of grant funds, to be used as seed money to restock households in some of the 10 project provinces and, if warranted, in some non-project provinces. Each beneficiary would receive, in-kind packages of young poultry or ducklings of a size commensurate with local needs and conditions. The Vietnam Women's Union (VWU) and DARD would select the beneficiaries on the basis of livelihood lost during the AI outbreak without having received other forms of compensation. VWU and DARD would also provide poultry management training. The procurement of poultry would be managed by DA and implemented by NIAH and General Livestock Company. Poultry would be purchased from AI-free suppliers, certified by DAH. Poultry would be distributed with support from the Vietnam Women's Union (VWU) which has considerable prior experience in the distribution of poultry in 6 of the 10 project provinces. The component is divided into two set of activities: US\$1,000,000 for the grant program and funds for the identification of beneficiaries, training and technical support and monitoring of the grant program.

## **IV. INSTITUTIONAL ARRANGEMENTS AND PROJECT IMPLEMENTATION**

### **Project Organization and Management**

38. Oversight, Coordination and Monitoring of Project Activities. The existing National Steering Committee (NSC) for Avian Influenza Control, chaired by the Minister of Agriculture and Rural Development, will provide general policies and guidelines to project implementation, review annual work plans, and ensure coordination and linkages with relevant agencies. The NSC is composed of human health and veterinary agencies tasked with overseeing national AI control and eradication operations. In addition, Donor coordination is critical for emergency operations and would be the responsibility of the International Support Group (ISG) Secretariat in MARD.

39. The National Project Coordination Unit (PCU) of the on-going IDA-funded *Agricultural Diversification Project* will be responsible, under the overall guidance of the NSC, for day-to-day implementation, supervision, and project monitoring. The PCU will be strengthened by the

recruitment of additional staff responsible for overall administration, procurement, and financial management of the project. It is agreed that at least one senior officer from each DAH, DA, and NAEC will be seconded to the PCU to guide project implementation. These officers could be appointed as *Project Coordinators* in charge of the respective component for which their line agency is responsible. The PCU, under the direction of the NSC, will be responsible for coordinating with DAH, DA, NCAE and other institutions to guide and monitor project implementation at the provincial and local levels. Detailed implementation arrangements at the central and provincial levels are presented in Appendix 7.

## **Accounting, Financial Reporting and Audit Arrangements**

40. Financial Management Assessment. An assessment of the PCU's financial management capacity has been carried out. It has been agreed that the PCU will operate the project's financial management system to facilitate the project's implementation start-up as it is familiar with the Bank's policies and procedures on financial management. A US Dollar Special Account will be opened at a commercial bank acceptable to IDA.

41. The project will produce a quarterly financial management report (FMR). In addition, financial reports between the PCU and PPIUs will be reconciled prior to the preparation of the FMR. Project accounts will be audited by a recognized independent auditor. The IDA share of eligible expenditures incurred by the PPIUs will be pre-financed by the government and reimbursed from special account upon submission of approved expenditure documentation. In addition, a project financial management manual acceptable to IDA will be prepared and adopted by the project prior to effectiveness. Full details of financial management arrangements are found in Appendix 9.

## **Retroactive Financing**

42. Retroactive financing of up to US\$ 0.3 million may be made for eligible expenditures incurred after May 15, 2004 and prior to the day of effectiveness. This provision would allow the project to strengthen surveillance activities at a time when the risk of resurgence of the disease is high. The Borrower is aware of the conditions for retroactive financing and of the risks associated with any payments made in expectation of retroactive financing, provisional agreement which does not commit the Bank to making a loan for the operation or to financing such payments.

## **Procurement**

43. Procurement Capacity Assessment. An assessment of the procurement capacity of the AIERP PCU was conducted as part of the appraisal mission and the capacity was found to be adequate. The PCU is fully functional and staffed with procurement staff having adequate procurement experience gained over the last five years of implementation of the Agricultural Diversification Project. Procurement risks and corrective measures have been identified and are presented in Appendix 8.

44. Procurement Methods and Procurement Plan. The emergency nature of the project requires the use of methods that would allow procurement to be conducted in the shortest possible time while still ensuring a reasonable degree of competition and transparency. Given the small value and nature of procurement packages, the proposed methods include shopping, procurement from specialized UN agencies, direct contracting, individual consultants, least cost and consultant's qualification in accordance with the provisions of the Bank Procurement Guidelines and Consultant Guidelines, April 2004. A procurement plan was developed by MARD during the appraisal and has been finalized and agreed upon during the Negotiations (see Appendix 8).

## **Environmental and Social Aspects**

45. The project is designed to assist with recovery of the poultry subsector in an environmentally and socially sustainable manner. For an emergency credit operation such as this, with insufficient time for preparing detailed studies incorporating environmental and social safeguards, mainstreaming social and environmental aspects in project design itself is the preferred approach. The project would have a positive impact on environmental health, reducing the risks to laboratory staff by improving the safety of handling and testing AI sampling at four provincial and two national laboratories that are currently engaged in such work. The project's assistance to MARD to develop a strategy for managing future AI outbreaks provides an opportunity to ensure environmental and social sustainability, in two areas: (a) mainstreaming environmental safeguards into protocols and procedures for the culling and disposal of animals during an outbreak, in particular by adopting OIE (World Organization for Animal Health) standards in these areas; and (b) development of GoV's policy on compensation for poultry farmers affected by future outbreaks. For each of these activities (upgrading laboratory safety and efficiency and developing the strategy for future AI outbreaks), the project would enable the adoption and use of OIE standards. The project includes technical assistance delivered by FAO for achieving these standards. A more detailed description of environmental and social aspects is presented in [Appendix 10](#).

## V. PROJECT BENEFITS AND RISKS

### Project Benefits

46. The recent AI epidemic has been a financial disaster for Vietnam's commercial poultry industry and has also affected the livelihood of millions of smallholder poultry-keepers. Of a total of around 12 million farming households it is estimated that over 70% keep poultry, constituting an especially important source of household cash income, especially for women. Moreover, many households in urban and peri-urban areas raise 15-20 backyard poultry which provides 7% of cash income for the poorest quintile of households<sup>6</sup>.

47. The main benefits to the national economy would be the restoration of productive assets and economic activities, mainly in rural areas, through: (a) the rehabilitation of the poultry subsector which was severely affected by the epidemic; (b) the strengthening of Vietnam's animal disease surveillance system, both public and private, and diagnostic capacity, to identify at the earliest time new HPAI outbreaks; and (c) the provision of information on infectious animal disease outbreaks and advice on animal health and safety to extension staff, poultry producers and the general public.

48. Project beneficiaries will include those poultry farmers and traders who lost their poultry or ducks as the result of the AI epidemic, and others who are protected against such losses in future. Other direct benefits include upgrading national diagnostic capacity by supporting national and four regional veterinary diagnostic laboratories with equipment and training, stocking 12 Grand-Parent (GP) poultry breeding farms with replacement GP poultry stock,

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<sup>6</sup> Vietnam VHLSS 2002.

providing increased bio-security, and institutional strengthening of MARD through the conduct of strategic studies and surveys.

### **Project Risks**

49. Project risks in the implementation of short-term emergency recovery operations often tend to be substantial, and should be dealt with thoughtfully to mitigate as much as possible. The following potential risks exist in the implementation of AIERP:

- Risk for achieving the project Development Objective (DO). After two years the Government's institutional animal health infrastructure, despite project inputs, may remain structurally incapable of assuring adequate monitoring and surveillance (S&M) for avian influenza<sup>7</sup> (as for other animal diseases of epidemic potential in Vietnam<sup>8</sup>), and hence incapable of preventing or early detection of further AI outbreaks. The Project would introduce new operational mechanisms to Vietnam for the monitoring and surveillance of epidemic diseases, which may need to be further supported under a longer-term project.
- Risk for project relevance. Over the short term a major recurrence of AI could take place before the agencies responsible have had time to prepare an adequate emergency response plan, which would overtake the timetable for starting the proposed project. The ongoing FAO/TCP, now approved, will be assisting the MARD/DAH to prepare and implement such a plan.
- Risk for project sustainability. Government capacity and AI surveillance and control systems developed under the proposed recovery project may not be adequately maintained for lack of government budget support. This is an issue that will need to be kept under close review.
- Risk for project sustainability. Replacement poultry stocks acquired by beneficiaries under the restocking program could be decimated by a resurgence of AI, poor management or other poultry diseases<sup>9</sup>. The project activities under components A, B and C would assist in mitigating this risk.
- Risk for project implementation and DO. GoV compensation scheme of AI-affected farmers may fail to be implemented in a timely and transparent fashion, thereby undermining poultry consumer and producer confidence. This is an issue that needs to be kept under review.
- Risk for project implementation and DO. Lengthy government procurement and budget procedures, in combination with World Bank Procurement and Disbursement rules, may delay the timely acquisition of project inputs. This is an issue that needs to be kept under close review by APMB and PCU.

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<sup>7</sup> Recent report of AFD recommends a 10-year restructuring and capacity building program.

<sup>8</sup> e.g. swine fever, foot and mouth disease, Newcastle disease, to name three animal diseases of major economic importance in Vietnam which remain substantially uncontrolled.

<sup>9</sup> Normal mortality in backyard scavenger poultry was reported by NIAH at almost 50% p.a.

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**PROJECT DESIGN SUMMARY AND LOG FRAME**

**A. PROJECT DESIGN CONSIDERATIONS**

1. As an emergency recovery project, the proposed AIERP must respond to three criteria. It must be (a) simple and flexible in design, (b) able to disburse quickly, and (d) avoid addressing prevailing institutional matters.
2. Design simplicity is an issue in a veterinary services system which requires strengthening on many fronts, and which is constrained by gaps in central-provincial government coordination. Specific task implementation assigned to each of the project line agencies, without forging unnecessary, complicated linkages, may avoid this constraint in the short run, but will not suffice over the longer term. The limited communications between central and provincial entities poses a special problem for rapid upstream and downstream field surveillance information flows. By working through the four Regional Veterinary Centers (RVCs) that will be upgraded for field surveillance, which in turn report to their northern (NVDC/Hanoi) and southern (HCMC) laboratories, the constraint of coordinating with the 10 project provinces will be avoided.
3. Design Flexibility is best achieved through an open-ended project design, under which blocks of the project credit/grant would be assigned, under an agreed timeframe, to groups of activities and related procurement. The project would, in effect, be designed as its lifespan progresses, with clearances obtained for (unforeseen) activities as they arose. The Procurement Plan plays an important role in the open-ended approach. This design would also lend itself to addressing the eventuality that renewed outbreaks took place in unforeseen places during project implementation, so that standby project funds could be released quickly to quell such outbreaks.
4. Rapid Procurement and Disbursement is of paramount importance in a successful emergency project intervention, and often poses the greatest constraint. Therefore the entire incremental PCU structure for the proposed project would be appointed and in place before effectiveness, to begin work on the necessary procurement schedules. In particular, an experienced procurement officer, to be funded under FAO/TCP, has been hired to assist the PCU to prepare detailed procurement plans for 2004 and 2005, finalizing procurement guidelines to be included in the PIM, and completing key bidding documents.
5. Avoiding existing institutional constraints is perhaps the most challenging issue to deal with, especially where such constraints may play a significant role in successful implementation. The rather rigid, centralized command structure of MARD can make rapid implementation difficult, unless disbursement procedures are streamlined. Such an arrangement

is crucial for the rapid implementation of the project, under which US\$6.2 million has to be disbursed over two years, with at least 75% disbursement by the end of December 2005.

## B. LOGFRAME AND PERFORMANCE INDICATORS

Narrative Summary	Key Performance Indicators	Monitoring and Evaluation	Critical Assumptions
Sector-related CAS Goal	Sector Indicators	Sector Reports	(from Goal to Bank Mission)
Strengthened national infrastructure against recurrence of Avian Influenza (AI) outbreaks and protection of poultry industry and consumers	Rapid, effective response to recurring AI outbreaks	Department of Animal Health, OIE and FAO disease outbreak reports on type A notifiable diseases	GOV commitment to protecting the poultry industry and human welfare
Project Development Objectives	Outcome / Impact Indicators	Project reports	(from Objective to Goal)
To (a) strengthen disease surveillance and diagnostic capacity in the control of HPAI, (b) strengthen the poultry sector infrastructure to better cope with serious disease outbreaks, and (c) safeguard human health through public awareness and information	<ul style="list-style-type: none"> <li>• Restocking without recurrent AI outbreaks</li> <li>• Early warning response and turn around for diagnosis within 1 week of outbreak</li> <li>• Restocking of GP poultry farms</li> <li>• National Emergency Contingency Plan for HPAI accepted by Government</li> </ul>	<ul style="list-style-type: none"> <li>• DAH field reports</li> <li>• DAH/Epidemiology Unit field reports</li> <li>• Central and Regional laboratory outputs increased</li> <li>• National Action Plan revised and accepted</li> </ul>	<ul style="list-style-type: none"> <li>• The NAP will establish clear benchmarks on the activation of strategic, national rapid response mechanisms in case of new disease outbreaks</li> <li>• The need for increased, upgraded diagnostic and surveillance capacity is demonstrated and implemented</li> <li>• Poultry farmers and consumers will regain confidence in poultry production</li> </ul>

Output from each Component	Output Indicators	Project reports	(from Outputs to Objective)
<b>Component A: Strengthening Disease Surveillance, Diagnostic Capacity, and Highly Pathogenic Avian Influenza Virus Research</b>			
<b><i>Subcomponent A.1 – Strengthening Animal Disease Surveillance</i></b>			
1. Establishment of early warning disease response system	<ul style="list-style-type: none"> <li>30 Community-based surveillance networks are operational</li> <li>75% average monitoring coverage in project provinces</li> <li>100% monitoring of GP breeding farms</li> </ul>	<ul style="list-style-type: none"> <li>Field monitoring reports: PY1 - 50% coverage of designated provinces; PY2 – 85% coverage</li> <li>Field reports: 90% monitoring coverage of all MARD poultry breeding farms end-PY1</li> </ul>	<u>Risks:</u> <ul style="list-style-type: none"> <li>Delayed activation</li> <li>Inadequate communications between central and provincial governments</li> </ul>
2. Rapid implementation of surveillance and reporting system in project provinces	<ul style="list-style-type: none"> <li>Rapid response time to disease outbreaks</li> <li>Effective implementation of NAP guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Field diagnostic reports</li> <li>Standardized field reporting</li> </ul>	<u>Risks:</u> <ul style="list-style-type: none"> <li>Over-centralization of reporting system</li> </ul>
<b><i>Subcomponent A.2 – Diagnostic Capacity Upgrading</i></b>			
1. Central NVDC laboratory at Hanoi upgraded	<ul style="list-style-type: none"> <li>Equipment procured and delivered within 3 months of project onset</li> <li>Staff trained within 6 months of project onset</li> </ul>	<ul style="list-style-type: none"> <li>PCU/DAH completion report</li> </ul>	<u>Risks:</u> <ul style="list-style-type: none"> <li>Delayed procurement and training</li> </ul>
2. Four Regional Veterinary Centers (RVC) upgraded	<ul style="list-style-type: none"> <li>Equipment procured and delivered within 8 months of project onset</li> <li>Staff trained within 6 months of project onset</li> </ul>	<ul style="list-style-type: none"> <li>PCU/DAH completion report</li> </ul>	<ul style="list-style-type: none"> <li>Delayed procurement and training</li> </ul>
<b><i>Subcomponent A.3 – Strengthening HPAI Virus Laboratory</i></b>			
1. Virus Reference Laboratory at NIVR established	<ul style="list-style-type: none"> <li>Equipment procured</li> <li>Staff trained</li> <li>Research program defined</li> <li>Acceptable biosecurity measures in place</li> </ul>	<ul style="list-style-type: none"> <li>NIVR status reports to PCU</li> </ul>	<u>Risks:</u> <ul style="list-style-type: none"> <li>Insufficient collaboration between NVDC/RVCs and NIVR</li> </ul>
<b><i>Subcomponent A.4 – Strategic Studies</i></b>			
1. Strategic Studies Completed	<ul style="list-style-type: none"> <li>National Emergency Contingency Plan for HPAI is adopted by Government</li> <li>Self-evaluation of Veterinary Services is completed</li> </ul>	<ul style="list-style-type: none"> <li>PCU status report to MARD/IDA</li> <li>TORs submitted by PCU prior to project onset</li> </ul>	<u>Risks:</u> <ul style="list-style-type: none"> <li>Conclusions and recommendations of the studies are not implemented</li> </ul>
<b><i>Subcomponent A.5 – Emergency Outbreak Containment Plan</i></b>			
1. Containment Plan formulated and supplies procured	<ul style="list-style-type: none"> <li>Plan completed</li> <li>Emergency supplies procured</li> </ul>	<ul style="list-style-type: none"> <li>DA and DAH have completed Plan guidelines</li> </ul>	<u>Risks:</u> <ul style="list-style-type: none"> <li>Insufficient communication between DA and DAH</li> </ul>

<b>Component B: Poultry Subsector Rehabilitation</b>			
<b><i>Subcomponent B.1 – Breeding Stock Supply</i></b>			
1. GP stock imported and successfully disseminated	<ul style="list-style-type: none"> <li>• 15,000 GP stock delivered on time</li> <li>• GP stock suitable for local production conditions</li> </ul>	<ul style="list-style-type: none"> <li>• PCU procurement completion report</li> <li>• NIAH assessment report</li> </ul>	<u>Risks:</u> <ul style="list-style-type: none"> <li>• GP stock selected unsuitable for smallholder production</li> </ul>
<b><i>Subcomponent B.2 – GP Farm Biosecurity</i></b>			
1. Biosecurity on 12 GP breeding farms strengthened	<ul style="list-style-type: none"> <li>• Biosecurity equipment and infrastructure in place within 10 months of project onset</li> <li>• Biosecurity models for small operators available</li> </ul>	<ul style="list-style-type: none"> <li>• DA/Livestock Company progress reports to PMU</li> </ul>	<u>Risks:</u> <ul style="list-style-type: none"> <li>• Biosecurity standards are not met</li> </ul>
<b><i>Subcomponent B.3 – Strategic Studies</i></b>			
1. Strategic Studies Completed	<ul style="list-style-type: none"> <li>• Study on Compensation Policy for HPAI is completed</li> <li>• Study on Poultry Sector Restructuring is completed</li> </ul>	<ul style="list-style-type: none"> <li>• DA progress reports</li> <li>• GP farms accepting new breeding stock</li> </ul>	<u>Risks:</u> <ul style="list-style-type: none"> <li>• Conclusions and recommendations of the studies are not implemented</li> </ul>
<b>Component C: Public Awareness and Information</b>			
<b><i>Subcomponent C.1 – Capacity Building in Communication and Public Information</i></b>			
1. TOT training by NAEC effective	<ul style="list-style-type: none"> <li>• Training reports</li> </ul>	<ul style="list-style-type: none"> <li>• Quality of training evaluation report</li> </ul>	<u>Risks:</u> <ul style="list-style-type: none"> <li>• Limited capacity by NAEC reduces quality and quantity of training</li> </ul>
2. Extension staff trained	<ul style="list-style-type: none"> <li>• Trained staff appointed at NAEC</li> </ul>	<ul style="list-style-type: none"> <li>• NAEC progress report</li> </ul>	
3. Publication materials and multi-media messages prepared	<ul style="list-style-type: none"> <li>• Preparation of materials and messages completed</li> </ul>	<ul style="list-style-type: none"> <li>• NAEC report (within 10 months of project onset)</li> </ul>	
<b><i>Subcomponent C.2 – Developing pilot models for Community-based rapid communication</i></b>			
1. Community-based reporting system effective	<ul style="list-style-type: none"> <li>• Notifiable diseases are reported</li> </ul>	<ul style="list-style-type: none"> <li>• Progress Report</li> </ul>	<u>Risks:</u> <ul style="list-style-type: none"> <li>• Inadequate coordination with SDAH</li> </ul>
<b><i>Subcomponent C.3 – Monitoring and Evaluation</i></b>			
1. Monitoring and Evaluation in place	<ul style="list-style-type: none"> <li>• Monitoring and Evaluation Workshops are held</li> </ul>	<ul style="list-style-type: none"> <li>• Progress Report</li> </ul>	
<b>Component D: Project Management</b>			
1. PCU appointed and effective	<ul style="list-style-type: none"> <li>• Administrative linkages established between PCU and implementation agencies/entities.</li> <li>• PCU staff training completed</li> </ul>	<ul style="list-style-type: none"> <li>• MARD report to WB.</li> <li>• Confirmation of appointment by PCU before onset of implementation.</li> <li>• PCU report to MARD and WB before appraisal.</li> </ul>	<u>Risks:</u> <ul style="list-style-type: none"> <li>• Delays in appointing the Project Director</li> </ul>

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**ECONOMIC IMPACT OF THE AVIAN INFLUENZA EPIDEMIC**

**A. INTRODUCTION**

1. Poultry Subsector Structure. Poultry represents the second most important source of meat in the Vietnamese diet. Poultry production involves three co-existing production systems: free-range scavenger, semi-intensive and industrial. Approximately 70% of the total poultry population is kept by smallholder households that produce about 60% of the total broiler chicken, under free-range scavenger or semi-intensive management. Typically, each smallholder owns 10-20 free-range chickens or ducks and sells a bird occasionally to meet cash or domestic needs. In semi-intensive production systems, a specialized grower typically raises 50-1,000 birds in simple housing and/or enclosures, provides partially compounded feed and, in some cases, vaccination against the main poultry diseases. Finally, industrial production involves flocks of tens of thousands of fowl raised under total confinement conditions and provided with fully compounded feeds, vaccination and veterinary supervision.

2. Up until the 1980s, all industrial poultry enterprises in Vietnam were state-owned. Since the late-1980s several private small to medium-sized joint ventures, often with foreign participation, have been established, with small farmers to produce eggs and broilers for the domestic market<sup>10</sup>. The appearance of foreign investors with advanced technology and marketing skills led to a decrease in market share of the state-owned companies from an estimated 36% in 1995 to 15% in 1999<sup>11</sup>. Production has increased by an average of 5% annually over the last decade but is facing difficulty in keeping up with the growth in demand. Long-term market price trends in Vietnam thus show poultry meat becoming more expensive than pork. Domestic demand growth remains so dynamic that there is little prospect of Vietnam becoming a net exporter of poultry products during the next decade.

**B. IMPACT OF THE AI EPIDEMIC**

**Table 1 – Avian Influenza Epidemic in Vietnam (as of February 24, 2004)**

<b>Human Health</b>	Total suspected cases	80
	No. of deaths from confirmed AI	15
<b>Animal Health</b>	No. of infected provinces	57 (64) (89.1%)
	No. of infected rural districts	381 (518) (73.5%)

<sup>10</sup> The first reported HPAI infection (December 2003) was on a foreign-owned breeding farm in the northern province of Ha Tay. In mid-2003 there had already been suspected but unconfirmed cases of HPAI on two breeding farms in the provinces of Ha Tay and Vinh Phuc.

<sup>11</sup> Source: Vietnam, draft Livestock Policy Brief, FAO, mimeo, 2003

	No. of infected communes	1,562 (8,970) (17.4%)
	No. of poultry destroyed	44 million (17.0%)

Sources: DAH, VNS

3. Highly Pathogenic Avian Influenza (HPAI). The severe form of avian influenza, termed highly pathogenic (HPAI), is one of the two most destructive diseases of poultry and other domestic and wild fowl, with flock mortality of up to 100% in the case of the H5N1 subtype. Additional, adverse economic impacts result from trading restrictions and embargoes placed on infected areas and the public health implications. HPAI is recognized as a World Organization for Animal Health (OIE) List-A Reportable Disease. Following the regional SARS human health scare prior to the HPAI epidemic, the AI outbreaks caused at least 23 human deaths and a much larger number of suspected infections, and raised fears among the general public of Vietnam and the region. H5N1 avian influenza virus currently has only a limited ability to infect humans but their continued circulation increases the possibility they might combine with human influenza virus strains and acquire the potential to trigger an extremely virulent human influenza pandemic. This has helped to focus international concern on the regional epidemic.

4. Preliminary Damage Estimates. Given the very rapid spread of the epidemic throughout Vietnam, which caught the country's animal health services off-guard, the full extent of damage, although difficult to gauge accurately, has been a major setback to the poultry industry and has affected the livelihood of tens of thousands of smallholders. In addition to public health concerns, control and eradication of HPAI is of major socio-economic importance.

### C. ECONOMIC IMPACT

5. One method of assessing the cost of the recent avian influenza epidemic is by considering the estimated contribution of the livestock and the poultry sub-sectors to the national product (GDP). According to Vietnam's preliminary national accounts, the estimated value-added by poultry-raising in 2002 was VND3,700 billion (US\$232 million)<sup>12</sup> in constant 1994 prices, equivalent to 1.2 percent of GDP. This means that if poultry production fell to zero for a period of three months, the direct loss of income would have amounted to around VND1,600 billion (US\$107 million)<sup>13</sup>. The massive culling program required to eradicate the disease has resulted in losses well beyond those producers actually affected by the disease. A preliminary assessment in the three provinces of Vinh Phuc, Ha Thai and Thai Binh indicates that of the total pre-outbreak poultry population of 25 million birds, 22% were culled of which 80% were healthy birds and 20% were either diseased or had died of AI. Apparently, many farmers voluntarily killed their birds upon hearing the news that the disease could be fatal to humans. The OIE requirement that all birds be destroyed within a 3 km radius of the infected source further contributed to the massive overkill.

<sup>12</sup> Equivalent to 17% of the total value of livestock production, which was about 6% of GDP.

<sup>13</sup> Since the crisis was short-lived there were only limited substitution effects on agricultural production e.g. from poultry into pig production or other on-farm activities.

6. An alternative method to assess the cost of the epidemic is to estimate the direct loss in poultry production and sales<sup>14</sup>, the loss of income by feed suppliers and poultry traders, and the real cost to the government of controlling the epidemic. An estimated 44 million birds are reported to have been culled. If the average farm gate price of a chicken before AI was VND20,000, the gross value of poultry lost in the crisis would amount to some VND800 billion. According to some observers<sup>15</sup>, losses of income in related upstream (e.g. feed and drug supply) and downstream (i.e. wholesale and retail distribution) activities could have been as high as VND600 billion; almost as high as those sustained by poultry farmers themselves. Containing the AI epidemic is roughly estimated to have cost the Government about VND400 billion for the hire of temporary labor for culling and clean-up crews, overtime for police and other officials in the provinces, and hire of transportation and purchase of imported materials. Thus the total economic cost of the January-March AI outbreak is very tentatively estimated, using this approach, to be around VND1,800 billion (US\$120 million), or 0.3% of GDP. This is close to the estimate reached by the macro-economic method, but somewhat lower than some earlier estimates<sup>16</sup>, made when the epidemic was still raging, which posited possible SARS-type effects on the tourist industry. Such secondary effects seem to have been avoided: obviously, they would have made the economic cost much higher.

7. The distribution of this cost throughout the population is not totally clear, since data are lacking on the incidence of the HPAI epidemic among different types of poultry producer. There are some indications that the semi-intensive smallholder poultry units (keeping 50 to 1,000 birds) were hardest hit by the disease. However the culling campaigns and market shut-downs hit all producers, including smallholder owners of free-range scavenger chickens. Income from selling poultry and eggs is more significant among the poorest quintile of the population, in which households derive an average of 7.1% of total cash income from this source.<sup>17</sup> Poor consumers in particular suffered a loss as a result of the absence of poultry meat and eggs from the market and the 30-40% temporary increase in price of substitute products during this period. Although at the time of the mission market prices for poultry and other meats on the main retail markets appeared to be returning to close to pre-AI levels, the possibility of shortages and further price spikes should not be excluded.

#### D. CONCLUSION

8. The distributional impact also depends on the compensation policy that will eventually be implemented by the Government. The plan is that all owners of poultry destroyed by AI or culled will receive a compensation of VND5,000 per adult bird or VND2,000 per immature bird<sup>18</sup>. In some cases several provinces have elected to top-up this amount by another VND10,000. For poultry farmers, the amount of compensation actually received depends on where they live and when they actually receive payment. It appears that in such

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<sup>14</sup> Including loss of sales during the 3-month moratorium on restocking.

<sup>15</sup> Source: mission discussions with VBARD, the CP Group, and Vietnam Poultry Association.

<sup>16</sup> e.g. Preliminary Estimate of the Cost of Avian Influenza, World Bank, Hanoi, February 2004

<sup>17</sup> Data from GSO's Vietnam Household Living Standard Survey of 2002.

<sup>18</sup> See Government letter # 452/BNN-KH of 16 March 2004 (Annex 7, Appendix 1)

matters considerable flexibility of interpretation is left to the provinces. It is important for future control of HPAI that the Government's compensation scheme be implemented fairly and promptly.

9. In conclusion, as long as the recent epidemic does not recur, the overall economic impact may have cost Vietnam between VND1,500 and 1,800 billion (US\$100-120 million), or an estimated 0.3% of GDP. Even at this high cost, the economic impact was less serious than first estimated because the epidemic was contained more quickly than many observers thought possible and did not require culling of entire poultry flocks, except in a few limited areas. However, it appears that loss of income may have been absolutely and relatively more serious for the specialized producers, especially semi-intensive backyard producers.

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**COMPONENT A - STRENGTHENING DISEASE SURVEILLANCE, DIAGNOSTIC CAPACITY  
AND HPAI VIRUS RESEARCH**

**A. INTRODUCTION**

1. Since the Government of Vietnam first declared the presence of highly pathogenic avian influenza (HPAI), an estimated 44 million poultry have either died of the disease or have been culled for reasons of disease control or economics. Lacking the necessary fine-tuned emergency disease response plans, surveillance systems, diagnostic capacity and data analysis capability to deal with the outbreak by means of selective, strategic containment, the Government adopted a policy of depopulating large areas in which both infected and non-infected poultry were culled. All poultry movement was halted, live-poultry markets were closed and stringent disinfection and other biosecurity measures were introduced.

2. Since early March 2004, these control measures have been relaxed on a province-by-province basis whenever it is observed that 30 days have elapsed since the last outbreak. It is unlikely, however, despite the present disappearance of the disease, that the virus has been totally eliminated from the country. It is in this period of renewed activity, and particularly when restocking of infected areas is allowed to start that the veterinary and other supporting forces of Government must be particularly alert to any re-emergence of the infection. To permit early warning of, to limit, and to be able to quickly contain any resurgence of HPAI the Government is refining its National Action Plan and has issued preliminary guidelines (see below). For this plan to be effective it must rapidly strengthen its diagnostic and surveillance capacities.

**B. NATIONAL ACTION PLAN**

3. The National Action Plan (NAP), prepared and promulgated by the Department of Animal Health (DAH) and signed into Decree by the Government, forms the framework on which the national AI control strategy is based and was promulgated officially on 18 March 2004. The NAP guidelines outlined below describe in detail the actions to be taken during the recovery period, before restocking is to commence.

4. The NAP, in addition to the existing regulations for dealing with outbreaks of AI as set out in BNN/TY of 5<sup>th</sup> February 2004, will assist in the timely and economic recovery of the poultry sub-sector to normal health and function. These guidelines were issued for the attention of all divisions of the DAH, the Sub-departments of Animal Health (SDAH) in each Province, District and Commune, and all poultry producers and local

administrations. The project will assist the Government in refining the NAP and in developing a comprehensive National Emergency Contingency Plan for HPAI.

5. In summary, the current NAP provides guidance on “Inspection and Hygiene Conditions to be Applied in the Recovery Period”: (a) in infected areas, including the use of sentinel flocks in farms originally holding more than 500 birds; and (b) in breeding farms supplying day-old chicks or eggs for hatching will be subject to routine serum sampling of their flocks.

6. The Regional Veterinary Centers (RVC) are responsible for the collection of samples from the state-owned farms and joint-venture farms, while the Provincial sub-Departments of Animal Health will be responsible for collecting the samples from all private farms and holdings involved, and delivering them, in proper and timely manner, to their RVC for testing.

### **C. SUPPORT PROPOSED UNDER THE PROJECT**

7. The AIERP would support five areas of activity:

- Strengthen disease surveillance from commune to central level, to encourage rapid detection of any new cases that may occur and assist in a swift response to contain any new outbreaks;
- Upgrade the diagnostic capacity at the NVDC national diagnostic laboratory in Hanoi and four RVCs (Can Tho, Ho Chi Minh City, Da Nang and Vinh), to enhance the capability of the veterinary service to accurately diagnose HPAI;
- Establish a Virus Reference Laboratory (VRL) under NIVR to conduct research and typing of AI and other pathogenic viruses, to establish virus prevalence patterns and pathogenicity and to assist MARD in the design and implementation of adequate control and eradication strategies;
- Conduct two strategic studies on the preparation of a National Emergency Contingency Plan for HPAI, including an update of the National Action Plan to control AI Epidemic, and a self-evaluation of Veterinary Services; and
- Develop Emergency Outbreak Containment Plan for three provinces, under which disinfectants, transport, manpower and other necessary resources can be made available rapidly to reach an infected are and institute containment.

#### **Subcomponent A.1 – Strengthening Animal Disease Surveillance**

8. The subcomponent will support the following activities.

9. Improving information flow. DAH intends to develop an area network to facilitate the monthly transmission of disease report data from the Provinces, using the modified TAD info-reporting system created for DAH under the SVSV project for routine and emergency disease reporting. The AIERP would support the costs of the requisite computerization of the Provincial Offices, preparation of manuals and training of staff.

10. Detection, reporting and follow-up of suspect cases. By far the most frequent interaction with farmers is provided by commune level animal health workers, who have been mobilized during the epidemic as commune AI teams. They are essentially private practitioners although some receive monthly allowances from the government and participate in preparation of monthly disease reports. The quality of disease surveillance provided by these workers is very variable, and it can be difficult for them to raise an alert when a notifiable disease is suspected. The proposed project activity will support efforts to improve their effectiveness:

- Community-based Surveillance Networks. At the community level, an early warning system will be established to support a robust emergency reporting and feedback system against notifiable diseases. A critical objective of this sub-component will be to improve the commitment of all participants to the “epidemiological surveillance networks”. Veterinarians without Borders (VSF) and the National Institute of Animal Husbandry (NIAH) have established and tested since June 2002 two pilot epidemio-surveillance networks at the district level in two provinces. Both schemes focus on skills development, but neither scheme has yet addressed the issue of rapid emergency reporting for notifiable diseases and this element will need to be built in under the present project. The project will support training for animal health workers, and the treatment of infected animals and reporting procedures. Farmers will receive hands-on training in detection of clinical signs. The project will provide basic bio-security equipment such as sprayers, protective equipment, in places where this has not already been supplied under other emergency response programs.
- Public Veterinary Surveillance Networks. The proposed project will also help strengthen the links between District Veterinary Stations, private veterinary and paraveterinary practitioners, and producer associations. It will support sampling and laboratory testing in the event of a suspected case. In the event of a suspected outbreak, rapid access will be provided to an emergency disease control fund by a procedure that is consistent across provinces. The AIERP will also support the continuation of incremental travel costs, to enable structured and conscientious monitoring at commune level. It will also be important to seek a mechanism for continuing to fund an increased veterinary presence at the commune level, since this will be important to the success of the community level networks. The project will also finance a vehicle for DAH field surveillance and coordination, the preparation and distribution of operating manuals and the training of field staff. Clearly, there is an important need for training in the various aspects of inspection, disease recognition, and differential diagnosis; and in swabbing, bleeding, handling, recording, storing and transporting samples for laboratory diagnosis. Training of Trainers’ (TOT) courses could first be organized with staff of the Regional Veterinary Centers (RVCs), these staff would then go on to train – on a province by province basis – selected provincial and district staff, and possibly even some of the private sector veterinarians animal health technicians operating at commune level.

11. Routine Serological Surveys and Epidemio-Surveillance. Activities to be supported by the proposed project include: (a) sero surveillance, to assess whether disease freedom has been achieved and preferably prior to restocking. The project will support collecting and testing of samples and feedback to farmers; (b) sampling of “survivors”, through random serological/cloacal sampling done on wild birds and poultry surviving in and

around depopulated areas to confirm whether any active virus remains in the area, prior to them being allowed to restock; (c) market inspections, in addition to the routine inspection of markets and the check-point inspections currently active on the roads, some random swabbing of poultry – particularly of breeds used in extensive production systems – will be done at the major wholesale markets; and (c) monitoring of farms. The 12 MARD-operated GP poultry breeding farms would be monitored and regular field S&M would be implemented in the service areas surrounding the RVC laboratories indicated. The detail cost of the sub-component is presented in Table 101 of Costab.

#### **Subcomponent A.2 – Upgrading Diagnostic Laboratory Capacity**

12. In order to support the program of sero surveillance outlined above and to provide rapid and accurate response to suspected HPAI cases, the National Veterinary Diagnostic Center (NVDC) in Hanoi and four RVCs (Ho Chi Minh City, Da Nang, Can Tho and Vinh) will be provided with essential equipment and training that have not been provided by other sources. The detail cost of the sub-component is presented in Table 102 of Costab.

13. Equipment. The proposed project will finance the purchase of equipments for NVDC and four RVCs. A list has been prepared by FAO specialists and will be refined prior to project effectiveness.

14. Training and Technical Assistance. Staff of the project-supported laboratories will receive training/refresher training in the accurate and efficient conduct, calibration, and troubleshooting of various diagnostic HPAI tests. Since there will be a very considerable volume of important sampling and testing to be done during the next three to six months, and since it is vital that these tests are up and running before the second wave of AI outbreaks emerges during the restocking phase, DAH will invite the assistance of experienced laboratory technologists to provide on-the-job training and support to the staff of the Hanoi NVDC and the 4 project RVCs.

#### **Subcomponent A.3 – Veterinary Reference Laboratory for HPAI research**

15. The NIVR Veterinary Reference Laboratory (VRL). The proposed project will support NIVR in strengthening HPAI research to include laboratory capacity to perform typing of the N antigen of the Avian Influenza virus (it can already do H typing) using the neuraminidase test. Project funds will be used to equip the VRL and train VRL staff accordingly. Construction of VRL will be carried out with Government counterpart funds and is not included in the project. However, the VRL would be constructed at internationally acceptable standards, to be monitored by project-supported FAO experts. The sponsoring agency NIVR will provide the Bank with assurances that construction at acceptable standards will be undertaken. The Project will not finance facilities and equipment to be used for live animal pathogenicity testing. The detail cost of the sub-component is presented in Table 103 of Costab.

#### **Subcomponent A.4 – Strategic Studies**

16. Two strategic studies will be carried out under this subcomponent: (a) the preparation of a National Emergency Contingency Plan for HPAI, including an update of the National Action Plan to control AI Epidemic; and (b) a self-evaluation of veterinary services, following OIE standards on quality and evaluation of veterinary services. To meet international requirements, veterinary services need to develop and document appropriate procedures and standards for the implementation and management of animal health measures and international veterinary certification activities. Detailed terms of reference are being prepared and will be included in the PIM. These studies would be financed by the FAO/TCP. The detail cost of the sub-component is presented in Table 104 of Costab.

#### **Subcomponent A.5 – Emergency Outbreak Containment Plan**

17. The preparation of an Emergency Outbreak Containment Plan, comprising a rapid mobilization plan to respond quickly and effectively to recurring AI outbreaks in three project or non-project provinces during the project lifespan. The Plan, to be developed by DAH and DA, would contain guidelines for the rapid activation of physical and human resources to respond quickly to an outbreak. Physical resources, supported by project funds, would comprise farm and burial disinfectants, sprayers and protective clothing. Human resources would entail the identification of, and project-supported contingency allowances for, of persons to be activated, in case of need. The detail cost of the sub-component is presented in Table 105 of Costab.

#### **D. RISK ASSESSMENT**

18. The key risks involved in implementing this Component are:
- Delayed arrival of the requisite equipment and training, after the second wave of disease will have once more overwhelmed DAH resources. However, the DAH's plan to delay restocking for three months gives some respite, and the FAO TCPs should also have got some key initiatives underway by then;

- Lack of incentive for field staff to properly conduct the immediate and future surveillance programs proposed. The proposed support to operational costs in respect of supplementation of travel allowances, should act as an attractive incentive to participate;
- Time needed to establish and operationalise the commune level surveillance networks. The increased veterinary manpower resources required to initiate this activity, as well as for the sero-surveillance to be funded under the AIERP, will allow a heightened level of vigilance to continue while the capacity of animal health workers and farmers is developed;
- Reluctance to announce suspected new outbreaks. For various understandable reasons, there can be unwillingness to raise the alarm about HPAI, and delay in reporting allows the disease to spread. However, the appraisal mission was encouraged by the fact that a suspected outbreak during its stay in Vietnam was reported quite quickly in the national press;
- Inability of the laboratories to cope with the peak demands for serological tests. As yet, the volume of blood samples to be handled has not been quantified. However, once trained and familiar with the ELISA procedures, a laboratory technician should be able to cope with 1,800 samples a day, using the equipment to be provided. With 4 RVCs and the NVDC fully activated, this could equate to about 270,000 samples a month, which should be sufficient capacity; and
- Risk of Reintroduction of the Disease. Other outbreaks could either arise from within the country or from outside the country, either by importation of poultry or from wild birds. Therefore the surveillance system needs to be attuned to detecting internal sources of virus and preventing the disease from spreading out from a newly introduced source.

19. Issues. The following issues will need to be addressed during project implementation:

- Institutional Issues. While an emergency operation does not intend to address long-term institutional aspects, there are significant structural issues that have to be managed if emergency responses to animal diseases are to be effectively implemented. In particular, there is a need to identify the institutional obstacles to effective emergency response and, in the provinces where it will be undertaken, find ways of modeling a workable solution. These questions will be addressed when designing the contingency emergency plan for HPAI. Most contingency plans are outcome oriented, and are characterized by simplicity in management and authorities required to deliver;
- Sustainability Issues. The sustainability issues are linked to a long-term national strategy for epidemic disease control in the poultry sector which will be supported by the proposed project; and
- Information Flows. Effective information flows are critical for the success of the project. Every effort should be made to ensure that the upstream and downstream flows of diagnostic and field monitoring information are set up at the earliest possible moment. The SDAHs in each province will be responsible for this mechanism, and each SDAH should clearly identify a person responsible for information flow. An Information Coordinator should be appointed in each SDAH, with counterparts in each RVC, who

communicates closely with those responsible for implementing the awareness and information campaign.

**THE SOCIALIST REPUBLIC OF VIETNAM**  
**AVIAN INFLUENZA CONTROL EMERGENCY PROJECT**

**COMPONENT B - POULTRY SUBSECTOR REHABILITATION**

**A. INTRODUCTION**

**The Extent of National Poultry Losses**

1. The government estimates that, according to the most recent information, a total of 44 million poultry died as a result of the AI or were culled in preventative measures implemented during the outbreak. Of this number, the semi-intensive/backyard poultry segment lost between ten and fifty percent. This suggests that somewhere between 4 and 19 million birds have been affected in the smallholder sector alone. Assuming an average holding of fifty birds per household before AI, between 80,000 and 380,000 smallholder households may have been affected nationally.
2. There are no reliable data as to the breakdown of the number of poultry that were lost from parent breeding stock in multiplier farms in the private and public sectors, or of the proportion of broilers lost in comparison with layers. The project will support a poultry losses survey in the ten project provinces to determine the exact causes and distribution of poultry losses from the epidemic.
3. Recovery in the worst hit provinces is also likely to be delayed by uncertainty over the resurgence of HPAI, so that the recovery itself will be patchy. Day old chick (DOC) producers in some areas will not return to production quickly, so that the available supply of DOC for growers wishing to restock may remain low for some time. Growers may also be reluctant to restock until their risk is clear, (a) the biosecurity and AI monitoring measures for large and small DOC producers are in place, (b) DOC suppliers are registered to produce disease-free birds in compliance with AI control procedures, and (c) satisfactory enforcement of a safe clearance – restocking interval of destocked DOC suppliers.

**Government Institutions in the Poultry Sector**

4. The Department of Agriculture (DA) under MARD controls about half of market share in national poultry production (Table 1), of which MARD has an approximate 20% share. With the exception of one GP farm in Ho Chi Minh City, these breeding farms are located in the Northern provinces. The NIAH owns and operates five farms (with the Thuy Phuong poultry research centre the largest), while MARD operates seven facilities held by General Livestock Companies. The variety of breeds of GP poultry stock held on these farms is supposedly adapted to local village conditions. The commercial GP stock is raised mainly for crossbreeding with native chickens for dual purpose scavenge raising and for small-scale, semi-intensive production.

NIAH reports keeping most (60-70%) of the foundation stock in Vietnam to supply smallholders with chicks of this poultry type.

5. The GP stock raised on the 12 state-owned farms supplies the many multiplier units of the provincial administrations with parent birds. MARD reports 106 operational provincial units in 51 provinces. These in turn supply smallholders throughout Vietnam with grower day-old chicks (DOC), at a cost of about VND3,500 each, somewhat less than the VND5,000 each for the commercial (white) DOC the private breeding farms supply. NIAH estimates the output of parent stock from the state-run farms to be somewhere between 150,000 and 180,000 DOC per year and having the potential of multiplying to 16 – 20 million grower DOC annually. The GP breeding stock (yellow-feathered Kabir, Sasso and Color Redbro strains) needs replacing every two years and the parent stock each year if this breeding resources is to remain productive and true to type. However, it has been four years since Vietnam last imported new GP stock and the genetic quality of this stock has significantly deteriorated and is below optimal quality.

### Private Sector Involvement in the Poultry Sector

6. The commercial sector is dominated by a few foreign-owned poultry companies. These enterprises raise their own parent stock and supply the industry in Vietnam with broiler and layer DOC, primarily under contract growing arrangements. Farms producing broilers predominate , but the smaller broiler parent farms also produce table eggs as well as grower chicks, so that the distinction between egg and broiler producers in the commercial (and state) sector is blurred. MARD reports that layers represent no more than one quarter of all poultry kept in the state and commercial units. The commercial sector is estimated to have half a million parent stock in total, down 150,000 birds lost or culled due to AI, but with an annual output capacity of sixty million DOC remaining. State and private units may therefore have a combined annual DOC capacity of about 186 million DOC from all sources (Table 1).

**Table 1. Vietnam Poultry Sector – Breeding Stock and Estimated Annual DOC Production**

<b>Sector and Farm and Breeder Farm Type</b>	<b>Parent stock (female)</b>	<b>Grower DOC (million)</b>	<b>% share</b>
<b>1. Commercial sector</b>			
Commercial - large companies\1	500,000	60	32
Other breeder farms\2	300,000	36	19
<b>2. State sector</b>			
General Livestock Companies\3	300,000	36	19
NIAH Farms	450,000	54	29
<b>Total annual DOC output – all sources</b>	<b>1,550,000</b>	<b>186</b>	<b>100</b>

1/ Includes CP Thailand, Cargill, Javaconfeed, Proconco.

2/ Includes private producers of about 250,000 DOC per year.

3/ Operated by MARD and Ho Chi Minh City.

Chick production assumes 110 female DOC/breeder year.

Source: Department of Agriculture, MARD Hanoi

7. Individual small commercial layer farms keep a maximum of 20,000 hens, with 23,000 private production farms registered in Vietnam which produce 2,000 broilers per batch<sup>19</sup> and three to four batches annually.

### **Government's Emergency Response**

8. On 3 March 2004, the Office of the Prime Minister issued a directive in which a number of recovery initiatives were suggested. The document assigned to MARD to take the lead role in AI recovery and instructed the National People's Party and several ministries<sup>20</sup> to collaborate in preparing their response. MARD reacted<sup>21</sup> on March 16<sup>th</sup> 2004, in a letter in which it outlined the policy and recommendations it would support for assisting the sector recover, the main elements of which are given in the Attachment to this Appendix.

### **Assessment of the Government's Compensation Policy**

9. The preparation mission's assessment of these recovery proposals suggests that they may be inadequate in terms of equity and in providing poultry raisers with a reporting incentive in the event of future outbreaks. The compensation payments may in many instances be too little too late:<sup>22</sup>

- Full compensation value for birds culled or dead from HPAI has taken place in *only nine most seriously affected provinces*<sup>23</sup>. There is *no provision* for paying compensation to provinces other than those listed;
- The remaining 55 provinces are thus required to compensate entirely from their provincial disaster relief funds from which some wealthier provinces have already paid some compensation to farmers. The provincial disaster relief funds are generally small, however, and some were exhausted in financing the culling, clean-up and policing of markets and poultry movement. Some provinces have borrowed additional sums to complete the work<sup>24</sup>; and
- Even with central budget support, provincial governments would find it difficult to ensure that smallholders are compensated equitably, because backyard poultry raisers, the most vulnerable of small-holders, have lower industry and political profiles than those in the commercial sector and are likely to be left until last.

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<sup>19</sup> AFD Mission Report on Avian Influenza in Vietnam March 2004.

<sup>20</sup> Including the Ministries of Finance, Agriculture and Rural Development, Investment and Planning, Trade, Science and Technology, Natural Resources and the Environment, and the State Bank.

<sup>21</sup> MARD Official Letter #452/BNN-KH of March 16 2004.

<sup>22</sup> Since this Annex was prepared, the Government has allocated VND 200 billion for national compensation, of which half has been distributed,

<sup>23</sup> Saigon, Hanoi, Hatay, Hanam, Vinh Phuc, Baria-Vungtau, Longan, Dongnai, Tiengiang.

<sup>24</sup> For example, Thanh Vinh Commune in Dinh Trung Province has expended its VND 13 million emergency budget but has an emergency procedures wages bill of VND 70 Million outstanding.

## **B. SUPPORT PROPOSED UNDER THE PROJECT**

10. The proposed project would support the rehabilitation of the poultry subsector through the following three subcomponents. The detail cost of the sub-component is presented in Table 2 of Costab.

### **Subcomponent B.1 – Breeding Stock Supply**

11. Day-old chicks of improved, adapted poultry and duck breeds will become available from the Parent offspring of newly imported GP stock financed under the project, and would enter small semi-intensive, backyard units. Restocking is premised on the assumption that enough native poultry breeding stock are locally available as a source of birds for this purpose.

12. Semi-intensive smallholders and backyard village poultry raisers will need replacement birds as soon as restocking begins. NIAH (5 farms) and MARD (7 facilities, held by the General Livestock Companies), are the repository of several breeds of GP poultry stock specifically adapted for village conditions - crossbreeding with native chickens for dual purpose scavenge raising, and small-scale, semi-intensive production. This GP stock provides the many multiplier farms of the provincial administrations with parent birds which in turn supply smallholders throughout Vietnam with grower chicks.

13. Replacing the existing GP birds will reinvigorate the quality of the grower stock output, making this an important initiative for the small-scale poultry industry over the medium and longer term. Subject to farm capacity, 15,000 GP DOCs and ducklings would be imported to replace the current breeders over two years. Four years of high quality replacements for the old parent stock held on the provincial multiplier farms will then be possible. Grower availability from newly introduced GP stock will begin eighteen months after importation. The lead time between DOC introduction and the release of significant numbers of grower stock may be as long as 28 months.

### **Subcomponent B.2 – Upgrading the Biosecurity of GP Facilities**

*14.* Provision would be made for upgrading the biosecurity at the 12 GGP and GP breeding farms operated by MARD and NIAH. The Project will finance for each farm: a personnel disinfection unit, a quarantine unit, a clean-water system, disinfectants, sprayers, protective clothing, fencing and other items essential for ensuring an effective disease containment barrier. Furthermore, vaccination for AI would be considered for all stock of the 12 GGP and GP farms, should the government clear the way for such vaccination. National engineering consultants will prepare biosecurity assessment and construction designs for each of the 12 farms. Prior to introducing the biosecurity packages for each breeding farm, a biosecurity specialist will review the assessment and the construction design for each GP farms to make recommendations for improvement. Both consultants will be project-supported, the biosecurity specialist will be financed by the FAO TCP. As a conditionality to protecting newly imported GP breeding stock from infectious disease, including AI, all 12 project farms must have completed their upgrading in a satisfactory manner prior to the arrival of imported birds.

15. Biosecurity models for small and medium size poultry farms will also be developed under the project (Component C) and disseminated through the public awareness and extension programs.

### **Subcomponent B.3 – Strategic Studies**

16. This subcomponent involves two strategy studies on compensation policy, poultry sector restructuring, and a survey of poultry losses resulting from the AI epidemic. The compensation

policy study would provide a framework for an equitable national compensation policy by which to provide restitution to producers following serious animal disease outbreaks. The poultry sector restructuring study would provide guidelines to better prepare the poultry sector to withstand serious disease outbreaks. The poultry losses survey would identify the causes of poultry culled, either for disease or preventive reasons, in the 10 project provinces. Detailed terms of reference are being prepared and will be included in the PIM. These studies would be financed by the FAO/TCP.

#### **D. RISK ASSESSMENT**

17. The main risks and issues associated with this Component are:

- Unsuitable GP breeding stock. The resupply of grand parent breeding stock may not produce a type of poultry suited to smallholder conditions. Mission observations suggest, however, that poultry produced as F2 from previously introduced GP stock is suitable under semi-intensive conditions but probably not as backyard scavengers;
- The type of GP poultry breeding stock is important, especially where these will form the genetic resource for smallholder restocking; and
- Disease-free replacement chicks for restocking is vital. Identification, monitoring and certification of participating breeding units, however small, will be important.

**SUMMARY OF OFFICIAL LETTER No. 452/BNN-KH**

**Dated March 16, 2004**  
(Unofficial Translation)

**Support to Smallholders Involving**

1. Direct per-bird compensation of 5,000 VND per mature bird, 2,000 VND per bird for other poultry, 500 VND for quail. Eggs would attract compensation of 300 VND with an additional 1,000 per bird payable to cover the cost of cleaning and ensuring environmental protection. Between 50,000 and 100,000 VND would be paid per person day to finance the cost of cleanup labor.
2. Reimbursement of the entire feed cost of Government breeding centers for the four months December – March, and the entire cost of diagnosing the virus on state and private farms.

**Recovery Policies**

1. Budgetary support for cleaning and sanitizing government facilities needing restocking,
2. Budgetary support for replacement breeding stock (50 – 100%) for the first cycle for commercial and smallholder poultry raisers.
3. Interest rate subsidy (50%) for a total of three months to cover restocking of large and small commercial production enterprises.
4. Budget support for restocking government farms and to import breeding stock for them.

**Responsibilities of MARD**

1. MARD to follow up on the epidemiology of AI and to determine policies to contain and to minimize the effect of a second outbreak, and to cooperate with provincial authorities
2. MARD to rehabilitate poultry development nationally by strengthening veterinary services, improving disease surveillance and forecasting, and improving technical infrastructure.

**Responsibility of Ministry of Planning and Investment**

The Ministry to give priority to supplementing the budget for strengthening the laboratories for research and diagnosis of AI.

**Responsibility of the State Bank of Vietnam**

The State Bank through its national, provincial and sub-provincial network, to conduct a survey of the borrowing difficulties faced by the smallholder and larger commercial poultry producers and livestock companies.

**Responsibility of Province and City People's Committees**

To organize AI prevention locally, prepare recovery plans, develop poultry flocks and to implement policies on poultry recovery and development.

**THE SOCIALIST REPUBLIC OF VIETNAM**  
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**COMPONENT C – PUBLIC AWARENESS AND INFORMATION**

**A. INTRODUCTION**

**Background**

1. Responsibilities for nationwide extension and awareness to farmers by MARD-generated public information are centered in two institutions: the National Agricultural Extension Center (NAEC) and the Information Center for Agricultural and Rural Development (ICARD). Established by Governmental Decree as recently as July 2003, NAEC was created to serve as a public service delivery agency under MARD. As such, NAEC is designated the service provider for Component C and responsible for its management and implementation. The Minister of MARD issued, on September 2003, a decree to split the previous Department of Agricultural and Forestry Extension into the National Agricultural Extension Center and the Department of Agriculture.

2. NAEC is specifically responsible for technology transfer and information distribution to farmers. To carry out these tasks it collects information on the needs and wishes of farmers nationwide. NAEC operates at the provincial level through the Provincial Extension Centers, each with about 15 staff, at the District level as District Extension Centers, each with 5 to 6 staff, and at the Commune level as Extension Staff, usually comprising one livestock and one crop extension officer.

3. Public sector Extension services in Viet Nam operate at four levels:

- the central extension institutions based in Hanoi;
- the provincial extension network;
- the district network; and
- the grassroots or commune-level network.

4. In addition to NAEC there are private service providers, including farmers associations, NGOs and private volunteers, as well as the commercial poultry farm veterinarians. NAEC now has the overall responsibility for the planning, budgeting and monitoring of agricultural extension services for the entire country. The Government plans to recruit about 5,000 extension personnel by 2005, including substantial increases in women and indigenous people.

5. The DAH at the national and the SDAH at provincial level, in collaboration with the NAEC extension network, are in charge of transferring technical and administrative information related to animal health to livestock producers and for collecting and analyzing disease surveillance data. Technical information is also provided through the DAH website, and the Green Line at National Post

Office branches. However, most of the animal health service linkages remain disconnected and the flow of information is mostly top down, seriously hampering rapid information transfer from the field to the executing agencies.

6. The important role of the private sector in extension must be emphasized, especially in on-the-job training. For example, the CP Livestock Co. in Ho Chi Minh City employs 50 farm veterinarians who provide technical services alongside product promotion. These veterinarians are well trained and, in quantity and quality, outperform the provincial veterinary services in that area. The impact of NGO activities such as VSF, GRET and others, is equally important, albeit of smaller scale. The role of NAEC has been limited during the recent AI epidemic, so as the collaboration with DAH to share technical and strategic information to prepare awareness and public information campaign.

## **B. RATIONALE FOR SUPPORTING PUBLIC AWARENESS AND INFORMATION**

7. Efforts, albeit considered rather inadequate by NAEC, were made by the extension services to address the AI crisis by employing information and awareness tools and materials. An analysis of the awareness, communication and information process during the three months during and following the outbreak has shown the following deficiencies:

- poor communication between DAH and the provincial sub-departments, within and between the provincial veterinary services, between field services and the laboratories, and between DAH and the human health sector;
- a low level of collaboration and information sharing among DAH, NAEC and extension services, both at the central and field level;
- insufficient generation and timely delivery of rapid and reliable information to the country, using relevant and simple technical messages;
- a lack of dynamic communication links between national and field levels;
- a lack of a clear national strategy of awareness and information to the farmers given the high level of risk and the economic impact, in particular for small holders and poor people;
- an insufficiently clear institutional communication and public information strategy by MARD and DAH during the critical phase of the AI crisis; and
- inadequate facilities and modern communication technologies at the provincial and district levels to serve as efficient transmission conduits to the grassroots level.

8. The return of further AI outbreaks is a distinct possibility<sup>25</sup>, and the knowledge and awareness of the disease by farmers and poultry owners must be strengthened; so too must their knowledge about immediate protection measures to safeguard human health and to stop the propagation of the disease. A clear awareness strategy and a comprehensive delivery of extension messages would have increased the institutional visibility of the livestock sector and strengthened the credibility of the national DAH AI containment policy during the post-emergency period.

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<sup>25</sup> An AI outbreak in a province of the Mekong Delta was confirmed in early May, and was quickly controlled.

9. Such a strategy would be an important investment, based on the lessons learned by NAEC, DAH and MARD and by the poultry sector during the AI epidemic. The awareness and communication policy of NAEC, and the capacity by DAH to contain infectious disease outbreaks, must therefore be brought in pace with the level of the livestock and poultry development in Vietnam. Awareness and communication strategies, driven by DAH and implemented (at different levels) by NAEC and the MARD information sector will serve, over the short and medium-terms, to help strengthen both DAH and NAEC and will contribute to more coordinated efforts in epidemio-surveillance of targeted diseases in Vietnam.

10. The quality and efficiency of the two-way flow of information and the active participation of all the poultry sector stakeholders are two key-points for the effective monitoring of the disease situation and prevention of a possible return of the epidemic in Vietnam.

11. Awareness and Public Information Campaign have two specific objectives:

- **To increase the production and the dissemination of technical and informative messages** targeting all the stakeholders and actors of the poultry subsector, with the aim to: (a) increase the basic knowledge of farmers, poultry holders and other stakeholders in basic animal health information: clinical signs, disease recognition, prevention, control of animal movements and markets; (b) inform poultry holders at all levels of the procedures to follow in an emergency alert, covering comprehensive and adapted guidelines; (c) inform and train farmers and poultry smallholders in basic biosecurity measures (culling and disposal process, use of drugs, etc.); (d) inform concerned stakeholders about regulations, compensation mechanisms and restocking process; and (e) inform the rural and urban population (including consumers) about any risks to human health.
- **To strengthen the activities and capacity in communications of DAH** at the national and provincial levels through: (a) the establishment of an Information and Communications Task Group under MARD, composed of NAEC and DAH staff, in charge of the design and management of information and communication strategies in the livestock sector in accordance with prevailing OIE regulations; (b) training of NAEC and DAH staff in information and communication management at national level; (c) scaled-up production and distribution of relevant information to the population, and to DAH and the livestock sector by NAEC, with the technical assistance of ICARD; and (d) training NAEC staff and AHW in the awareness and communication process, methodology, and production of information materials at the provincial level and provision of communications assistance to the disease surveillance network.

### C. COMPONENT DESCRIPTION AND STRATEGY

12. The Component has three main aims: (a) to increase the level of awareness of targeted groups, to improve the two-way flow of information in case of recurring outbreaks, and to provide these target groups with the necessary technical information; (b) to provide poultry holders and animal field workers with the technical information to successfully undertake the restocking process whilst insuring adequate biosecurity; and (c) to target the poultry subsector with clear and comprehensive information about governmental compensation and restocking mechanisms.

13. The Component supports the strengthening of the awareness campaign currently being carried out by the Government and by DAH, which would be implemented by NAEC, in collaboration with the private sector agri-business poultry enterprises. The Component comprises three subcomponents.

#### **Subcomponent C.1 – Capacity Building in Communication and Public Information**

14. The proposed project would support the following activities:

- Training and needs assessment of veterinary and livestock extension staff at the central, provincial, district, commune and village level;
- TOT training on animal husbandry extension;
- Preparation of a training plan for extension and veterinary staff on poultry production, common poultry diseases (including AI) and communication skills at all levels;
- Development of a training *curriculum*; and
- TOT training in animal husbandry extension, poultry diseases and communication skills.

#### **Subcomponent C.2 – Community Public Awareness and Information Campaigns**

15. The proposed project would support the following activities:

- Conduct a training course in communications methodology for extension and veterinary staff at the provincial level;
- Carry out a needs assessment on communications requirements for poultry producers;
- Procurement of, and training in the use of communications and information equipment; and
- Printing and dissemination of communication and information materials, posters, fact sheets and brochures.

#### **Subcomponent C.3 – Monitoring and Evaluation**

16. The proposed project would support the following activities:

- Training in participatory monitoring and evaluation at all levels;
- Mid term evaluation workshop of the above;
- Developing an Action Plan for M&E; and
- Replication of successful models.

#### **Expected Results and Outputs**

17. **For the short term** (emergency situation):

- farmers and poultry holders have been trained and sufficiently informed to face a possible return of AI;

- the poultry sector receives comprehensive guidelines for efficient reporting in case of emergency, and for routine surveillance;
- prevention techniques and biosecurity measures are well understood by the population and by the professional poultry sector;
- consumers have been informed and are aware of the risks to human health; and
- packages of technical information (communication materials, printed and multimedia supports, etc.) are available, and documents such as posters and leaflets are widely distributed across the country, with priority to the ten (10) provinces under the project.

18. **For the medium-term** (preventive situation):

- animal health services at national level have been strengthened in information and communication management, human resources have been trained and technical capacities increased. A Task Group has been set up and is operational;
- a Communication Strategy has been designed, routine technical messages have been prepared and target-groups identified;
- adequate information channels and communications tools have been identified (MARD websites, national radio-TV broadcasting networks, printed materials, etc.);
- linkages and collaboration between DAH and NAEC have improved and are operational; collaboration in producing and exchanging information is more effective;
- communication activities are considered important in day-to-day effectiveness, and in the development of the epidemio-surveillance network;
- NAEC trainers have been trained in awareness and communication at the provincial level and the technical capacities of DAH in field communications (within Provincial Extension Centers) have been increased as well as their equipment and facilities;
- A two-way information flow is operational between AH Services at national level and veterinary staff in the Provincial Extension Services;
- AHW have received awareness material and relevant simple methodological guidelines; and
- Packages of technical information about the main animal diseases in Vietnam (AI and/or OIE List A) have been collected and e-formatted on CD-ROM.

**Methodology and Key Activities**

19. The implementation of the Component would be achieved by: (a) strengthening national capacities in information/communication within the animal health sector, in close collaboration with the NAEC and the extension services at the provincial level; (b) promoting exchange and collaboration between DAH and NAEC; and (c) setting up a task-group to formulate an information/communications strategy with informative messages.

20. Two workshops would be held at the national level; the first workshop at the onset of project implementation, and the second in Project Year 2, which would teach NAEC and the Provincial Extension Centers staff how to carry out public information and

awareness assessment in order to determine the efficiency of the Campaign and Strategy. ICARD would be involved to produce animal health and livestock sector economics data and information packages for partners and trade sector.

21. Operational awareness and public information capacity and methodologies at the provincial level would be strengthened through the NAEC Extension Centers. Training sessions and workshops (in the Provincial Extension Centers) would be organized for agricultural and veterinary staff in six selected provinces, on how to prepare, locally, awareness and communication materials; and to strengthen the collaboration between agricultural awareness services and veterinary services. This methodology would encompass two processes:

- Information Production. A process would be established to design, produce and distribute awareness and public information (multimedia) materials. This would increase the level of public awareness and improve the visibility and the efficiency of the NAP.
- Information Dissemination. A rapid dissemination process for information sharing through radio/TV broadcasting networks (covering 95% of the country), and through e-media, targeting traders, food producers, the media sector and specialized institutions. This process would aim to increase data availability on the economic importance of poultry and livestock production in the country and should also make more visible the governmental action plan for AI and should clarify the compensation and restocking mechanisms.

22. The Component would finance multi-media equipment, transportation and printing equipment, computers and training. The Component would operate at the central (by NAEC) at in selected provincial levels through local extension centers. Inputs would include three local consultants to be stationed at NAEC: (a) an Education/Training specialist (approximately 4 months); (b) an information extension specialist, with animal health people (approximately 2 months); and (c) a journalist/editor (approximately 1 month).

#### **D. RISK ASSESSMENT**

23. Success of the ST Immediate Awareness and Public Information Campaign for Avian Influenza will depend on the following:

- Government commitment to the importance of the information, education and communication process in an emergency situation as an integrated routine activity in the daily activities of DAH;
- An efficient national Task Group to formulate an awareness and public information strategy and produce technical guidelines and information for the poultry subsector;
- Technical commitment by DAH to produce reliable information and to collaborate with NAEC, provincial Extension Centers, ICARD, NGOs, and other entities;
- Availability of funds, at the national and provincial level, to produce and disseminate communication and awareness materials; and
- Availability of qualified human resources and facilities in NAEC and the provincial extension centers to produce awareness and educational materials.

24. Success in the medium and long-term will depend on the capacity of the DAH to integrate Information and Communication Management as a routine activity into the mandate of Veterinary Services, and to consider the management of information and communication as an investment rather than an expense.

25. Crucial points for the implementation of the Awareness and Public Information Component include:

- The technical capacity and the willingness of NAEC at the national level to take proactive leadership of this Component. The emergency nature of this project requires quick operational commitment to implement awareness activities to prevent a possible return of AI and to ensure a successful, disease-free restocking process;
- NAEC will have to undertake the necessary technical dialogue with DAH and veterinary services at the provincial level. The key to success is the creation of a joint Task Group (NAEC/DAH and other relevant governmental agencies); and
- Linkages need to be activated with ICARD for specific information/data; specific targeted groups and/or channels an efficient transmission belt. The quality of national consultants and their commitment to work with NAEC and DAH are keys to success.

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**PROJECT COSTS**

Component	Indicative Costs (US\$M)	% of Total	IDA Financing (US\$M)	IDA Financing (%)
A. Strengthening Disease Surveillance, Diagnostic Capacity and HPAI Research	2.760	44.5	2.0	74.3
B. Poultry Sector Rehabilitation	2.130	34.4	1.8	85.0
C. Public Awareness and Information	0.950	15.3	0.9	93.9
D. Project Management	0.360	5.8	0.3	80.8
<b>Total Project Cost</b>	<b>6.200</b>	<b>100.0</b>	<b>5.0</b>	<b>81.4</b>

Project Costs By Component	Local	Foreign	TOTAL
	----- US \$ Million -----		
A. Strengthening Disease Surveillance, Diagnostic Capacity and HPAI Research	0.800	1.800	2.600
B. Poultry Sector Rehabilitation	0.500	1.500	2.000
C. Public Awareness and Information	0.400	0.500	0.900
D. Project Management	0.200	0.200	0.400
<b>Base Cost</b>	<b>1.900</b>	<b>4.000</b>	<b>5.900</b>
A. Physical Contingencies	0.030	0.100	0.130
B. Price contingencies	0.070	0.100	0.170
<b>Total Project Cost</b>	<b>2.000</b>	<b>4.200</b>	<b>6.200</b>

Project Costs By Category	Local	Foreign	TOTAL
	----- US \$ Million -----		
Civil Works	0.300	0.100	0.400
Goods	0.250	3.150	3.400
Consultants services	0.250	0.050	0.300
Training	0.250	0.250	0.500
Incremental Operating Cost	0.300	0.100	0.400

<b>Total Project Cost</b>	1.350	3.650	5.000
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	<b>IMPLEMENTATION PERIOD</b>		
	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>Total Financing Required</b>			
Investment Costs	2.30	2.70	0.50
Recurrent Costs	0.20	0.40	0.10
<b>Total Project Cost</b>	<b>2.50</b>	<b>3.10</b>	<b>0.60</b>

<b>Financing</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
IDA	1.80	2.70	0.50
Government	0.15	0.40	0.10
FAO	0.55	--	--
<b>Total Project Financing</b>	<b>2.50</b>	<b>3.10</b>	<b>0.60</b>

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**IMPLEMENTATION ARRANGEMENTS**

**A. PROJECT MANAGEMENT STRUCTURE**

1. Project Coordination and Management. The National Steering Committee for controlling and monitoring Avian Influenza, chaired by MARD's Vice Minister, will provide general policies and guidelines to the PCU for project implementation, review annual work plans, and ensure coordination and linkages with relevant agencies. At central level, the *National Project Coordination Unit* (PCU) of the on-going IDA-funded *Agricultural Diversification Project* will be responsible for day-to-day project implementation, supervision, and project monitoring. The ADP will receive technical assistance from international and national consultants, technical guidance from the Department of Animal Health (DAH), Department of Agriculture (DA), National Agricultural Extension Center (NAEC), and other concerned departments and institutions of MARD. The use of the existing PCU will help avoid the need to develop a separate structure for this small project for only two years and offer opportunities to scale up learning and experiences to the existing national programs.
2. Central Level. The PCU will be strengthened by the recruitment of additional staff who will be responsible for overall administration, report preparation, and procurement and financial management of the project. To facilitate project implementation at least one senior officer from each DAH, DA, and NAEC will be seconded to the PCU to be appointed as *Project Coordinators* in charge of the respective project components under their oversight. In addition, the PCU, under the direction of the PSC, will be responsible for coordinating with DAH, DA, NCAE and with other institutions, to guide and monitor implementation at provincial and local levels. More specifically, DAH will assist the PCU in preparing its annual and quarterly work plans, work budgets, and technical guidelines for Component A. Similarly, DA and NAEC will respectively assist the PCU in implementation of Component B and Component C. The PCU is responsible for consolidating the overall plans for submission to MARD and IDA, and providing guidelines and monitoring project implementation at all levels.
3. Provincial Level. Project implementation at the provincial level would be the direct responsibility of each of the ten project provinces and collaborating line institutions, such as National Institute of Veterinary Research (NIVR) and National Institute of Animal Health (NIAH). A simple *Provincial Project Implementation Unit* (PPIU) will be formed in each project province to implement project activities in the province under supervision and guidance of the central PCU. The PPIU will be headed by a DARD Deputy Director and will draw, on part time-basis, qualified staff from relevant sub-departments or centers of DARD, such as Animal Health, Agriculture, Extension, and Vietnam Women's Union (VWU).

4. Technical activities will be implemented through the veterinary and extension service networks at the provincial, district and commune levels. Contracted animal health and extension workers would be recruited at the commune level to provide support services to beneficiary households. The VWU and other NGOs will be involved in conducting surveillance public awareness campaigns, training, extension, and activities at community level.

## **B. COMPONENT DESCRIPTION AND IMPLEMENTATION ARRANGEMENTS**

5. The Project consists of four components:

### **Component A – DISEASE SURVEILLANCE, DIAGNOSTIC CAPACITY AND HPAI RESEARCH**

6. This component serves to expand and upgrade existing diagnostic capacity and to provide rapid response field surveillance and reporting system. It would finance equipment, training, consultant services and operating costs. The component comprises five subcomponents presented below:

#### **Subcomponent A1 – Strengthening of Animal Disease Surveillance**

7. This sub-component will enhance disease surveillance from the commune to the central levels through provision of technical assistance, training and goods including one vehicle for DAH and 105 motorcycles for District Veterinary Centers to: (a) strengthen public veterinary networks and carry out routine serological surveys; (b) establish community-based surveillance networks in approximately thirty (30) districts in the project provinces; and (c) improve information flows and improve epidemiological information system.

8. Implementation Arrangements. The PCU will be responsible for the procurement of goods and services in accordance with World Bank guidelines, with technical assistance for specifications provided by DAH and other technical experts. DAH will assist the PCU in the preparation of work plans and budgets, training plans, implementation, and setting-up, operating, and managing the networks from central down to commune levels.

#### **Subcomponent A2 – Upgrading Diagnostic Capacity**

9. This subcomponent will strengthen disease diagnostic capacity through provision of technical assistance, equipment and training to the National Veterinary Diagnostic Center (NVDC) in Hanoi and four Regional Centers (RVCs) in Vinh, Da Nang, Can Tho and Ho Chi Minh City.

10. Implementation Arrangements. In general, the PCU will be responsible for the procurement of goods and services for the entire project in accordance with World Bank procurement guidelines. The PCU, in consultation with the DAH, NVDC, RVCs, and other technical experts, will carry out the procurement of goods (laboratory equipment and one vehicle for NVDC), including the preparation of bid documents, bid evaluation, contract awarding, and management of goods delivery. Alternatively, laboratory equipment and reagents may be procured through WHO. DAH will assist the PCU in preparing and implementing a

detailed training plan in biosafety for laboratory workers and staff in a manner acceptable to IDA.

### **Subcomponent A3 – Veterinary Reference Laboratory for HPAI Research**

11. This sub-component will strengthen research on HPAI and other pathogenic viruses through provision of technical assistance, equipment and training for the establishment of a Virus Reference Laboratory (VRL) under the National Institute for Veterinary Research (NIVR).

12. Implementation Arrangements. The PCU, in consultation and cooperation with NIVR, will carry out the procurement of goods (i.e., laboratory and biosecurity equipment, reagents and other items) for the VRL. The NIVR will assist the PCU in preparing training and implementation plans. International safety standards will be incorporated in the construction of the VRL (to be financed by non-project funds), in accordance with FAO or OIE standards for such facilities. Prior to onset of operations, NIVR will prepare a laboratory risk analysis report and an accident mitigation plan acceptable to IDA, then submit the design and operation plans of the laboratory to a technical audit in respect of their biosafety standards by experts with qualifications and experience acceptable to IDA prior putting in into operation.

### **Subcomponent A4 – Strategic Studies**

13. This subcomponent will carry out two strategic studies, namely the preparation of a National Contingency Plan for HPAI and a Self-evaluation of Veterinary Services. The subcomponent will also support participation of DAH officials and project staff in regional and international information exchanges and dissemination on avian influenza.

14. Implementation Arrangements. DAH will assist the PCU in preparing the TORs for selection of the consultants for strategic studies. The PCU will be responsible for selecting consultants following World Bank guidelines for selection of consultants. A national Contingency Plan for HPAI will be prepared and submitted to IDA for review and comments by the end of 2004 prior to putting it into implementation. The Coordinator seconded from DAH in charge of Component A will be responsible for M&E of the component.

### **Subcomponent A5 – Emergency Outbreak Containment Plan**

15. The subcomponent provides support to develop an emergency outbreak containment plan, including provision of disinfectants, equipment and protective clothing to enable rapid activation of human and physical resources in case of outbreaks.

16. Implementation Arrangements. DAH and DA will assist the PCU in preparing a rapid mobilization plan to respond in timely fashion to recurring HPAI outbreaks. The Plan would have sufficient resources to cover three provincial emergency outbreaks during the life of the project. DAH and DA will assist the PCU in implementing and managing this subcomponent and help coordinate activities under this subcomponent with other activities of the government programs.

## **Component B – POULTRY SUBSECTOR REHABILITATION**

17. This component aims to: (a) strengthen the national poultry breeding resources with additional certified disease-free stock; (b) upgrade bio-security against disease invasion of 12 GP poultry breeding farms; and (c) carry out strategic studies on compensation policy for affected producers and on the restructuring of the poultry sector and a survey of poultry losses resulting from the 2003-2004 avian influenza epidemic. The component would finance breeding stock, equipment, chemicals and disinfectants, training, and consultant's services. The component comprises three subcomponents presented below.

### **Subcomponent B1 – Breeding Stock Supply**

18. An estimate total of 15,000 GP DOC and ducklings (11,000 certified disease-free chicks and 4,000 certified disease-free ducklings) would be imported in PY1 and PY2 to augment GP stock in the 12 poultry breeding farms under MARD. Replacement day-old chicks would be supplied from this stock via multiplier parent farms to village poultry holders.

19. Implementation Arrangements. Similar to the implementation of Subcomponent B1, the DA will assist the PCU in implementing and managing this subcomponent. The PCU, with assistance from DA, NIAH and General Livestock Company, will be responsible for the procurement of poultry. It is important to note that the procurement of breeding stock will be conditional on the completion of satisfactory biosecurity measures (see next subcomponent) on those GP farms on which the newly arrived GP stock would be housed.

### **Subcomponent B2 – Upgrading the Bio-security in GP Facilities**

20. This subcomponent will support biosecurity upgrading of the 12 GP poultry farms<sup>26</sup> to strengthen their defense against future infectious disease outbreaks through the provision of technical assistance, equipment, and one vehicle for DA. Biosecurity upgrading would encompass the design and installation of quarantine facilities, perimeter security fencing, improved water and waste disposal systems, personnel disinfection entry units and essential facilities for ensuring an effective disease containment barrier.

21. Implementation Arrangements. DA will assist the PCU in the procurement of goods, civil works and selection of consultants under this subcomponent. National engineering consultants will be hired to prepare construction designs addressing biosecurity needs for each of the GP breeding farms under the project. After that, an international biosecurity specialist will review and assess the adequacy of biosecurity measures in the construction design and his/her recommendations will be incorporated into the final construction design which shall form the basis for upgrading and rehabilitation of the GP farms. As a conditionality to protecting newly imported GP breeding stock from infectious disease, all the GP breeding farms must have completed their upgrading in a satisfactory manner prior to the arrival of imported birds.

### **Subcomponent B3 – Strategic Studies**

22. This subcomponent involves strategic studies on compensation policy for affected producers and on the restructuring of the poultry sector and a survey of poultry losses during the 2003-2004 avian influenza epidemic.

23. Implementation Arrangements. DA will assist the PCU in preparing the TORs for selection of the consultants for strategic studies and surveys. The PCU will be responsible for selecting consultants following the World Bank Guidelines. The study on compensation policy for affected producers shall be completed by the end of 2004 and submitted to IDA for review and comments. In addition, the project coordinator seconded from DA will be responsible for the M&E of Component B.

### **Component C – PUBLIC AWARENESS AND INFORMATION**

24. This component will be implemented in all ten project provinces, which provides support to: (a) carry out a program to build capacity on communications and public information; (b) develop pilot models for community-based rapid communication and information systems; and (c)

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<sup>26</sup> 5 farms managed by NIAH, 1 farm managed by the Agricultural Research Institute of South Vietnam; and 6 farms managed by the General Livestock Company.

improve the monitoring and evaluation of public awareness and information activities.

25. The component would finance training, publication and mass media materials and equipment, technical assistance, and one vehicle for NAEC. The NAEC in collaboration with the private sector agri-business poultry enterprises will assist the PCU in implementing activities under this component. The component comprises three subcomponents represented below.

**Subcomponent C1 – Building Capacity on Communications and Public Information**

26. This sub-component will carry out a program to build capacity on communications and public information including a needs assessment of extension and veterinary staff at all levels, training of trainers on communication, common poultry diseases and animal husbandry, and dissemination of information to poultry farmers.

27. Implementation Arrangements. NAEC will assist the PCU in organizing and implementing this sub-component including preparation of work plans and budgets, procurement of equipment (including one vehicle for NAEC), preparation of training plans and implementation of the approved plans. At the provincial level, based on the guidance of NAEC and instructions of the PCU, the PPIU will be responsible for implementing activities at local levels through the existing extension network at district and commune levels in collaboration with NGOs and private sector agri-business poultry enterprises.

**Subcomponent C2 – Developing pilot models for community-based rapid communication and information systems**

28. This subcomponent will develop pilot models for community-based rapid communication and information systems, including providing training in communications methodology for extension and veterinary staff and assessing needs in communications requirements for poultry producers through the provision of technical assistance, equipment, training, and the preparation and dissemination of communication and information materials (i.e., posters, fact sheets and brochures).

29. Implementation Arrangements. NAEC will assist the PCU in organizing and implementing this sub-component. At the provincial level, based on the guidance of NAEC and instructions of the PCU, the PPIU will be responsible for implementing activities at local levels through its networks at district and commune levels in collaboration with NGOs and private sector agri-business poultry enterprises.

**Subcomponent C3 – Carrying out monitoring and evaluation of public awareness and information**

30. This subcomponent will improve the monitoring and evaluation of public awareness and information activities under the project through the provision of technical assistance and training.

31. Implementation Arrangements. NAEC will assist the PCU in organizing and implementing the M&E system. At the provincial level, based on the guidance of NAEC and instructions of the PCU, the PPIU will be responsible for implementing activities at local levels through its networks at district and commune levels in collaboration with farmers, NGOs, and private sector agri-business poultry enterprises. The project will support training in

participatory monitoring and evaluation at all levels, mid-term evaluation workshop, development of an action plan for M&E, and replication of successful models.

#### **Component D – PROJECT MANAGEMENT**

32. This component would support the *Project Coordination Unit* (PCU) of the Agricultural Diversification Project, now under implementation, in its day-to-day project management activities. The component would finance incremental PCU operating costs such as office rental, travel, office equipment, human resource support and training.

33. Implementation Arrangements. The PCU for this project will be part of the existing PCU. Additional staff would be recruited to handle overall administration, consolidation of reports, procurement, and financial management of the project. The PCU will report directly to the APMB in MARD and the NPSC. No vehicles will be purchased for the PCU. Instead, project funds will be used for renting vehicles for the PCU's transportation and field work.

34. The functions of PCU are as follows:

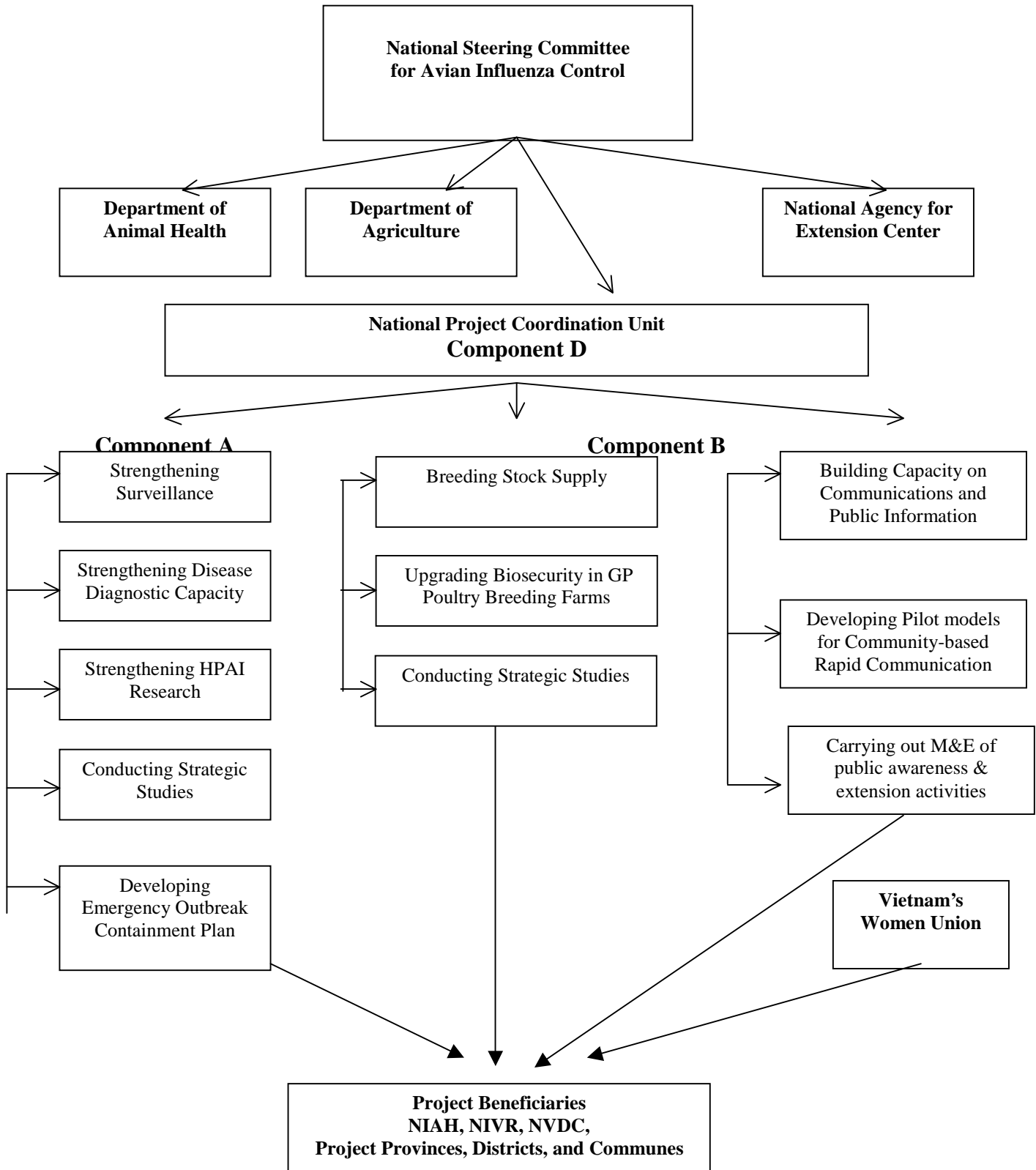
- Under the guidance of NPSC, be responsible for overall project implementation, management and supervision, in accordance with agreements reached between the GOV and IDA;
- Develop coordination and management mechanisms for the project, coordinate with DAH, DA, NAEC and other concerned agencies on national policies and regulations related to implementation of the project components;
- Provide overall guidance for project implementation to ensure realistic targets are set and met; provide guidance and closely monitor PPIUs in implementing environmental safeguard policies;
- Prepare and issue internal guidelines for provincial, district, and commune levels and review their respective operations;
- Consolidate work plans and budgets (including procurement plans) prepared by DAH, DA, and NAEC for each component for submission to PSC, MARD, and IDA;
- Develop and maintain a satisfactory accounting systems for the project in accordance with the procedures required by both the GoV and IDA, including management of the Special Account (SA) and coordination with co-financing institutions (e.g. FAO);
- Handle all procurement activities for goods, civil works, and selection of consultants; and
- Set up project management, reporting and M&E systems at all levels and manage flow of information for decision making in accordance with project requirements.

35. At the provincial level, a simple *Provincial Project Implementation Unit* (PPIU) will be formed in each province to implement activities in the province under supervision and guidance of the PCU. The PPIU will be headed by a DARD Deputy Director and will draw qualified staff from relevant sub-departments and centers of DARD, such as Animal Health, Agriculture, Extension, and VWU.

36. The functions of PPIU are as follows:

- Under the guidance of the PCU, be responsible for project implementation, management and supervision within the province;
- Coordinate with provincial, District and Commune implementation units to ensure effective project implementation in the province especially with provincial and district departments in charge of animal health, extension, and environment;
- Provide training to staff at district and commune levels;
- Ensure that realistic progress targets are met and be responsible for the implementation of safeguard policies (i.e., environmental safeguards) in the province;
- Assist DAH, DA, and NAEC in preparing work plans and budgets (including procurement plans) for each component for submission to PCU and IDA;
- Maintain a satisfactory accounting system for the project at the provincial level, in accordance to procedures required by the GoV and IDA; and
- Disseminate project information to households, set up a project management and reporting systems at provincial, district, and commune levels, manage flow of information for decision making in accordance with project requirements.

# PROJECT ORGANIZATION CHART



**THE SOCIALIST REPUBLIC OF VIETNAM**  
**AVIAN INFLUENZA CONTROL EMERGENCY PROJECT**

**PROCUREMENT ARRANGEMENTS**

**A. PROCUREMENT METHODS AND RESPONSIBILITIES**

1. Procurement for the proposed project would be carried out in accordance with World Bank “Guidelines: Procurement Under IBRD Loans and IDA Credits”, April 2004; and “Guidelines: Selection and Employment of Consultants by World Bank Borrowers”, April 2004 and the provisions stipulated in the Legal Agreement. The general description of various items under different expenditure category are described below and summarized in Table A. For each contract to be financed by the Credit, the different procurement methods or consultant selection methods, estimated costs, prior review requirements, and time frame are given in the General Procurement Plan in the Attachment and a detailed Procurement Plan to be provided by MARD prior to effectiveness. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs.

**Civil Works**

2. Civil Works estimated at an aggregate amount of US\$450,000, for contracts estimated to range from US\$25,000 to US\$100,000 per contract, include construction for upgrading bio-security of 12 poultry farms in the project provinces. All the works will be procured through shopping procurement method.

**Goods**

3. Goods estimated at an aggregate amount of US\$3,600,000 to be procured under the proposed project include equipment and reagents for national and regional veterinary centers, chick vaccination, breeding stock supplies and vehicles.

4. Shopping procurement (national and international) would cover most of the equipment and vaccination required for the project. The amount for each contract, estimated to range from US\$50,000 to US\$250,000 would be relatively higher than the common threshold for shopping (\$50,000) normally used for conventional projects. Under the project goods estimated to cost less than US\$250,000 per contract may be procured through shopping. This higher threshold is justified due to the emergency nature of the project. ICB or NCB would be too time consuming and thus the use of these methods might adversely affect the timely procurement of equipment and vaccine for urgent recovery and preventive operations.

5. Procurement from specialized UN Agencies. Procurement from UN specialized agencies (notably WHO and IAPSO) may be used. Such procurement would cover laboratory equipment, reagents, disinfectants, and vehicles.

6. Direct contracting of some essential breeding stock supplies is the appropriate method since certified disease-free breeding stock such as Sasso Grant, Kabir GP, Cherry Valley Duck, etc. are obtainable only from a particular source. There will be about 5 contracts estimated to range from US\$100,000 to US\$300,000 per contract.

### **Consulting Services**

7. Consulting Services estimated at an aggregate amount of US\$330,000 include consulting services to set-up community-based surveillance networks, to operate these networks, to prepare engineering biosecurity designs for the GP breeding farms and for the training of project staff, commune staff and farmers on animal disease surveillance and epidemiology, and animal husbandry and biosecurity. Most consulting services would be provided by individual consultants. Audit services may be procured through the least-cost selection method. Any other consulting contract with firms estimated to cost less than US\$100,000 per contract may be procured through the method of selection based on consultant's qualifications.

### **Training**

8. An extensive training program including workshops and training courses estimated to cost about US\$570,000 will be carried in accordance with agreed procedures based on training programs with detailed itemized budgets approved by the Bank. The training programs shall provide the objectives, criteria for selection of participants, venue and/or institute selected, period of activity and estimated cost. Expenditures incurred under these activities will generally be claimed under SOEs.

### **Operating Costs**

9. Operating Costs estimated at an aggregate amount of US\$700,000 include staff per diem field allowances, travel expenses, costs for vehicle operation and maintenance, office rental and office consumables, communication expenses, printing expenses, compensation for emergency overtime for Animal Health Workers at the commune level, and salaries of contractual staff, but exclude regular salaries of public employees.

## **B. PROCUREMENT CAPACITY ASSESSMENT**

10. An assessment of the capacity of the Project Management Unit (PMU) of the AIERP was conducted by the Bank procurement specialist in May 2004.

11. The procurement capacity of the PMU is found to be adequate. The PMU is fully functional and staffed with procurement staff having adequate procurement experience gained over the last five years in the implementation of the IDA-funded Agricultural Diversification Project (ADP).

12. The issues and risks concerning the procurement component for implementation of the proposed project have been identified and are mainly related to: (a) MARD's potentially slow internal approval process; and (b) potentially heavy workload due to the emergency nature of the proposed project in addition to the remaining workload of the Agricultural Diversification Project.

13. The recommended corrective measures are: (a) MARD to provide a simplified review procedure for internal approval; and (b) PMU to recruit a procurement officer to work full time for the duration of the project.

14. The overall project risk in respect of procurement is medium.

### C. PROCUREMENT PLAN

15. A procurement plan was developed by MARD during the appraisal mission is attached. An updated procurement plan is expected to be available prior to effectiveness and will be subsequently updated at least annually.

### D. FREQUENCY OF PROCUREMENT SUPERVISION

16. In addition to the prior review supervision to be carried out from Bank offices, the capacity assessment of the Implementing Agency has recommended semi-annual supervision mission to visit the field to carry out post review of procurement actions.

**Table A: Project Costs by Expenditure Category**  
(in US\$ thousand equivalent)

<b>Expenditure Category</b>	<b>Total costs</b>
<b>1. Civil Works</b>	<b>450</b> (400)
<b>2. Goods</b>	<b>3,600</b> (3,400)
<b>3. Consults Services</b>	<b>330</b> (300)
<b>4. Training</b>	<b>570</b> (500)
<b>5. Operational Costs</b>	<b>700</b> (400)
<b>Total<sup>1/</sup></b>	<b>5,650</b>
<b>IDA finance</b>	<b>(5,000)</b>

1/ Excluding FAO financing estimated to US\$550,000

## PROCUREMENT PLAN

### I. GENERAL

#### Agreed Date of the Procurement Plan

Procurement Plan June 2004

Date of General Procurement Notice July 2004

### II. CIVIL WORKS

Prior Review Threshold. Procurement Decisions subject to Prior Review by Bank as stated in Appendix 1 to the Guidelines for Procurement :

	Procurement Method	Prior Review Threshold	Comment
1	Shopping*	US\$ 50,000	

### III. GOODS AND NON-CONSULTING SERVICES

Prior Review Threshold. Procurement Decisions subject to Prior Review by Bank as stated in Appendix 1 to the Guidelines for Procurement :

	Procurement Method	Prior Review Threshold	Comment
1	Shopping*	US\$ 50,000	No contract package for goods is expected to exceed US\$250,000
2	Direct contracting	All	

\* The invitation for quotations for each contract for goods and works procured under shopping procedures and estimated to cost more than \$100,000 per contract shall be advertised in at least one newspaper of nation-wide circulation; and prospective bidders shall be allowed at least 14 days to submit quotations.

### IV. SELECTION OF CONSULTANTS

Prior Review Threshold. Selection Decisions subject to Prior Review by Bank as stated in Appendix 1 to the Guidelines Selection and Employment of Consultants

	Selection Method	Prior Review Threshold	Comments
1.	Individual consultants	US\$ 50,000	
2.	Selection based on Consultants' Qualification	US\$50,000	

3.	Least Cost Selection	US\$ 50,000	
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Short list comprising entirely of national consultants. Short list of consultants for services, estimated to cost less than \$100,000 equivalent per contract, may comprise entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines.

**V. PUBLICATION OF THE AWARD OF CONTRACT**

At least once every three months, MARD shall make public by posting on PCU Notice Board a list of all awarded contracts identifying the bid and lot numbers and the following information: (a) name of each bidder who submitted a bid; (b) bid prices as read out at bid opening; (c) name and evaluated prices of each bid that was evaluated; (d) name of bidders whose bids were rejected and the reasons for their rejection; and (e) name of the winning bidder, and the price it offered, as well as the duration and summary scope of the contract awarded.

## Vietnam - Avian Influenza Emergency Recovery Project (AIERP)

### Procurement Plan (June 30, 2004)

*All price in US\$*

No.	Contract description	Estimated Number of Contracts	Estimated Cost (Contingencies not included)					Proc. Method	Prior Review	Post Review	Est. Proc. Period
			Total	Comp. A	Comp. B	Comp. C	Comp. D				
<b>I CIVIL WORKS</b>											
1	Biosecurity Upgrading of 12 GP Farms - Building Rehabilitation and Upgrading	12	450,000	0	450,000	0	0	Shopping	contracts >50k each	20% the rest	Oct\Nov-04
<b>Sub-total</b>			<b>450,000</b>	<b>0</b>	<b>450,000</b>	<b>0</b>	<b>0</b>				
<b>II GOODS</b>											
1	Lab equipment (5 RVC & VRL)	5-10	800,000	800,000	0	0	0	Shopping	contracts >50k each	20% the rest	Jul\Nov-04
2	Laboratory Chemicals, Reagents, and Consumables	5	200,000	200,000	0	0	0	Shopping	contracts >50k each	20% the rest	Jul\Nov-04
3	Disinfectant, Protective clothing, Sampling kits & Small Equipment	5	300,000	300,000	0	0	0	Shopping	contracts >50k each	20% the rest	Jul\Nov-04
4	Biosecurity equipment for GP farms	5-10	300,000	0	300,000	0	0	Shopping	contracts >50k each	20% the rest	Oct\Dec-04
5	Poultry breeding stock for GP Farms	5	1,150,000	0	1,150,000	0	0	Direct Contracting	All		2004 & 2005
6	Vehicles (4 units)	1	200,000	100,000	50,000	50,000	0	Shopping	contracts >50k each	20% the rest	Jul\Nov-04
7	Motorbikes (105 districts)	1	210,000	210,000	0	0	0	Shopping	contracts >50k each	20% the rest	Jul\Nov-04
8	Office Equipment and Computers	5	190,000	40,000	40,000	80,000	30,000	Shopping	contracts >50k each	20% the rest	Jul\Sep-04
9	Training and communication Equipment	3-5	170,000	120,000	0	50,000	0	Shopping	contracts >50k each	20% the rest	Jul\Sep-04

10	Leaflets and Posters	5	80,000	0	80,000	0	Shopping	contracts >50k each	20% the rest	Jul\Sep-04	
<b>Sub-total</b>			<b>3,600,000</b>	<b>1,770,000</b>	<b>1,540,000</b>	<b>260,000</b>	<b>30,000</b>				
<b>III CONSULTING SERVICES</b>											
1	TA - Set-up and operate community-based surveillance networks		50,000	50,000	0	0	0	Individual Consultants	TOR	20%	Jul\Nov-04
2	TA - MARD/ICARD/DAH Web Development and maintenance (lumpsum)		40,000	0	0	40,000	0	Individual Consultants	TOR	20%	Oct\Dec-04
3	TA - Engineering Design for Biosecurity Upgrading of 12 GP farms		70,000	0	70,000	0	0	Individual Consultants	TOR	20%	Jul\Nov-04
4	TA - Support to Training		55,000	15,000	15,000	25,000	0	Individual Consultants	TOR	20%	Jul\Nov-04
5	TA for NAEC										
	+ Education Specialist (4 months)		15,000	0	0	14,000	0	Individual Consultants	TOR	20%	Jul\Nov-04
	+ Animal Health Specialist (2 months)		7,000	0	0	7,000	0	Individual Consultants	TOR	20%	Jul\Nov-04
	+ Journalist\Editor (1 month)		3,000	0	0	3,000					
6	TA - Project Management										
	+ Interpreter (24 months)		20,000	0	0	0	20,000	Individual Consultants	TOR	20%	Jul\Nov-04
	+ Procurement Specialist (18 months)		30,000	0	0	0	30,000	Individual Consultants	TOR	20%	Jul\Nov-04
	+ Financial Software Specialist (1 month)		10,000	0	0	0	10,000	Individual Consultants	TOR	20%	Jul\Nov-04
	+ Auditing (2 months)		30,000	0	0	0	30,000	LCS	TOR	20%	Jul\Nov-04
<b>Sub-total</b>			<b>330,000</b>	<b>65,000</b>	<b>85,000</b>	<b>89,000</b>	<b>90,000</b>				
<b>IV TRAINING</b>											
1	Training of SDAH and District Veterinary Staff		60,000	60,000	0	0	0	SOE	Plan and cost estimates		2004 to 2006
2	Training of Commune Staff & Farmers on Community Based Surveillance Network		35,000	35,000	0	0	0	SOE	Plan and cost estimates		2004 to 2006

3	Training, public awareness and information on extension, animal health and M&E	370,000	0	0	370,000	0	SOE	Plan and cost estimates	2004 to 2006
4	Community Public Awareness and Information Campaigns	80,000	0	0	80,000	0	SOE	Plan and cost estimates	2004 to 2006
5	Training and workshops on project management	25,000	0	0	0	25,000	SOE	Plan and cost estimates	2004 to 2006
<b>Sub-total</b>		<b>570,000</b>	<b>95,000</b>	<b>0</b>	<b>450,000</b>	<b>25,000</b>			
<b>V OPERATIONS COSTS</b>									
1	Allowance and Incremental staff time	280,000	120,000	0	110,000	50,000	SOE	Plan and cost estimates	2004 to 2006
2	Travel, Management & Office maintenance	310,000	200,000	20,000	40,000	50,000	SOE	Plan and cost estimates	2004 to 2006
3	Operating costs for PPIU	100,000	0	0	0	100,000	SOE	Plan and cost estimates	2004 to 2006
<b>Sub-total</b>		<b>700,000</b>	<b>200,000</b>	<b>20,000</b>	<b>150,000</b>	<b>330,000</b>			
<b>GRAND TOTAL <sup>1/</sup></b>		<b>5,650,000</b>							



**THE SOCIALIST REPUBLIC OF VIETNAM****AVIAN INFLUENZA CONTROL EMERGENCY PROJECT****FINANCIAL MANAGEMENT AND DISBURSEMENT ARRANGEMENTS****A. SUMMARY OF THE FINANCIAL MANAGEMENT ASSESSMENT**

1. An assessment of the project's financial management arrangements was conducted in May 2004 and it is concluded that with the completion of the Action Plan as tabled in this Annex, that the Project meets the minimum requirements of the Bank's OP/BP10.02. The project will adopt traditional disbursement methods and will produce quarterly financial monitoring reports.

**Country Issues**

2. IDA conducted a Country Financial Accountability Assessment (CFAA) of Vietnam in 2001, which provides a diagnosis of the country's financial management environment. The CFAA helps the Government and IDA, among other things, to assess and manage the risk that public funds might be used for unintended purposes and identify the key risks, capacity gaps and constraints to progress in this area. An Action Plan to address the key findings of the CFAA has been agreed upon with the Government.

3. Among the key findings of the CFAA that are relevant to the financial management aspects of this Project are the following: (a) management reports for effective decision-making are not widely used; (b) as the requirements of public expenditure accounting are very comprehensive and detailed, and compliance with the financial management requirements is challenging for all units, particularly at the lower levels; and (c) as accounting staff focus on more easily accomplished requirements like mechanical verification of payments and receipts, the regular and efficient monitoring of state budget information for effective use of public funds at times is not carried out in a timely manner.

4. The CFAA also reports that "the current budget arrangement in Vietnam suffers from a lack of transparency in the achievement of objectives." The conclusion of the assessment is that there is a certain degree of fiduciary risk in the use of public resources, although overall the fiduciary risk for this Project is manageable for on-budget items, considering the steps that are envisioned to be taken under the financial management plan.

**Implementation Arrangement**

5. At the central level, the current PCU of the on-going Agricultural Diversification Project under the Agricultural Projects Management Board (APMB) of MARD will be responsible for day-to-day implementation, supervision, and project monitoring. The PCU will receive technical assistance from national consultants, technical guidance from the Departments of Animal Health

(DAH) and Agriculture (DA), the National Agricultural Extension Center (NAEC), and other concerned Departments and institutions of MARD for each of the project components, as follows:

Component A: *Strengthening Disease Surveillance, Diagnostic Capacity and HPAI Research*, to be implemented through consultation and cooperation with, and with the assistance from DAH, NVDC, RVCs, NIVR, and DA.

Component B: *Poultry Subsector Rehabilitation*, to be implemented with the assistance from DA, NIAH and participating Vietnam General Livestock Companies;

Component C: *Public Awareness and Information*, to be implemented by with the assistance from NAEC in collaboration with DAH and DA; and

Component D: *Project Management*, to be implemented by the PCU with senior officers seconded from DAH, DA, and NAEC.

6. At provincial level, a simple *Provincial Project Implementation Unit* (PPIU) will be formed in each province to implement activities in the province under supervision and guidance of the PCU. The PPIU will be headed by a DARD Deputy Director and will draw qualified staff from relevant sub-departments and centers of DARD, such as Animal Health, Agriculture, Extension, and Vietnam Women's Union.

#### **Description and Assessment of Financial Management and Disbursement Arrangements Adequacy**

7. A Special Account (SA) will be opened at a commercial bank acceptable to IDA to receive IDA credit's advance and will be managed by the PCU. The initial SA advance will be made at the request of the Ministry of Finance, with subsequent SA replenishments against Withdrawal Applications, accompanied by either statements of expenditure or summary sheets and other appropriate documents. Direct payment to contractors will be made against Withdrawal Applications for individual payments exceeding 20% of the SA threshold. All Withdrawal Applications will be approved by the Ministry of Finance before disbursement takes place.

8. Most of the Project's expenditures will be incurred at the PCU. Expenditures incurred by the PPIU comprise field allowances, vehicle operating costs and training costs and will be pre-financed by the Government and subsequently reimbursed from the SA after being approved by Project's line Deputy Director. The estimated amount of government pre-financing funds required for PPIUs expenditure are estimated at VND 2 billion.

9. Project activities that have been reviewed and authorized by the Project's line director will be used as the basis for approval of expenditure. Original bills and vouchers of expenditure incurred at PPIUs will be retained at the respective PPIU and filed in an orderly manner for quick and easy access. Reconciliation of income and expenditures between PPIU and PCU will be performed on a quarterly basis, before preparation of the Financial Monitoring Report (FMR).

10. A full-time accountant will be employed by the PCU and a part-time accountant will be attached to each PPIU. Each PPIU will produce a quarterly report in a standardized format and PCUs will use accounting software capable of analyzing expenditures and reimbursements to the PPIU by each province. PPIUs are required to submit their quarterly report within 15 days after the end of the period under review to enable the reconciliation of income and expenditures before preparation and submission of the FMR. The accounting system at both the PCU and

PPIUs must be able to analyze income by source of funding, and expenditures by source of funding, project component, and category of expenditure.

11. Annual budgets will be prepared jointly by the PCU and PPIUs, based on approved annual procurement and activities plans. Payment to contractors/suppliers will be made upon approval of project director/project line Deputy Director or PPIU director, as appropriate.

12. Supervision on financial management will be performed at least twice a year and an annual audit will be performed at the PCU and PPIUs by independent auditors recognized by the Bank.

13. A project financial management manual, acceptable to IDA, will be tailored and adopted by the project. A number of actions need to be taken to meet IDA's minimum requirements for financial management and to support project implementation, as detailed in the Action Plan, tabled below.

### **Risk Analysis and Mitigating Measures**

14. Project activities will be implemented across ten (10) project provinces that have little or no experience with IDA funded project. The issue of capacity and performance consistency at the provincial level will be addressed with training, supervision and guidance from the PCU, which is experienced with IDA-funded projects. In addition, the financial management system at the provincial levels will be set up in close consultation and with the assistance from the PCU.

### **Strengths and Weaknesses**

15. The APMB has been working with a number of World Bank funded projects and its PCU is currently managing the IDA-funded Agricultural Diversification Project. No major internal control issue are recorded in this project's most recent Auditors' Report. It is expected that the PCU's familiarity with IDA's financial management and disbursement policies and procedures will speed up project implementation without negatively affecting financial management standards.

16. It is likely that several PPIUs have limited or no experience with World Bank-funded projects. However, given that Project IDA-funded activities at the PPIUs are confined to training and field allowances and operating costs, the PPIUs should be able to manage the financial management aspects of their activities. In addition, training will be provided to project accountants from time to time and the quarterly reconciliation of project income and expenditures will help to improve their skills, knowledge and experience.

### **Accounting Policies and Procedures**

17. The Project will use accounting policies and procedures acceptable to IDA. For reporting purposes, International Public Sector Accounting Standards (IPSAS) should be used by the Project. The Project will rely as much as possible on the current accounting and reporting systems and internal controls of the PCU for its current World Bank-funded projects, and modify them as necessary to comply with the Development Credit Agreement and the Bank's policies, guidelines and procedures on Financial Management.

### **Reporting and Monitoring**

18. The project will prepare its annual accounts under IPSAS and submit its audited accounts to the Bank no later than 6 months from the closing date of the financial year/period. In addition to the annual accounts, the project will prepare quarterly Financial Monitoring Reports (FMR) in a format agreed by IDA and submit these to the Bank no later than 45 days from the closing date of the reporting quarter. The format of the FMR is tailored to the monitoring purposes of IDA and to the project management and will be made available to the auditors as required.

## Financial Management Action Plan

Actions	Responsibility	Date of Completion
Agree on the content and format of FMR	MARD	Negotiation
Appoint current PCU under APMB to manage the project	MARD	Negotiation
Set up provincial project implementing units	MARD/ Provinces	Effectiveness
Finalize and adopt project financial management manual, as part of the PIM, acceptable to IDA	MARD/ MOF	Effectiveness
Set up a computerized accounting system at PMU	MARD	Effectiveness
Identify and appoint a full time project accountant at PCU and at least 3 part-time project accountants at provincial project implementing units with qualification and experience acceptable to IDA	MARD/ Provinces	Effectiveness
Provide training on project financial management to project accountants	MARD	Effectiveness

## Supervision Plan

19. Supervision of project financial management will be performed on a risk-based approach at least twice a year. The supervision will review the project's financial management system, including but not limited to the operation of Special Account, SOE review, internal control and financial reporting, and provide a supervision report thereof. Financial management supervision will be conducted by IDA's financial management specialist.

### B. AUDITING ARRANGEMENTS

20. The project accounts will be audited annually under International Standards on Auditing by an independent firm of public accountants. The audit will be carried out in accordance with a TOR satisfactory to IDA. The Auditor shall be appointed within 6 months from the first disbursement. The auditors' report will be submitted to IDA by no later than six months after the close of the previous fiscal year. A management letter addressing internal control weaknesses of implementation agencies will also be provided by the auditor together with the audit report. Audit fees are to be covered by the IDA credit.

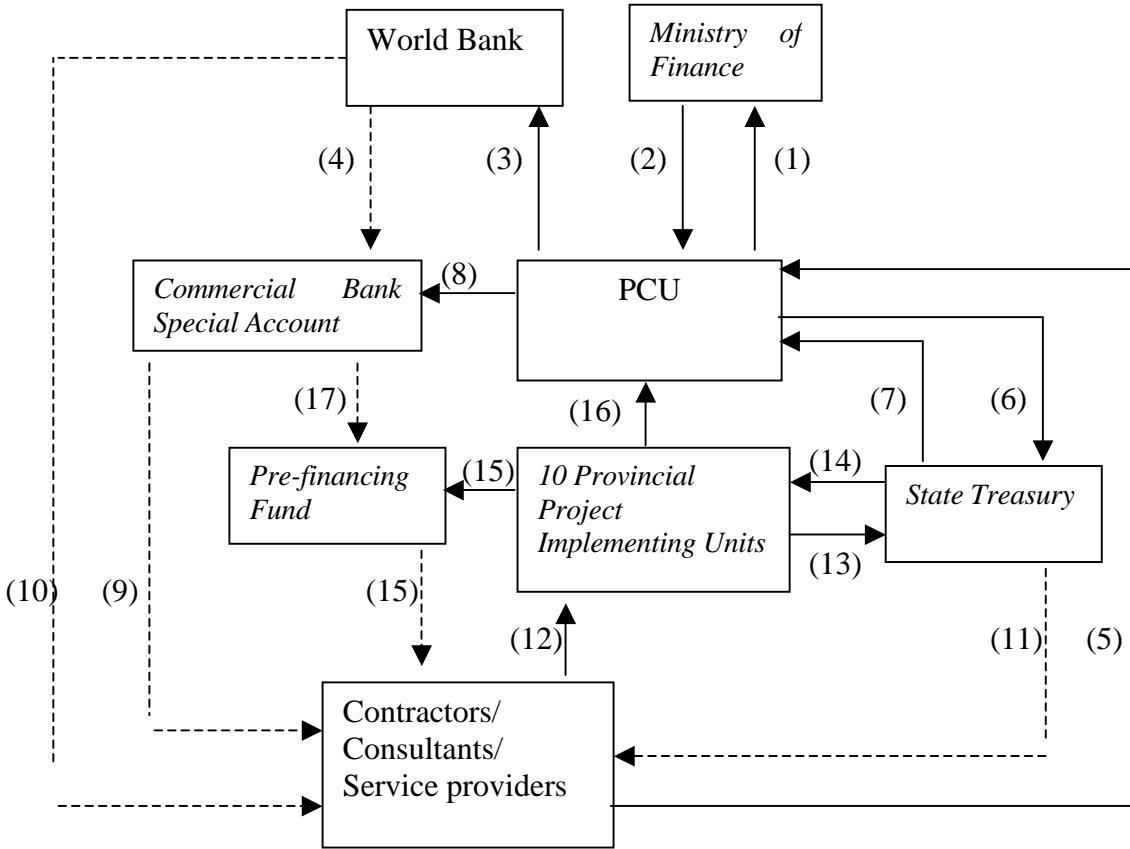
### C. DISBURSEMENT ARRANGEMENTS

#### Allocation of Credit Proceeds

Category	Disbursement	
	Amount (\$mil)	Expenditures to be financed
(1) Works	[400,000]	90%
(2) Goods:		
(a) breeding stock under Part B.1 of the Project	[1,200,000]	100% of foreign expenditures, 100% of local expenditures (ex-factory cost) and 85% of local expenditures for other items procured locally
(b) laboratory equipment under Part A.3 of the Project	[250,000]	
(c) other goods	[1,750,000]	
(3) Consultants services other than under Parts A.1.(c), A.2, A.3, A.4, for biosecurity assessment under Part B.2 and under Part B.3	[300,000]	100% for expenditures for services of individuals domiciled outside the territory of the Borrower, and 93% for expenditures for services of all other consultants
(4) Training and workshops other than Parts A.1(c), A.2, A.3 and A.4 of the Project	[500,000]	100%
(5) Incremental Operating Costs	[400,000]	70%
(6) Unallocated	[200,000]	

TOTAL:	[\$5,000,000] =====	
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## Flow of Funds



### Legend

- > Document flow
- - -> Funds flow

### Withdrawal application and replenishment of special account:

- PCU prepares the Withdrawal Application and sends it to MOF for approval (1).
- MOF reviews, approves and sends withdrawal application back to PCU (2).
- Withdrawal Application is sent to IDA for review and funds transfer (3).
- IDA credit is transferred to the Special Account (4).

### Payments to third parties from Special Account – at PCU:

- Payment request, together with appropriate documentation, is sent to PCU by contractors, consultants and service providers (5).
- PCU sends payment documentation to State Treasury for approval of payment (6).
- State Treasury notifies PCU its approval (7).
- PCU orders the commercial bank to pay IDA's share of eligible expenditure from Special Account (8).
- The commercial bank transfer money under remittance order by PCU (9).
- State Treasury makes payment of counterpart fund's share of eligible expenditure (11).

**Direct payments:**

- Large payments to contractors/consultants/service providers are made directly by IDA. Steps (5)\ (7) followed by (1)\(3) are performed, with specific requests for direct payment made in the Withdrawal Application. Payment will then be made directly from IDA (10).

**Payments to third parties from the Special Account – at PPIU:**

- Payment request, together with appropriate documentation, is sent to PPIU by contractors, consultants and service providers (12).
- PPIU sends payment documentation to State Treasury for approval of payment (13).
- State Treasury notifies PCU its approval (14).
- State Treasury makes payment of counterpart fund's share of eligible expenditure (11).
- PPIU makes payment of IDA's share of eligible expenditure from pre-financing fund (15).
- PPIU sends payment documentation to PCU for review and consolidation (16).
- PCU orders reimbursement of Pre-financing Fund (8).
- Reimbursement made from Special Account to Pre-financing Fund (17).

**Use of Statement of Expenditure**

21. Expenditures for (a) goods and works under contracts costing less than US\$50,000 equivalent each; (b) consultants' services provided by firms under contracts costing less than US\$100,000 equivalent each; (c) consultants' services provided by individuals under contracts costing less than US\$50,000 equivalent each; and (d) training and incremental operating costs, will be paid from the SA and detailed in the SOE supporting Withdrawal Applications for replenishment of the SA. Withdrawal Applications for expenditures exceeding SOE thresholds that apply to direct payment (see above) must be supported by full documentation and signed contracts. Supporting documentation of statements of expenditures should be retained by the PCU and PPIUs for review by IDA missions and external independent auditor acceptable to IDA.

**Special Account**

22. A Special Account (SA) in US Dollars will be opened by the Borrower's central bank at a commercial bank on terms and conditions acceptable to IDA, and exclusively used for the IDA credit. The bank in which the SA is opened should be able to produce monthly bank statements and make these available to the Project in a timely manner. The initial allocation of SA and its authorized allocation are set at US\$500,000 equivalent. Payment from SA is to be made for IDA's share of the Project's eligible expenditure, in accordance with the Development Credit Agreement in accordance with World Bank guidelines. Replenishment of the SA will be made via Statement of Expenditures, supported by appropriate documentation, and submitted to the Bank together with the Withdrawal Application, at least every two months or when the balance of the SA is below 70% of its authorized allocation, whichever comes first.

**Retroactive Financing**

23. Retroactive financing of up to US\$ 0.3 million may be used for eligible expenditures incurred after May 15, 2004 and prior to the day of effectiveness. This provision would allow the project to strengthen surveillance activities at a time when the risk of resurgence of the disease is high. The Borrower is aware of the conditions for retroactive financing and of the risks associated with any payments made in expectation of retroactive financing, provisional agreement which does not commit the Bank to making a loan for the operation or to financing such payments.

## APPENDIX 10

### THE SOCIALIST REPUBLIC OF VIETNAM

### AVIAN INFLUENZA CONTROL EMERGENCY PROJECT

#### ENVIRONMENTAL AND SOCIAL IMPACT

1. Environmental impact. The project's environmental and social impact would be positive, in two areas: (a) by improving laboratory procedures currently in use and by improving the country's security against a recurrence of the AI epidemic, which would have positive environmental health benefits; and (b) by improving the policy framework for the management of potential future outbreaks, with respect to the compensation to poultry farmers affected by culling measures and with respect to the humane culling of chickens and environmental standards for their disposal. No resettlement would be carried out under the project.

#### **Environmental Issues**

2. Laboratory testing and environmental health. Testing for AI is currently carried out by the National Veterinary Diagnostic Center (under the Ministry of Agriculture and Rural Development) and by the National Institute of Veterinary Research. These laboratories now carry out tests to determine the presence of the AI H5 subgroup. The H5 diagnosis is based on a standard enzyme-linked immuno-absorbent assay (ELISA), a relatively simple procedure for which there is good capacity in these laboratories. Tests to determine the presence of the highly pathogenic form of the virus (H5N1), the specific AI subgroup that was responsible for the recent outbreak in Vietnam, are currently carried out by laboratories in Singapore and other locations outside of Vietnam.

3. The project would finance: (a) general improvements to the NVDC laboratory and four of its six Regional Veterinary Centers (RVCs), and to the NIVR labs in Hanoi and Ho Chi Minh City; (b) creation of a Virus Reference Laboratory (VRC) at the NIVR laboratory in Hanoi and testing and storing samples of the strains of H5N1 for applied research and monitoring purposes. The project will not support any investments related to pathogenicity testing in live animal models; and (c) upgrading the technical capacity and safety equipment in the labs.

4. The project would have a positive impact on laboratory worker safety, reducing opportunities for transmission of AI to humans by providing more safe facilities and building capacity for their use. The project will improve and ensure safety by meeting

international standards established by the OIE (World Organization for Animal Health). The adoption of and adherence to OIE standards will be assisted and supervised through technical assistance from FAO. The investments to establish a VRL is subject to two conditionalities: (a) the preparation of an accident mitigation plan, and (b) the construction of the VRL under acceptable biosafety standards, both under terms acceptable to the Bank.

5. Environmental Management on Poultry Farms. The project would assist the Ministry of Agriculture and Rural Development to develop a strategy for managing future AI outbreaks. The strategy would cover the necessary elements for detection of pathogens and measures to prevent the spread of the disease and control and eradicate outbreaks. The project would have potentially positive environmental impacts by adopting OIE standards in two areas:

- (a) Enhancing biosecurity and health status of all GP poultry breeding farms. The Awareness and Public Information Component C would train farm staff in basic hygiene principles and the proper use of disinfectants, increasing human safety by lessening the risk of exposure to avian influenza; and
- (b) Ensuring that environmental safeguards are mainstreamed into protocols and procedures designed to control outbreaks. The issues of environmental importance here include (i) storage and use of surfactants used to disinfect farms after an outbreak, and (ii) handling and disposal of poultry that are identified for culling to control outbreaks, with regard to humane euthanizing of animals and disposal of carcasses that avoids contamination of ground water.

## **Social Issues**

6. Socio-economic. On a national scale the AI epidemic has cost Vietnam 0.3% of GDP, equivalent to several hundred million US dollars, and financially affected some 9 million households. The poultry sub-sector comprises 17% of agricultural GDP. The project would provide country-wide field surveillance that would play an important role in preventing the recurrence of AI, thereby safeguarding the poultry farmers' investment and fostering producer and consumer confidence. Although a recurrence of AI can never be ruled out with absolute certainty, the chances of identifying new flare-ups at a very early stage will be greatly improved provided the project activities are carried out vigorously. Project benefits to stakeholders, from restocking and increased protection against AI, are substantial, especially for those without the financial means to restock.

7. The socio-economic impact of project interventions will be very positive. With the emphasis on smallholder poultry owners, many of them women who have suffered significant financial losses from destocking, and an early warning and other prevention measures to assist the poultry sector in guarding against the recurrence of AI. Great care will be taken to ensure that the restocking exercise does not trigger new outbreaks. This will be done by stringent monitoring and testing of replacement stock suppliers under the Surveillance Component, and registering these enterprises as being disease-free.

8. Social Issues in the Emergency Strategy. The project's assistance to MARD in developing a strategy to manage future AI outbreaks would have a positive social impact by ensuring development of GoV's policy on compensation for poultry farmers affected by future outbreaks.



**THE SOCIALIST REPUBLIC OF VIETNAM**  
**AVIAN INFLUENZA CONTROL EMERGENCY PROJECT**

**MONITORING AND EVALUATION**

<b>Project Component</b>	<b>Performance Indicator</b>	<b>Method of Verification</b>
1. Strengthen Disease Surveillance, Diagnostic Capacity, and HPAI Research	<ul style="list-style-type: none"> <li>• National Action Plan reviewed and strengthened</li> <li>• NVDC and 4 Regional Veterinary Centers upgraded</li> <li>• 75% average monitoring coverage in provinces</li> <li>• 100% monitoring of GP poultry breeding farms</li> <li>• Virus reference laboratory for HPAI established at NIVR</li> </ul>	<ul style="list-style-type: none"> <li>• Acceptance of NAP by MARD Steering Committee</li> <li>• Field surveillance reports from RVCs</li> <li>• Survey Report</li> <li>• Supervision reports, training and procurement reports</li> <li>• DAH Emergency outbreak reports</li> </ul>
2. Poultry Sector Rehabilitation	<ul style="list-style-type: none"> <li>• 15,000 GP stock delivered</li> <li>• Biosecurity works, equipment and training in place 10 months following project onset</li> <li>• Compensation study completed</li> <li>• Poultry losses survey completed</li> </ul>	<ul style="list-style-type: none"> <li>• Delivery reports from breeding farms</li> <li>• Completion reports from breeding farms</li> </ul>
3. Public Awareness and Information Campaign	<ul style="list-style-type: none"> <li>• Trained staff appointed at NAEC</li> <li>• A communication strategy has been designed</li> <li>• Preparation of materials and messages completed</li> <li>• Community-based reporting system effective</li> </ul>	<ul style="list-style-type: none"> <li>• Progress reports</li> <li>• Consumer awareness survey</li> <li>• Assessment report by NAEC</li> </ul>
4. Project Management	<ul style="list-style-type: none"> <li>• PCU fully activated</li> <li>• Timely procurement</li> </ul>	<ul style="list-style-type: none"> <li>• PCU report</li> <li>• Final Study reports received</li> </ul>

		<ul style="list-style-type: none"><li>• Project Implementation reports</li></ul>
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