

# Report and Recommendation of the President

RRP: VIE 34348

## Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Asian Development Fund Grant to the Socialist Republic of Viet Nam for the Preventive Health System Support Project

August 2005

Asian Development Bank

## CURRENCY EQUIVALENTS

(as of 15 July 2005)

|               |   |             |
|---------------|---|-------------|
| Currency Unit | – | dong (D)    |
| D1.00         | = | \$.00006301 |
| \$1.00        | = | D15,870     |

## ABBREVIATIONS

|          |   |   |
|----------|---|---|
| ADB      | – | Asian Development Bank  |
| ADF      | – | Asian Development Fund  |
| CDC      | – | communicable disease control                                    |
| DALY     | – | disability adjusted life year                                   |
| DST      | – | Department of Science and Training                              |
| EMDP     | – | ethnic minority development plan                                |
| EMP      | – | environmental management plan                                   |
| HICH     | – | Health Care in the Central Highlands                            |
| HIV/AIDS | – | human immunodeficiency virus/acquired immunodeficiency syndrome |
| IEC      | – | information, education, and communication                       |
| IEE      | – | initial environmental examination                               |
| MOH      | – | Ministry of Health  |
| NTP      | – | national targeted program                                       |
| PHC      | – | preventive health center  |
| PIU      | – | project implementation unit                                     |
| PMU      | – | project management unit   |
| SARS     | – | severe acute respiratory syndrome                               |
| SGIA     | – | second generation imprest account                               |
| SIEE     | – | summary initial environmental examination                       |
| TB       | – | tuberculosis  |
| VDG      | – | Viet Nam development goal                                       |
| WHO      | – | World Health Organization                                       |

## NOTES

- (i) The fiscal year of the Government and its agencies ends on 31 December.
- (ii) In this report, "\$" refers to US dollars.

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## LOAN AND PROJECT SUMMARY

### **Borrower and Grant Recipient**

Socialist Republic of Viet Nam

### **Classification**

Targeting classification: Targeted intervention

Sector: Health, nutrition, and social protection

Subsector: Health systems

Themes: Inclusive social development, gender and development

Subthemes: Human development, indigenous peoples, gender equity in opportunities

### **Environment Assessment**

Environmental Category: B

The Project will safeguard the environment by replacing old and outdated laboratory equipment, developing environmental management plans for preventive health centers, improving the training of laboratory staff in waste management and segregation, and providing support for new waste management systems. The Project does not support new civil works and will not lead to an increase in solid or liquid waste generation.

### **Project Description**

The Project will strengthen the preventive health system, by increasing its capacity to adapt to changing epidemiological patterns. This will improve the health status of the population and support efforts to reach the health-related Viet Nam development goals (VDGs). The Project will upgrade preventive health centers with new equipment and training in 46 provinces and 4 national institutes. This will support the preventive health system's efforts to combat communicable diseases and build its capacity to meet new challenges in areas such as food safety, occupational health, and school health. Training will be provided in preventive health, epidemiology, communicable disease control (CDC), and laboratory techniques. The Project will build capacity in the health surveillance system. It will provide support to CDC programs in the 17 poorest and most disadvantaged of the project provinces (project priority provinces). The Project will support the planning and technical capacity of the preventive health system and health surveillance system.

### **Rationale**

Viet Nam has achieved a high level of health due, in large part, to contributions from its preventive health system. However the system was designed to meet the country's traditional epidemiological profile, dominated by communicable diseases. This profile is changing rapidly as a result of growing household income, urbanization, and better access to health care. The preventive health system needs to change to better address these

changes. Some parts of the country need significant new investment in emerging health areas, such as food safety and occupational health. Other parts still face major challenges from traditional communicable diseases. The preventive health system needs to upgrade the knowledge and capacity of its staff. Building capacity in the health surveillance system is critical given its important role in detecting outbreaks of new threats, such as severe acute respiratory syndrome (SARS) and avian flu, and in helping provinces understand their epidemiological profile and plan accordingly.

The Project is closely aligned with Viet Nam's Comprehensive Poverty Reduction and Growth Strategy and the Health Sector Strategy, 2001–2010 and directly supports the Asian Development Bank (ADB) commitment to reducing poverty and assisting developing member countries achieve development goals. The Project as a whole contributes directly to reducing the burden of communicable diseases. The Project focuses on strengthening the preventive health system of Viet Nam, which plays a leading role in the health system's efforts to combat communicable diseases, including preparing for emerging communicable diseases such as SARS and avian flu.

A \$10,140,000 grant will support various activities aimed at controlling communicable diseases, consistent with the criteria outlined in the Asian Development Fund IX grant program for HIV/AIDS and infectious disease control activities. The Project contributes directly to reducing the burden of communicable and infectious diseases, as the preventive health system plays a leading role in the health system's efforts to combat communicable diseases, including emerging communicable diseases such as SARS and avian flu.

**Impact and Outcome**

The Project will improve the health status of the population, putting Viet Nam on course to achieve the health-related VDG targets by 2015. The Project will support Government development of a comprehensive preventive health system that integrates the reduction of major communicable diseases and addresses emerging challenges, including food safety and occupational health.

**Cost Estimates**

The total project cost, including physical and price contingencies, and taxes and duties, is \$47.5 million equivalent.

**Financing Plan****Cost Estimates**

(\$ million)

| <b>Source</b> | <b>Foreign Exchange</b> | <b>Local Currency</b> | <b>Total Cost</b> | <b>Percent</b> |
|---------------|-------------------------|-----------------------|-------------------|----------------|
| ADB Loan      | 25.8                    | 2.1                   | 27.9              | 59             |
| ADF Grant     | 1.3                     | 8.9                   | 10.1              | 21             |
| Government    | 0.0                     | 9.5                   | 9.5               | 20             |
| <b>Total</b>  | <b>27.1</b>             | <b>20.4</b>           | <b>47.5</b>       | <b>100</b>     |

ADB = Asian Development Bank, ADF = Asian Development Fund.

Note: Numbers may not add up due to rounding.

Source: Asian Development Bank estimates.

**Loan and Grant Amounts and Terms**

A loan in various currencies equivalent to Special Drawing Rights (SDR)19,222,000 (\$27.9 million equivalent) will be provided from ADB's Special Funds resources. The loan will have a 32-year term including a grace period of 8 years, an interest rate of 1% per annum during the grace period and 1.5% per annum thereafter.

A grant in the amount equivalent to \$10,140,000 will be provided from Asian Development Fund.

**Period of Utilization**

30 June 2012

**Estimated Project Completion Date**

31 December 2011

**Executing Agency**

Ministry of Health

**Implementation Arrangements**

The implementing agencies include provincial health services in 46 provinces, 4 national institutes, and several departments in the Ministry of Health. A project management unit (PMU) headed by a project director will procure and distribute all major equipment to the implementing agencies. The PMU will be responsible for organizing training activities and allocating resources, supervising small-scale procurement by participating provinces and national institutions, and liquidating project expenditures. A project steering committee will supervise PMU activities.

The Project will be managed by the provincial health services and the national institutes, with the support of a small administrative office that will serve as the project implementation unit. The provinces and national institutes will coordinate training and carry out small-scale procurement to ensure that the Project operates smoothly. They will ensure that the equipment provided is properly used and maintained.

**Procurement**

Goods and services will be procured in accordance with ADB *Guidelines for Procurement*. Laboratory equipment (15 packages) will be procured on the basis of international competitive bidding, international shopping, and local competitive bidding, depending on the size and nature of the package. Additional material and supplies will be procured nationally using international competitive bidding, international shopping, local competitive bidding, and direct purchase, depending on the nature of the package. The provinces and national institutes will carry small-scale procurement using local competitive bidding or direct purchase.

**Consulting Services**

The Project will contract 66 person-months of international consulting services (4 consultants) recruited as a firm, using quality-and cost-based selection in accordance with ADB's *Guidelines on the Use of Consultants* and 170 person-months of domestic consultants (7 consultants), recruited in accordance with other arrangements satisfactory to ADB.

**Project Benefits and Beneficiaries**

The Project will have a significant impact on the health system and the health status of the population of Viet Nam. It will address issues of inequality in the health system by targeting assistance to provinces that still face a high burden of communicable disease. The Project will support the Government as it addresses emerging health issues such as food safety and occupational health. Through its focus on diseases that are often underfunded, the Project will generate significant health benefits and externalities, and is expected to reduce the total burden of disease (as measured in disability adjusted life years) by 17% in 2015.

The Project will benefit the preventive health system by strengthening the health surveillance system, four key national institutes, and provincial preventive health centers in 46 of 64 provinces (with a total population of 58.7 million, about 75% of the population). The Project offers targeted support to 17 project priority provinces (with a total population of 14.8 million) to reduce the high burden of communicable disease.

The Project will provide important support to the Ministry of Health and to provinces to plan for the ongoing epidemiological transition and build capacity in preventive health, including laboratories, health surveillance, and epidemiology. About 3,500 local health workers will receive training in community health. Refresher and intensive courses will be offered to 2,500 staff and an additional 350 staff will receive postgraduate training.

The expected economic internal rate of return of the Project, only considering private benefits to people who would have become sick without the Project, is at least 16%.

**Risks and Assumptions**

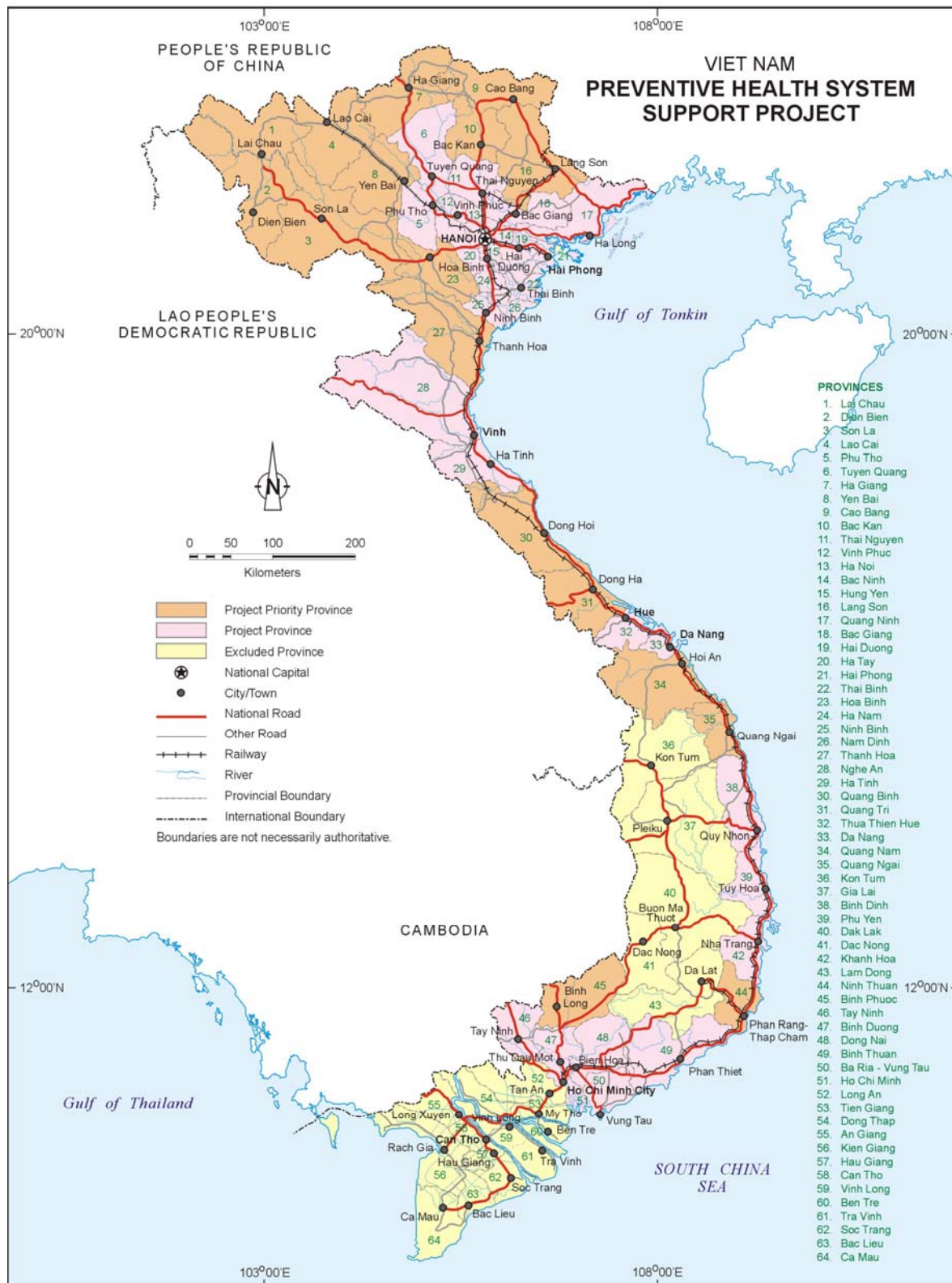
The Project will support technologies and procedures that are understood internationally and in Viet Nam. Only minimal technical risks are associated with the Project. The Project does not have any adverse social or physical impact. Land acquisition and resettlement are not required as no civil works are needed.

The Project will provide support to national targeted programs (NTPs) in 17 project priority provinces (out of a total of 46 provinces). While these programs have generally been successful, they do not always coordinate with the rest of the health system as they focus narrowly on one health issue. The Project will work to support ongoing efforts to integrate NTPs into the health system, by providing training in the management of communicable disease programs and support for quality of care standards.

The Project will supply laboratory equipment. This investment requires adequate government budget for operation and maintenance to ensure that the equipment does not deteriorate. The Project will carry out a careful assessment of each province to ensure that equipment purchased is needed (given the province's epidemiological profile and the current availability of usable equipment).

The Project will provide substantial and needed support for training and NTPs. This could result in the Government reducing its own contribution to these programs, thus reducing the overall effectiveness of the Project's investments.

The Project will invest in the human resources of the preventive health staff. Experience has shown that it is often difficult to attract and retain trained personnel in the preventive health system, particularly in remote areas. The Project will offer specialized training that is specific to the needs of preventive health staff. This will make training opportunities attractive to staff who seek a career in the preventive health field.



## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on (i) a proposed loan, and (ii) a proposed grant, both to the Socialist Republic of Viet Nam for the Preventive Health System Support Project. The design and monitoring framework is in Appendix 1.

## II. RATIONALE: SECTOR PERFORMANCE, PROBLEMS, AND OPPORTUNITIES

### A. Performance Indicators and Analysis

#### 1. Sector Background

2. Viet Nam has seen significant progress in improving the living and health standards of its population. As a result of rapid economic growth and targeted public investment, at the current rate of progress Viet Nam will achieve most of the health-related Viet Nam development goals (VDGs) by 2015.<sup>1</sup> The child mortality rate fell from 44 per 1,000 live births in 1991 to 30 in 2001. The maternal mortality rate decreased from about 200 per 100,000 live births in 1990 to about 160 in 1999. Child malnutrition has dropped from 47% in 1992 to 38% in 1996 and 26% in 2001. Viet Nam has made significant gains in the control of several communicable diseases including malaria and tuberculosis (TB), reducing the share of communicable disease from 56% of the total burden of disease in 1976 to around 27% in 2002.<sup>2</sup>

3. **The Preventive Health System.** The preventive health system is central to the Government's efforts to maintain and improve public health. The system is responsible for traditional activities such as immunization, and information, education, and communication (IEC) on good health practices and activities such as disease control, food safety, and school health programs; public health laboratories; and epidemiological surveillance systems.

4. The preventive health system traditionally played a leading role in the health sector and is usually credited for the country's success in achieving good health results with a limited budget. However, as free markets take hold, much of the focus in the health sector has been on curative care at the expense of the preventive health system. The Government has made major investments to improve service quality and reduce vulnerability due to the high burden of out-of-pocket expenditures. Public spending has increased significantly, from around \$2.90 per capita in 1993 to \$7.60 in 2000; about two thirds has been spent on the curative health system.<sup>3</sup> Viet Nam has also received substantial foreign support for health, also focusing on curative health care and family planning. Support for preventive health has focused on a few diseases, namely HIV/AIDS,<sup>4</sup> malaria, and TB (Appendix 2).

5. The health system faces formidable challenges. The country's health profile is becoming more heterogeneous. Despite progress in reducing the overall burden of communicable diseases, they still remain a major health concern in many areas of the country. The Red River Delta and the South East regions have the epidemiological profile of a middle-income country.

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<sup>1</sup> The VDGs are the localized version of the Millennium Development Goals; they are generally more ambitious and include a number of additional targets.

<sup>2</sup> The Project was prepared with support from ADB. 2003. *Technical Assistance to the Socialist Republic of Viet Nam for the Strengthening of Preventive Health Services Project*. Manila. (PPTA 4102-VIE).

<sup>3</sup> Estimates based on Knowles, J. et al. 2003. *Making Health Care More Affordable for the Poor: Health Financing in Viet Nam*.

<sup>4</sup> Human immunodeficiency virus/acquired immune deficiency syndrome.

However many provinces (primarily in the Central Highlands, North East, and North West regions) still have traditional epidemiological patterns, with communicable diseases remaining the principal public health risk. For example, in the northern provinces of Cao Bang, Dien Bien, and Lai Chau, more than 50% of the burden of disease is due to communicable diseases, compared with the Red River Delta, where communicable diseases account for 10%. In addition to the gap in health status between rich and poor provinces, the gap in health between poor and non-poor households is growing.<sup>5</sup> Many of the gains in health and nutrition have benefited wealthier households largely or exclusively.

6. Noncommunicable diseases are playing a growing role in the health profile of the country. These include cardiovascular diseases (stroke, hypertension, heart failure), diabetes, and cancer. Noncommunicable diseases now account for around 70% of the total burden of disease. While they are largely influenced by lifestyle factors (such as diet, tobacco, and alcohol use), the health system can play a role in disseminating information about prevention and in the early detection of life-threatening problems.

7. Despite Viet Nam's success with traditional communicable diseases, the country faces significant challenges from emerging communicable diseases. If unchecked, these diseases could slow Viet Nam's economic growth and limit progress in meeting the VDGs. HIV/AIDS is a growing concern, with an estimated 240,000 cases (almost 0.4% of the population) and rapid increase in new cases, which has been doubling every 2 years. Severe acute respiratory syndrome (SARS) severely affected the country in 2003 and left a heavy economic and human toll. Avian flu also has the potential to become a major health and economic threat. It has already caused significant damage to the country's poultry industry. If the disease begins to spread among the human population, the health consequences could be severe. Food safety is another emerging concern, because higher household income and a greater role of women in the workforce have led to an increase in the demand for processed and packaged food. Processed foods have become a major source of transmission of food- and water-borne diseases and of toxic and carcinogenic substances.<sup>6</sup> For example, a survey of street food in Hanoi found that 44% contained unapproved agents.

## 2. Preventive Health in Viet Nam

8. The preventive health system is a separate entity within the health sector. Within the Ministry of Health (MOH), two policy units (Department of Preventive Medicine and HIV/AIDS Control and Department of Food Administration) are responsible for the management and supervision of preventive health activities. The preventive health system carries out countrywide activities through national targeted programs (NTPs) and national institutes, and provincial activities through the provincial preventive health centers (PHCs).

9. **National Targeted Programs.** The Government created 10 NTPs to address major health problems,<sup>7</sup> particularly in poor and remote provinces. The NTPs allocate resources to provinces based on needs, taking into account fiscal capacity and health conditions. Support is provided for direct interventions (such as the provision of drugs and bed nets), IEC campaigns,

<sup>5</sup> Bhushan, I., E. Bloom, N. Huu, and N.M. Thang. 2001. *The Human Capital of the Poor*. Manila: ADB; Baird, S. 2003. *Inequality and Health in Vietnam: A Look at Key Issues*. Manila: ADB.

<sup>6</sup> Hanoi Preventive Medicine Center. 2002. *Safe Street Food in Hanoi*. Proceedings of Intersectoral Solutions for Food Safety Management in Vietnam. MOH/UNICEF: Hanoi, 8 May 2002.

<sup>7</sup> NTPs exist for dengue fever, expanded program for immunization, food safety, goiter, HIV/AIDS, leprosy, malaria, mental health, nutrition, and TB. NTPs also operate in other sectors, such as education.

and specialized training. While the NTPs have proved effective,<sup>8</sup> concerns exist that they may fracture the health system by creating incentives to focus on specific diseases rather than treating the population's health needs in a holistic manner.

10. **The Public Health Surveillance System.** A public health surveillance system plays a central role in health sector planning, providing information to guide managers and health workers on disease control. Viet Nam has a surveillance system for communicable diseases (including food-borne related diseases) and some noncommunicable diseases, including those related to occupational safety and health. However, the quality and timeliness of data depend greatly on the separate guidelines and protocols for different diseases and the varying local capacity. This can be confusing for local staff supporting several disease programs.

11. **National Institutes.** Twelve institutes and 2 centers, under direct MOH control, provide technical guidance, surveillance, and supervision for preventive health activities. The national institutes also play an important role in training and public health research. This includes the National Institute of Hygiene and Epidemiology, which serves as the central technical resource center for the preventive health system; a number of regional institutes that provide technical support to a defined geographic area; and institutes that focus on specific health issues, such as malaria or nutrition.

12. **The Preventive Health Center.** In the provinces, the PHC is the primary institution providing preventive health services. As part of the provincial health service, the PHC receives technical guidance from MOH. The preventive health laboratory, which is under the PHC, is the province's primary center for testing biological samples, and conducting food safety, and occupational safety and health programs. The PHC is supported by a provincial IEC center. School health programs include hygiene promotion and health education; environmental health in schools; and regular health, visual, and dental examinations for students. In the districts and communities, preventive health activities are integrated with the curative health system. Each district has a preventive health team, typically with 5–7 technical staff and a small laboratory. Each commune health center has at least one staff focusing on preventive health activities, working with other commune health staff and village health workers.

13. **Human Resources.** On average, a PHC has about 50 staff, including those working on outreach activities and in the laboratory. While the number of staff is generally adequate, the quality is below recommended levels, particularly in remote and rural provinces. Only about 15% have either basic or in-service training in epidemiology or public health. Likewise, few staff are trained in emerging areas such as HIV/AIDS, occupational health, and food safety. For example, on average, 2.4 staff are trained in food safety per PHC, which is about half of what is recommended. Because preventive health staff do not have direct contact with patients, they cannot supplement their incomes with fees. The Government gives staff additional incentives, particularly for staff located in poor and remote provinces.

## **B. Analysis of Key Problems and Opportunities**

### **1. Challenges**

14. **Renewing the Preventive Health System.** Viet Nam will need to increase its investment in the preventive health system to ensure the system has the necessary equipment, supplies, and human capacity to meet new challenges. Traditionally the preventive health

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<sup>8</sup> Minford, M. 2004. *A Review of National Targeted Programs in Vietnam*. Hanoi.

system played the leading role in maintaining the high levels of health seen in Viet Nam, but in recent years investment has been inadequate to meet the changing health needs.

15. **Changing Epidemiological Patterns.** While Viet Nam is seeing significant changes in its epidemiological pattern, the change in the burden of disease has not been felt equally across the country (Appendix 3). The preventive health system was designed when the epidemiological pattern was much more homogenous. Viet Nam now requires a system that can continue to support provinces with high levels of communicable diseases, while beginning to address new issues like occupational health and safety and noncommunicable diseases.

16. **Emerging Communicable Diseases.** Viet Nam is at risk from emerging communicable diseases such as HIV/AIDS, SARS, and avian flu. There are fears that Viet Nam could be in the center of a major pandemic, which would cause significant human suffering and economic dislocation. The preventive health system has been slow to adapt to these new risks, and lacks both the financial and human resources to respond efficiently.

17. **Fractured Public Health Surveillance System.** The existing surveillance activities are limited by the separation of information into individual diseases or programs. This limits the ability to provide a comprehensive and integrated epidemiological picture of communicable diseases. The concept of surveillance is not fully understood at all levels of the preventive health system. The current structure is not flexible enough to accommodate emerging disease concern, such as SARS and avian flu.

18. **Food Safety.** With current trends in income growth and urbanization, food safety will become an increasing problem. Exporters of raw and processed foods also require a stronger food inspection system to certify their products. The recent outbreak of avian flu only highlights the relationship between food and human health. The Government has responded to this concern by approving an ordinance on food safety and creating the Department of Food Administration in MOH.<sup>9</sup> Food safety testing equipment is usually basic and limited, and most staff lack sufficient training.

19. **Underdeveloped School Health.** The potential is high for school health programs to become an important early contact with the health system to prevent future disability, particularly for children in poor and rural areas. Despite this, the school health program is relatively underdeveloped. Staff working in school health have limited equipment (for example, for eye tests and dental examinations) and often only basic training.

20. **Occupational Health and Safety.** Industrialization and urbanization have increased the need to improve safety standards in the workplace making occupational safety and health a new area for the preventive health system. This includes testing the workplace for toxic materials and identifying simple, cost-effective interventions that can reduce on-the-job accidents and injuries. Only a few provinces have developed occupational health and safety programs, and even then, have noticeable limitations in equipment and staff training.

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<sup>9</sup> The Asian Development Bank and World Health Organization provided support to the Government to strengthen food safety policy through technical assistance to build capacity to prevent food-borne diseases: ADB. 2000. *Technical Assistance to the Socialist Republic of Viet Nam for the Capacity Building for Prevention of Food-Borne Diseases*. Manila. (TA 3483-VIE).

## 2. Opportunities

21. The preventive health system was designed to meet the needs of a relatively homogenous country with a high burden of communicable diseases. Laboratories were generally given the same type and amount of equipment. As with many public services in Viet Nam, the preventive health system has been driven traditionally by inputs (the aim to meet Government norms for staffing and training) than by outcomes and goals. National norms were established for training and were applied universally across the country.

22. As the epidemiological profile changes due to the growing household income, urbanization, and better access to health care, the preventive health system needs to change as well. Some parts of the country require new investment in emerging areas, such as food safety and occupational health. Other areas still face major challenges from traditional communicable diseases. In addition to the need for new and appropriate equipment, the preventive health system also needs to upgrade the knowledge and capacity of its staff. Recent outbreaks of new threats (such as avian flu and SARS) require strengthening the health surveillance and laboratory systems. The health surveillance system plays a critical role in detecting outbreaks of new threats and in improving strategic planning. The laboratory system needs to be upgraded, and investments to upgrade the capacity of national laboratories consolidated.

23. **The Preventive Health Master Plan.** To respond to these needs, MOH has developed a master plan<sup>10</sup> for the preventive health system. The plan defines the roles and responsibilities of the different actors in the subsector (Appendix 4). The goal is to meet the country's future preventive health needs by improving the system's organization and increasing investment in equipment and staff training. The investment plan includes renovating physical infrastructure, replacing equipment, and increasing the quality of human resources to better prepare the country for emerging health problems, such as HIV/AIDS, SARS, and avian flu, noncommunicable health issues, and food safety. The master plan explicitly recognizes that different provinces have different investment needs.

24. The Government has increasingly focused resources on the curative subsector, which has also attracted the best staff and the bulk of resources. The master plan identifies resource needs of around \$250 million from 2006–2010. Much of this will be met from planned government investment, however significant gaps remain. Most external support to the preventive health subsector has concentrated on three diseases—HIV/AIDS, malaria, and TB, with little additional support going to other health priorities. The public health surveillance and food safety systems have received important technical assistance, but investment is needed for training and equipment to build on these initial investments, given the growing threat of new communicable diseases and lifestyle disease.

## 3. Lessons Learned

25. The Asian Development Bank (ADB) has been active in the health sector in Viet Nam for more than a decade and has two ongoing investment projects.<sup>11</sup> ADB has participated

<sup>10</sup> Ministry of Health. 2004. *Master Plan on the Development of the Preventive Health Network in Vietnam by 2010 and Vision for 2010*. Hanoi: Department of Preventive Medicine and HIV/AIDS Control, MOH, Government of Viet Nam. The master plan will be an integral part of the Health Sector Strategy, 2006–2010.

<sup>11</sup> ADB. 2000. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Rural Health Project*. Manila. (Loan 1777-VIE). ADB. 2003. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Health Care in the Central Highlands Project*. Manila. (Loan 2076-VIE).

extensively in policy dialogue in the health sector and worked closely with development partners.

26. ADB experience in the health sector is mixed but is clearly improving. The first project, the Rural Health Project, was slow to implement due to lack of familiarity with ADB procedures and poor communication. This experience is common in other sectors where ADB is active. However, MOH has improved its capacity to manage ADB administrative requirements and integrate them with government regulation. ADB has also learned a great deal about government procedures and how to integrate them in project design and supervision. The timing of activities within projects should be realistic and take into account administrative requirements of the Government for necessary approval. Consultants can provide useful technical and planning support in project implementation. Project design should take into account the decentralized nature of government with the appropriate division of labor between MOH and local authorities. Corruption is a challenge in Viet Nam. In the health sector, ADB has spent significant time reviewing procurement documents to ensure improved transparency and to reduce the risk that corruption will distort project implementation. With time, project performance has improved in the health sector.

27. The Government dedicates considerable effort to develop strategies and master plans. ADB experience is that these strategies should be taken seriously as they reflect significant national ownership. Projects should align their objectives to existing national objectives and take advantage of the important consensus-building process that goes into preparing government strategies. Reforms often take time to gain support in Viet Nam, but once good understanding and consensus are developed, the Government is able to take decisive action. Likewise, development partners need to follow the cues given by the Government.

### III. THE PROPOSED PROJECT

#### A. Impact and Outcome

28. The goal of the Project is to improve the health status of the population by maintaining the pace of health improvements, putting Viet Nam on course to achieve the health-related VDG targets by 2015. The Project will support Government efforts to develop a comprehensive preventive health system that supports efforts to reduce the spread of communicable diseases and addresses emerging challenges in preventive health, including food safety and occupational health and safety.

29. The Project covers 46 of the country's 64 provinces. Eighteen provinces are excluded from the scope because they have existing projects with significant components to strengthen their preventive health services.<sup>12</sup> Of the 46 participating provinces, 17 poor and disadvantaged provinces (the project priority provinces) with significant health needs will receive priority attention. These provinces were selected using criteria that weigh their relative poverty (as measured by the provincial VDG rating) and a measure of their health needs.<sup>13</sup> The provinces

<sup>12</sup> A World Bank project supports the preventive health system in the 13 provinces of the Mekong Delta region and an ADB project supports five provinces of the Central Highlands. Both projects are being closely coordinated with this Project and with the preventive health master plan. This will ensure that the entire country is covered by an equivalent set of interventions.

<sup>13</sup> These provinces are Bac Can, Binh Phuoc, Cao Bang, Dien Bien, Ha Giang, Hoa Binh, Lai Chau, Lao Can, Lang Son, Ninh Thuan, Quang Binh, Quang Nam, Quang Ngai, Quang Tri, Son La, Thanh Hoa, and Yen Bai. The total population of the 17 provinces is 14.8 million, of which 39% are ethnic minorities.

selected have difficulty controlling common infectious diseases. They are also the most disadvantaged in terms of socioeconomic development. The Project will provide support for four national institutes to strengthen their role as regional reference laboratories.

## **B. Outputs**

30. The project design is based on an extensive review of the needs and investment options to support the preventive health system, in the context of the preventive health master plan (footnote 13). The Project was developed through extensive consultation with MOH, national institutes, provincial health services, and health sector development partners. The technical scope of the Project is divided into the four components: health surveillance and priority health issues, preventive health system strengthening, human resource development, and project management.

### **1. Health Surveillance and Priority Health Issues**

#### **a. The Health Surveillance System**

31. The health surveillance system is the primary tool for providing information to guide health managers and staff to carry out their responsibilities effectively, including introducing local control measures and strategic planning. The Project will strengthen the capacity to collect and utilize epidemiological data, to ensure better tracking and monitoring of public health threats. This will be achieved by developing an integrated surveillance system and supporting field visits. The Project will support training of provincial and district staff to allow them to effectively report on disease outbreaks. The Project will work in close coordination with other initiatives to strengthen the health surveillance system, including ongoing initiatives by the Association of Southeast Asian Nations (ASEAN) and the World Health Organization and the proposed Regional Communicable Disease Control (CDC) Project.<sup>14</sup> These initiatives focus on improving the national capacity of the system and compliance with the new International Health Regulations developed by the World Health Organization in response to the SARS outbreak. The Project will focus on strengthening provincial and district capacity for routine monitoring and reporting.

#### **b. Quality of Services**

32. MOH will develop a minimum set of quality standards to monitor the performance of PHCs and to serve as benchmarks for the public health surveillance system. Traditionally, MOH has focused on inputs (quantity of equipment or training levels of staff) compared with official norms. These new standards will focus on outputs, such as the quality and frequency of testing, and planning and programming to meet the provinces' preventive health needs. The Project will (i) design a monitoring system for the collection and analysis of information on the performance of the preventive centers and (ii) provide technical support to upgrade areas of the PHC that do not meet the required quality of service standards.

#### **c. Support for Communicable Disease Control**

33. Many provinces continue to have difficulty bringing common infectious diseases under control. These provinces are also the most disadvantaged in terms of socioeconomic

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<sup>14</sup> ADB is preparing a regional project focusing on strengthening the capacity of countries in the Greater Mekong subregion to control regional outbreaks of communicable disease.

development and have a high ethnic minority population. The Project will provide comprehensive support through the existing NTPs in 17 project priority provinces with high burdens of disease and low fiscal capacity. This support will be based on provincial plans developed on an annual basis and will complement activities ordinarily covered by the NTPs. The participating provinces will develop an annual proposal for financing, including support for behavior change communication activities, increased supervision and technical support, and material support. Given the significant support available for HIV/AIDS, the Project will focus on other communicable diseases, such as dengue fever and Japanese encephalitis, and parasite control and deworming. The Project may support activities to control TB and malaria. However, the primary focus will be on other communicable diseases that have received significantly less support and pose a serious risk to the population's health.

## **2. Preventive Health Service**

### **a. Support for the Provincial Preventive Health System**

34. The Project will strengthen PHCs in 46 provinces. It will provide a basic package of level 1 equipment and supplies to all covered PHCs.<sup>15</sup> For level 2a and 2b laboratories, the Project will provide additional equipment to meet their specific needs. The Project's resources will be allocated judiciously to help support PHCs replace old equipment. A detailed assessment of quantity and quality of existing equipment (taking into account existing inventory of equipment and proximity to provincial hospitals and other facilities) was carried out during project preparation. MOH will finalize this needs assessment for each PHC. Particular emphasis will be given to areas with little or no existing equipment. Based on the initial needs assessment, around 40% of support will be for equipment in the area of food safety. Around 30% of the support will be for infectious disease control equipment to replace existing equipment with more modern equipment. Equipment will also be allocated for school health, occupational health and safety programs, and the detection and diagnosis of lifestyle and noncommunicable diseases. Complementary training will be offered in the use of new equipment and laboratory management.

### **b. Support for National Institutions**

35. The Project will provide support to the four main public health institutes in the country: National Institute of Hygiene and Epidemiology in Hanoi, the Pasteur Institute of Nha Trang, the Pasteur Institute of Ho Chi Minh City, and the Central Highlands Institute of Hygiene and Epidemiology in Buon Ma Thout.<sup>16</sup> These institutes play a critical role in providing regional support for the preventive health system. The Project will support the provision of additional equipment and supplies to improve the institutions' efficiency. Each institute will provide an assessment of their equipment needs following national norms; the initial assessment was completed during project preparation. This equipment will strengthen the institutions' role in CDC as regional reference laboratories. Viet Nam does not currently have any class 3 laboratories, although several national institutes have class 3 equipment. The Project will

<sup>15</sup> Level 1 includes equipment for routine testing of communicable disease. Levels 2a and 2b include equipment for level 1 plus equipment required to support testing for needs that vary by province, such as occupational health, border quarantine, food safety, emerging diseases, and other noncommunicable diseases.

<sup>16</sup> The Project will not support the provincial PHCs in the central highlands as these receive a comparable level of support from the Health Care in the Central Highlands Project: ADB. 2003. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Health Care in the Central Highlands Project*. Manila. (Loan 2076-VIE). The Project's support to the Highland Institute of Hygiene and Epidemiology will complement the Health Care in the Central Highlands Project.

support the institutes to purchase additional class 3 equipment and support the efforts of the Government and other partners to upgrade these facilities.

### **3. Human Resource Development**

36. Training is a significant part of the Project, given the critical need to improve the knowledge and skills of preventive health staff. The Project will support in-service training in preventive and community health at all levels and postgraduate training to strengthen the technical and managerial capacity of staff.

#### **a. Postgraduate Training**

37. The Project will support postgraduate training in key areas such as epidemiology, communicable disease control, public health, health system management, and laboratory procedures. The Project will support (i) postgraduate degrees in public health or laboratory procedures; (ii) postgraduate training for a master of public health (or equivalent) at foreign universities with specialization in epidemiology or planning and management for CDC; (iii) postgraduate certificate programs, including specialization in public health for medical doctors; and (iv) establishment of a field epidemiology training program, which will play a vital role in the surveillance system in rapidly detecting and responding to new outbreaks; the Project will work closely with other efforts to ensure an effective program. Approximately 350 staff will participate, with approximately 50 receiving master's or equivalent specialist II degrees and the rest receiving postgraduate certificates. These courses will be held primarily at major medical universities. Eight preventive health staff will receive training in foreign universities to gain international expertise on recent advances in preventive health systems. The Project will develop an annual training plan, which identifies postgraduate courses covered during the year. This will give the training program flexibility to adjust to the country's changing needs.

#### **b. Technical Training**

38. The Project will support technical training in environmental health, food safety, infectious disease control, medical waste management, occupational health, and school health in medical schools, universities, and national institutions. The training is aimed at laboratory and other technicians working at the provincial, district, and commune levels. It will also be open to staff in health institutions that contribute to the preventive health system, such as the staff of IEC centers. The Project will support refresher courses, from 1 to 2 weeks duration, to update knowledge. It will also support longer, more comprehensive training courses in the same areas, from 1 to 2 months. In total, approximately 2,500 people will receive training.

#### **c. Community Health Training**

39. The Project will support the training of commune and district preventive health staff in the 17 project priority provinces with special courses designed to address preventive health needs of poor and ethnic minority communities. The Project will support two training activities: (i) training in the preventive health needs of women and children, focusing on maternal mortality reduction, CDC in children, and child nutrition; and (ii) training in local CDC, focusing on infectious disease control, food safety, and immunization and vaccination management. The training courses will be offered annually to selected staff. The training courses will be around 2

weeks in length and be designed in close consultation with the community.<sup>17</sup> Approximately 1,750 health workers will participate in each of these activities.

#### **4. Project Management**

40. The Project will help strengthen the central and provincial capacity of MOH to implement the Project. The Project will finance the necessary office equipment and supplies to support project implementation. The Project will also support contract staff services (administrative and support personnel) required for effective implementation, monitoring, and evaluation of project activities. A consulting group will be contracted to assist MOH in procuring equipment, developing field epidemiology and other training, strengthening the surveillance system, strengthening support to communicable disease programs, and ensuring compliance with Government and ADB guidelines.

#### **C. ADF IX Grant Component**

41. A \$10,140,000 grant will support various activities aimed at controlling communicable diseases, consistent with the criteria outlined in the Asian Development Fund IX grant program for HIV/AIDS and infectious disease control activities. Appendix 5 provides details of the grant component. Grant financing is justified at both the country and project levels. The Project is closely aligned with Viet Nam's Comprehensive Poverty Reduction and Growth Strategy and the Health Sector Strategy, 2001–2010, and directly supports ADB commitment to reducing poverty and assisting Viet Nam in achieving the VDGs.

42. The Project contributes directly to reducing the burden of communicable and infectious diseases, as the preventive health system plays a leading role in the health system's efforts to combat communicable diseases, including emerging communicable diseases such as SARS and avian flu. Distinctive activities that will be supported by the grant are in two components: (i) health surveillance and priority health issues, which will support the health surveillance system and provide targeted support to 17 project priority provinces to strengthen their CDC programs; and (ii) human resource development, which includes significant support for training in epidemiology, disease surveillance and response, and management of communicable diseases. It also includes training to address community health needs.

#### **D. Special Features**

##### **1. Renewed Focus on Health Problems of the Poor**

43. The Project disproportionately focuses on diseases of the poor, which are often ignored. Much of the training focuses on the health needs of the poor, with a strong emphasis on communicable diseases, particularly on communicable diseases that have received little attention by international development partners. Health training will target community health workers in poor provinces. The support to NTPs also strengthens the health system's capacity to respond to health problems that burden the poor. Improving the preventive health system will reduce the vulnerability of the poor and the near poor to health-related shocks. Appendix 6 contains the summary poverty reduction and social strategy.

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<sup>17</sup> The Project will utilize existing relevant training materials and courses, such as those developed by the ADB-financed Rural Health Project (footnote 14) and similar projects. These courses will be developed and offered in collaboration with women's unions and other women's groups.

## **2. Contribution to Medical Waste Management**

44. The Project will make a substantial contribution to improving medical waste management. The Project will replace outdated laboratory equipment with new equipment that produces less hazardous waste. The Project will improve current health-care waste management practices in national institutes and PHCs by providing refresher courses in medical waste management, safety equipment for health-care workers, and equipment for proper waste management. It will also supply basic equipment necessary for improved medical waste management. Appendix 7 contains the summary initial environmental examination.

## **3. Coordination and Ownership**

45. The Government has identified increased investment in the preventive health system as its highest priority for the health sector. The Project was developed in close cooperation with MOH to ensure consistency with the preventive health master plan (footnote 13). In particular, the project design incorporates the priorities in the master plan and integrates these priorities with ADB's overarching objective of poverty reduction. Prepared in close consultation with stakeholders, the Project incorporates their comments and recommendations, including those received in stakeholder workshops and from numerous field visits. Because of the technical nature of preventive health, most interested stakeholders are active in the health sector.

46. The Project was developed in close coordination with the proposed regional CDC project, which will support regional efforts in the Greater Mekong subregion. The CDC project will focus on strengthening the health surveillance system's capacity to detect and respond to the cross-border transmission of disease. In particular, this will support implementation of the new international health regulations on the early reporting of communicable diseases. It complements the Project's support for routine monitoring activities of provincial health surveillance system activities. The CDC project will provide support to controlling communicable diseases in 15 provinces, which will complement the Project's support for NTPs. Several disease control programs in the CDC project are not generally supported by NTPs.

## **4. Contribution to Social Development**

47. The Project focuses on improving the health status of vulnerable groups. Ethnic minorities account for about 14% of Viet Nam's total population and 28% of the poor. They are disproportionately affected by communicable diseases. The Project provides a special focus for 17 project priority provinces with high ethnic minority population (39% of the total population). Training and behavior change communication activities will take into account the cultural and linguistic needs of ethnic minorities. Qualified ethnic minority health workers will be encouraged to participate in training. The strengthened surveillance system will allow better disaggregation of health problems by ethnicity. Appendix 8 contains the summary ethnic minority development plan.

48. The Project mainstreams gender concerns to ensure that women share proportionately in the project benefits. The Project will strengthen the capacity of the preventive health system to better respond to the preventive health needs of both men and women. The preventive health system has a large number of women staff (around 55% of employees at the PHC are women) and increasing training opportunities will enhance the status of this work. Equal training opportunities will be offered and qualified women will be encouraged to apply. Some of the training courses will focus on maternal and child health and the preventive health needs of

women. These will be developed and offered in collaboration with the Women's Union and other groups. Appendix 9 provides the Project's gender strategy.

## E. Cost Estimates

49. The Project is estimated to cost \$47.5 million equivalent (Table 1). Of this, \$27.1 million equivalent (57%) is foreign exchange costs and \$20.4 million equivalent (43%) local currency costs. Detailed cost estimates are in Appendix 10.

**Table 1: Cost Estimates**  
(\$ million)

| Item   | Foreign Exchange | Local Currency | Total Cost  |
|--|------------------|----------------|-------------|
| <b>Project Investment</b>                                |                  |                |             |
| <b>A. Health Surveillance and Priority Health Issues</b> |                  |                |             |
| 1. Health Surveillance                                   | 0.5              | 1.4            | 1.9         |
| 2. Quality of Services                                   | 0.0              | 0.4            | 0.4         |
| 3. Support for Communicable Disease Control Programs     | 0.2              | 2.7            | 2.9         |
| <b>Subtotal (A)</b>                                      | <b>0.7</b>       | <b>4.5</b>     | <b>5.2</b>  |
| <b>B. Strengthening the Preventive Health Service</b>    |                  |                |             |
| 1. Support for Provincial Preventive Health System       | 18.1             | 3.4            | 21.5        |
| 2. Support for National Institutes                       | 4.0              | 0.6            | 4.6         |
| <b>Subtotal (B)</b>                                      | <b>22.1</b>      | <b>4.0</b>     | <b>26.1</b> |
| <b>C. Human Resource Development</b>                     |                  |                |             |
| 1. Postgraduate Training                                 | 0.5              | 1.2            | 1.7         |
| 2. Technical Training                                    | 0.0              | 2.6            | 2.6         |
| 3. Community Health Training                             | 0.0              | 0.5            | 0.5         |
| <b>Subtotal (C)</b>                                      | <b>0.5</b>       | <b>4.3</b>     | <b>4.7</b>  |
| <b>D. Project Management</b>                             |                  |                |             |
| <b>Subtotal (D)</b>                                      | <b>1.6</b>       | <b>3.0</b>     | <b>4.6</b>  |
| <b>Taxes and Duties</b>                                  | <b>0.0</b>       | <b>3.8</b>     | <b>3.8</b>  |
| <b>Contingencies</b>                                     | <b>1.4</b>       | <b>0.8</b>     | <b>2.2</b>  |
| <b>Interest Charges</b>                                  | <b>0.7</b>       | <b>0.0</b>     | <b>0.7</b>  |
| <b>Total</b>   | <b>27.1</b>      | <b>20.4</b>    | <b>47.5</b> |

Notes: Appendix 11 provides justification of calculation of taxes and duties, contingencies, and interest charges. Numbers may not add up due to rounding.

Source: Asian Development Bank estimates.

## F. Financing Plan

50. The Government has requested a loan of \$27.9 million equivalent from ADB's Special Funds resources and a grant from the Asian Development Fund for the control of HIV/AIDS and infectious diseases of \$10,140,000 to help finance the Project. The loan will have a 32-year term, including a grace period of 8 years, and an interest rate of 1.0% per annum during the grace period and 1.5% per annum thereafter. The loan will finance \$25.8 million of the foreign exchange cost (including interest on the loan) and \$2.1 million of the local currency cost. The grant will finance \$1.3 million of the foreign exchange cost and \$8.9 million of the local currency cost. The Government will provide counterpart funds of \$9.5 million equivalent for taxes, recurrent costs, and part of the capital cost. The indicative financing plan is in Table 2.

**Table 2: Financing Plan**  
(\$ million)

| <b>Source</b>          | <b>Foreign Exchange</b> | <b>Local Cost</b> | <b>Total Cost</b> | <b>Percent</b> |
|------------------------|-------------------------|-------------------|-------------------|----------------|
| ADB Loan               | 25.8                    | 2.1               | 27.9              | 59             |
| ADF Grant <sup>a</sup> | 1.3                     | 8.9               | 10.1              | 21             |
| Government             | 0.0                     | 9.5               | 9.5               | 20             |
| <b>Total</b>           | <b>27.1</b>             | <b>20.4</b>       | <b>47.5</b>       | <b>100</b>     |

ADB = Asian Development Bank, ADF= Asian Development Fund

Notes: Numbers may not add up due to rounding.

<sup>a</sup> Foreign exchange and local costs estimates for the ADF grant are indicative.

Source: Asian Development Bank estimates.

51. Financing for the local currency cost is justified under ADB's local currency financing policy. Strengthening and reorganizing Viet Nam's preventive health system is a major priority given both the risk of emerging health threats and the need to effectively address the changing and unequal epidemiological pattern. Viet Nam needs a large investment program to meet this challenge. While the Government has committed additional resources to the preventive health system, these will not be sufficient to meet the required investment needs without external financing. Health systems require significant local currency expenditure and external support for local currency expenditures is justified to help meet this gap. A higher percentage of local financing for this Project is consistent with ADB policy.

52. Although no cofinancing is envisioned at this time, cofinancing from both public and commercial sources may be mobilized in the future to complement ADB financing for the Project. Such cofinancing may include both grants and loans and may benefit from ADB credit enhancements, including ADB guarantee instruments. Cofinancing arrangements will be presented for Government and ADB consideration as necessary. The Government has committed to providing counterpart funds promptly to ensure early implementation of the Project.

## **G. Implementation Arrangements**

### **1. Project Management**

53. MOH will be the Executing Agency. A project management unit (PMU), located within MOH, will work under the overall guidance of a project steering committee.<sup>18</sup> The steering committee will (i) provide guidance to ensure timely and effective performance of the Project, and (ii) supervise strategic planning and propose modifications and changes to the Project. Appendix 11 outlines the project management and implementation structure.

54. The PMU will coordinate national and provincial project activities, and serve as a liaison between the provinces, MOH, and ADB. A project director will head the PMU with the support of a vice director and at least five full-time project staff to provide technical expertise and administrative support in the areas of accounting, contract administration, disbursement, planning, and procurement.

<sup>18</sup> Decision 4115/Q—BYT of November, 2004 establishes a project steering committee for all ADB-financed projects within MOH, with representatives from MOH and other key government department. The steering committee is chaired by a vice minister. MOH has indicated that the existing PMU for the Health Care in the Central Highlands Project will be the PMU.

55. MOH will contract a consulting group to support the planning and administration of the Project. The consulting group will support the PMU in (i) planning and preparing procurement documents; (ii) developing monitoring indicators; and (iii) meeting ADB guidelines for procurement and project implementation; as well as provide technical assistance in the design and implementation of the health surveillance system and quality of services, and support efforts to combat priority communicable diseases.

56. The provincial health services, through the provincial preventive health departments, will administer the Project. To support the administration, the provinces will establish a small project implementation unit (PIU) and will contract at least one contracted staff and an administrative assistant. The PIU will coordinate with the PMU on specific equipment and training requirements of the province. The Project will coordinate with the national institutes in the same fashion.

## **2. Implementation Schedule**

57. The Project will be implemented over 6 years from January 2005 to December 2011. Procurement of major equipment will take place in the second and third years. Appendix 12 presents the implementation schedule.

## **3. Procurement**

58. All ADB-financed procurement will be in accordance with ADB *Guidelines for Procurement*. Procurement of equipment and supplies will use international competitive bidding procedures if the package amount exceeds \$1 million, international shopping or local competitive bidding procedures if \$1 million or less, or direct purchase for less than \$100,000. Local competitive bidding may be used with procedures acceptable to ADB for supply and installation contracts. The PMU will handle all procurement using international competitive bidding, local competitive bidding, and international shopping. Direct purchase may be used by the provinces and national institutes, under the supervision of the PMU. The Project does not support civil works. Appendix 13 contains a list of indicative procurement packages.

## **4. Consulting Services**

59. The Project will require 66 person-months of international consulting services and 170 person-months of domestic consulting services. The international consultants will be recruited in a single package from a consulting firm, using ADB quality- and cost-based selection through a full technical proposal in accordance with ADB *Guidelines on the Use of Consultants*. Four international and seven domestic consultants will be contracted. The Government has requested that the international consultants work closely as an integrated team with the domestic consultants to be recruited as a firm or individually as appropriate, in accordance with other arrangements satisfactory to ADB. Appendix 14 summarizes consulting services.

## **5. Training**

60. The Project will finance degree courses and refresher courses for staff working in the preventive health system. The PMU, with support from the Department of Science and Training (DST), will coordinate training activities, including making contracts and other arrangements with universities and training centers. DST and the Project will evaluate the quality and availability of preventive health courses. Much of the training is expected to be carried out through existing programs at medical universities, secondary medical schools, and other

training institutions. DST will work with the training institutes to develop and revise curricula when necessary. To ensure that training opportunities are open to all qualified applicants, regardless of gender and ethnicity, DST will develop a set of transparent criteria for the selection of trainees at all levels. The provinces and national institutes will identify trainees and coordinate training activities under their jurisdiction. Selection for international training and for some postgraduate training will be conducted at the national level. Trainees will be required to sign guarantees to return to host institutions for at least 2 years after receiving training. Appendix 15 outlines the proposed training activities.

## 6. Disbursement Arrangements

61. The PMU will use ADB imprest account procedures for eligible project expenditures. An imprest account for the loan will be established by PMU at a commercial bank, acceptable to ADB within 1 month of loan effectiveness. The account will have a ceiling of \$2 million; the initial deposit will be based on estimated expenditures for the first 6 months of project implementation or \$1 million, whichever is lower. A separate imprest account will be established for the Asian Development Fund grant. The initial deposit to the imprest account will be based on estimated expenditures for the first 6 months of the Project or \$1,000,000, see Grant Agreement Section 3, whichever is lower. The imprest accounts will be established, managed, replenished, and liquidated in accordance with the ADB *Loan Disbursement Handbook*, as amended from time to time, and detailed arrangements agreed upon by the Government and ADB. Statement of expenditure procedures will be used for reimbursing eligible expenditures and liquidating advances to the imprest accounts to ensure speedy project implementation. The maximum payment for any individual item using statement of expenditure is \$100,000 per payment.

62. To expedite fund flows to the provinces and national institutes, each province and national institute may establish a second generation imprest account (SGIA) within 3 months, in US dollars for the grant proceeds or local equivalent for the loan proceeds, at commercial banks acceptable to ADB. The PMU will transfer funds from the imprest accounts to the SGIA in accordance with ADB's *Loan Disbursement Handbook* and detailed arrangements agreed upon by the Government and ADB. The initial amount to be deposited into each of the SGIAs will not exceed the equivalent of 6 months estimated expenditures or \$10,000, whichever is lower. The ceiling for these SGIAs will not exceed \$20,000.

## 7. Financial Management, Accounting, Auditing, and Reporting

63. **Financial Management.** This is ADB's third project with MOH. A financial management and governance assessment was prepared for the Health Care in the Central Highlands (HICH) Project (prepared in July 2003), which has a similar project design. MOH has shown that it has the financial management capacity to manage a large, externally financed project. It has maintained a number of first and second generation imprest accounts and has submitted required audits in a timely fashion. MOH is proposing that the PMU responsible for the HICH project also administer this Project. The HICH project also has both grant and loan elements that are separately financed and require separate audits and financial management controls. MOH reviewed the financial management assessment and confirmed that it is still valid as no major changes have been made to Government or MOH financial management policies. Based on ADB experience with MOH and findings of the financial management and governance assessment, the financial management arrangements appear appropriate.

64. **Accounts and Auditing.** The Government, acting through MOH, will maintain adequate records and accounts to identify goods and services financed by the Project. The PMU will (i)

keep project accounts separate from regular accounts; (ii) maintain separate accounts for the loan and grant portions of the Project; (iii) ensure accounts and financial statements are audited annually in a timely fashion, in accordance with sound accounting principles, by external auditors acceptable to ADB; and (iv) submit to ADB, not later than 6 months after the close of each fiscal year, certified copies of audited project accounts, including the imprest accounts, statement of expenditure, and financial statements; the auditor's reports and opinions; and management letter together with a report of actions taken by MOH to improve the financial management system. The Project will finance the cost of auditing.<sup>19</sup>

65. **Anticorruption.** MOH has been briefed on ADB's *Anticorruption Policy* and on the importance that the Government and ADB place on eliminating corruption. Attention was drawn to the section on fraud and corruption that was added to ADB's *Guidelines for Procurement* and *Guidelines on the Use of Consultants*, particularly the need for bidders, suppliers, contractors, and consultants to observe the highest standards of ethics in procuring and executing ADB-financed contracts, and the sanctions if fraud and corruption are discovered. The Project design has provisions for funds for independent and external auditors.

## 8. Advance Action

66. MOH will take advance procurement action to expedite project implementation particularly for office equipment and supplies for the PMU. Following standard ADB practices, MOH will take advance recruitment action to ensure that the consulting group is mobilized in a timely fashion. ADB concurrence to advance action does not commit ADB to finance related expenditure under the Project or to finance the Project.

## 9. Reporting

67. Prior to loan effectiveness, MOH will submit short monthly progress reports to ADB on progress toward effectiveness. After the Project becomes effective, MOH will prepare a quarterly progress report summarizing (i) progress made against established targets; (ii) delays and problems encountered, and actions taken to resolve issues; (iii) compliance with loan covenants; (iv) proposed program of activities to be undertaken during the next 6 months; (v) expected progress during the succeeding period; and (vi) status of participating provinces and institutions. Within 3 months of physical completion of the Project, the Government will prepare and submit a project completion report to ADB.

## 10. Project Review

68. The Government and ADB will conduct periodic reviews of the Project to ensure smooth implementation. The Government and ADB will jointly undertake a midterm review after 3 years of physical implementation. The midterm review will (i) review the Project's scope, design, implementation arrangements, and other relevant issues; (ii) examine progress toward the Project's objectives; (iii) identify changes in resource allocation and their impact on project implementation and sustainability; (iv) assess implementation performance against projections; (v) review compliance with loan covenants; (vi) identify problems and constraints; and (vii) formulate appropriate recommendations for corrective action.

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<sup>19</sup> September 2002. *Guidelines on ADB-funded Project Processing and Implementation*, Hanoi: ADB and the January 2002. *Guidelines for the Financial Governance and Management of Investment Projects Financed by the Asian Development Bank*.

## 11. Project Performance Monitoring and Evaluation

69. One of the major objectives of the Project is to strengthen the country's surveillance system for communicable diseases. MOH has identified a shortlist of verifiable indicators for monitoring and evaluation that are incorporated in the design and monitoring framework (Appendix 1). The PMU will work with the Department of Preventive Medicine and HIV/AIDS Control to ensure that data is collected, analyzed, and disseminated to all interested parties. Intermediate results will be monitored and evaluated using the routine information system. An end of project survey will assess the Project's overall impact and benefits. Data will be disaggregated by gender and ethnicity.

## IV. PROJECT BENEFITS, IMPACTS, AND RISKS

### A. Benefits and Impacts

70. **More Responsive Preventive Health System.** The Project will help Viet Nam respond better to the epidemiological transition. As the burden of disease changes, PHCs will need to adapt to and address new health challenges, including those related to food safety, occupational and environmental health, and noncommunicable diseases.

71. **Improved Health Status.** The Project will improve the health status of the population in the participating provinces, leading to a measurable decrease in the burden of communicable disease. The general population will benefit due to the preventive health system's improved capacity to monitor food and environmental quality. The Project will also benefit a number of specific groups, including school children through improved school health programs and mothers through community health training. The population in 17 project priority provinces with high incidence of communicable diseases will benefit from the Project's focus on strengthening CDC programs. Using disability adjusted life years (DALY), a commonly used measure of the burden of disease, the Project is expected to save about 2.0 million DALYs. This represents an increase in life expectancy of around 1–2% for the entire population.

72. **Significant Economic Benefits.** Investing in health, especially the public good aspects of health, brings significant economic benefits to the country. Viet Nam's recent experiences with SARS and avian flu have shown that communicable diseases can lead to significant economic damage. The Project will increase the capacity to respond to these health emergencies and reduce their economic cost. The private benefits of the Project, from the reduction of DALYs, give the Project at least a 16% economic internal rate of return. Appendix 16 summarizes the expected economic benefits of the Project.

73. **Reduced Poverty.** Poor health is a leading cause of poverty in Viet Nam. Many households are forced to drain their savings to pay for expensive medical bills, in addition to losing the income from sick family members who are unable to work. Thus well-targeted investment can improve equity and efficiency within the economy. The preventive health system in Viet Nam plays an important role in protecting the health of the poor. The poor have less access to public and private preventive health services and have higher burdens of disease; thus they will benefit the most from increased public provision of preventive health services. The Project targets the most disadvantaged provinces and the poverty analysis shows that at least 38% of the Project's benefits will accrue to the poor. The Project will benefit nearly 15 million people living in the 17 project priority provinces with high burdens of communicable diseases.

## B. Risks

74. The Project will support technologies and procedures that are well understood in Viet Nam. The Project has minimal technical risks. The Project does not have any adverse social or physical impact. Land acquisition and resettlement is not required, as the Project does not support civil works.

75. **Limited Integration of NTPs and the Health System.** The Project will provide support to NTPs in the 17 project priority provinces. While these programs have generally been successful, they do not always coordinate with the rest of the health system as they focus narrowly on one health issue. The Project will work to support ongoing efforts to integrate NTPs into the health system, through the provision of training in the management of communicable disease programs and support for quality of care standards.

76. **Low Budget for Operation and Maintenance.** The Project will supply laboratory equipment. This investment requires adequate government budget for operation and maintenance to ensure the equipment is sustainable. The Project will carry out a careful assessment to ensure that the equipment purchased is needed and is not available in the province. The Project will provide support for the purchase of reagents and other supplies necessary to operate the equipment.

77. **Project Investments not Sustainable.** The Project will provide substantial and needed support for training and NTPs. This could provide the Government with an incentive to reduce its own contribution to these programs, thus reducing the sustainability of the Project after ADB financing ends. The Project has specific assurances to ensure that government investment is maintained during the life of the Project and increases to ensure that after the end of the Project, the Project's investments are sustainable.

78. **Trained Staff Leave Preventive Health System.** The Project will invest in the human resources of the preventive health system. Experience has shown that attracting and retaining trained personnel in the preventive health system is often difficult, particularly in remote areas. The Project will offer specialized training that is specific to the needs of preventive health staff. This will make training attractive to staff who want a career in the preventive health system. Recognizing the importance of this issue, the Government recently increased staff salaries.

## V. ASSURANCES

### A. Specific Assurances

79. In addition to the standard assurances, the Government and MOH have given the following assurances, which are incorporated in the legal documents:

- (i) **Establish standards for service quality.** The Government will ensure that (a) by 30 June 2006, MOH will establish standards for the quality of services of PHC laboratories; (b) by 31 December 2006, MOH will conduct an initial assessment of the PHC laboratories based on these standards; and (c) based on the initial assessment, necessary measures will be taken so that by 1 June 2008 all PHC laboratories meet the minimum standards for safety, are able to use the equipment, and are certified by MOH.
- (ii) **Assessment of equipment needs.** The Government will ensure that MOH will finalize an assessment of the laboratory equipment lists for each PHC prior to

preparing the bidding documents for laboratory equipment taking into account the needs and capacities of the project province and the current stock of equipment.

- (iii) **Continued operation of targeted programs for communicable diseases.** The Government will ensure that (a) MOH will continue operation of the NTPs for communicable diseases or their equivalent to provide a means to channel support to provinces to fight communicable diseases; and (b) adequate and timely budgetary support will be provided so that the NTPs supported by the Project will remain sustainable after project completion, in particular, that the financing provided for NTPs under the project will not substitute the national budget for NTPs.
- (iv) **Continued government support for training.** The Government will ensure that (a) the training positions supported by the Project will be additional to existing training positions; (b) starting from 2006, the amounts allocated in the national budget for training of preventive health workers and the number of state-funded training positions in preventive health will increase annually so that at project completion, MOH has sufficient capacity to continue training at the same level.
- (v) **Develop appropriate training for the Project.** The Government will ensure that (a) MOH will evaluate the quality and availability of preventive health courses, and develop and revise curricula, as necessary; (b) develop a set of transparent criteria for the selection of trainees at all levels to ensure that training opportunities are open to all qualified applicants and carried out in a transparent manner in accordance with the criteria agreed upon by MOH and ADB.
- (vi) **Adequate support for operation and maintenance.** The Government will ensure that adequate budget is made available on an annual basis to the project provinces and national institutes for the operation and maintenance of the project facilities and allocation of sufficient health staff based on the data on expenditures and purchases annually provided by MOH.
- (vii) **Develop detailed epidemiological maps.** The Government will ensure that MOH will collect detailed epidemiological information, using established techniques to measure burden of disease, for all project provinces by 31 December 2006. This database will be updated annually.
- (viii) **Environment.** The Government, through MOH, will ensure that the operation of all project facilities will comply with all applicable laws and regulations of Viet Nam; ADB environment policies and regulations, specifically ADB's *Environment Policy, 2002*; the summary initial environmental examination; and environmental management plan (EMP) as set out in the summary initial environmental examination, including, but not limited to (a) preparing, by the time of finalizing needs assessment, an EMP by the project province including options available for waste management, (b) disclosing the EMP publicly, (c) procuring equipment that meet appropriate environmental standards; (d) properly disposing of old or nonfunctional equipment; and (e) providing adequate training for PHC staff in medical waste management.
- (ix) **Ethnic minorities.** The Government will ensure the implementation of the ethnic minority development plan prepared for the Project in accordance with applicable

government policies and procedures and ADB policies, specifically ADB's *Policy on Indigenous Peoples*, 1998. This includes ensuring equal opportunities for ethnic minority health staff in training, and integrating cultural sensitivities in IEC materials and in training.

- (x) **Gender strategy.** The Government will ensure that the Project's gender strategy is implemented, equal training opportunities are provided for men and women, and the preventive health system addresses the needs of men and women.

## **B. Conditions for Loan and Grant Effectiveness**

80. **Full Operation of PMU and PIUs.** Prior to the effectiveness of the loan and grant agreements (i) MOH will issue a decision establishing clear guidelines for implementing the Project, specifying the roles and responsibilities of the PMU, PIUs, and other agencies concerned, as well as the arrangements for the flow of funds provided under the Project; and (ii) the PMU and PIUs will have established and become operational, in a manner satisfactory to ADB.

## **VI. RECOMMENDATION**

81. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve

- (i) the loan in various currencies equivalent to Special Drawing Rights 19,222,000 to the Socialist Republic of Viet Nam for the Preventive Health System Support Project from ADB's Special Funds resources with an interest charge at the rate of 1.0% per annum during the grace period and 1.5% per annum thereafter; a term of 32 years, including a grace period of 8 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft Loan Agreement presented to the Board; and
- (ii) the grant not exceeding the equivalent of \$10,140,000 to the Socialist Republic of Viet Nam for the Preventive Health System Support Project from the Asian Development Fund in accordance with the terms and conditions set forth in the draft Grant Agreement presented to the Board.

Haruhiko Kuroda  
President

1 August 2005

## DESIGN AND MONITORING FRAMEWORK

| Design Summary   | Performance Targets/Indicators  | Data Sources/Reporting Mechanisms  | Assumptions and Risks  |
|--|---|--|--|
| <p><b>Impact</b><br/>Improved health status of the population</p>  | <p>Substantial progress in meeting the health-related Viet Nam development goals (VDGs):</p> <ul style="list-style-type: none"> <li>• Substantially reduce communicable diseases by 2015 (not quantified in VDGs but monitorable through continuing analysis of burden of disease).</li> <li>• Reduce child mortality rate from 48 per 1,000 to 26 per 1,000 by 2015.</li> </ul>  | <ul style="list-style-type: none"> <li>• Household surveys</li> <li>• Surveillance system</li> <li>• Final project evaluation</li> <li>• Census, 2009</li> </ul>   | <p><b>Assumption:</b></p> <ul style="list-style-type: none"> <li>• The current pace of economic development and poverty reduction will continue.</li> </ul>  |
| <p><b>Outcome</b><br/>The Ministry of Health develops a comprehensive public health system that integrates the reduction of major communicable diseases, with new emerging challenges in noncommunicable diseases including food safety and occupation health.</p> | <p>Meet major communicable targets in the National Strategy for People's Health Care and Protection 2001–2010 and National Strategy on Communicable Diseases:</p> <ul style="list-style-type: none"> <li>• Reduce DALYs for gastro-intestinal, vector, viral, and bacteria diseases by 15% between 2002 and 2010 in 17 provinces.</li> <li>• Reduce TB infection rate from 71/100,000 in 2002 to 60 in 2010.</li> <li>• Reduce incidence of malaria from 236/100,000 in 2002 to 200 in 2010.</li> <li>• Reduce incidence of leprosy from 1.5/100,000 in 2002 to 1.2 in 2010.</li> </ul> <p>Meet the targets for noncommunicable diseases in the National Strategy for People's Health Care and Protection 2001–2010 and National Strategy on Noncommunicable Disease Programs:</p> <ul style="list-style-type: none"> <li>• The annual increase in occupational-related diseases reduced from 15% in 2002 to 10% in 2010 annually.</li> <li>• Massive food poisoning cases reduced from 2,000 in 2002 to 1,500 in 2010.</li> <li>• Incidence and mortality from food-borne diseases decreases from 1.1/1,000 in 2002 to 0.9 in 2010.</li> </ul> | <ul style="list-style-type: none"> <li>• Communicable disease surveillance system</li> <li>• Noncommunicable disease surveillance system</li> <li>• Demographic and health surveys</li> <li>• Burden of disease estimates</li> </ul> | <p><b>Assumptions:</b></p> <ul style="list-style-type: none"> <li>• The current pace of economic development and poverty reduction will continue.</li> <li>• Current focus on HIV/AIDS will continue and increase.</li> </ul> <p><b>Risk:</b><br/>Reduction in government support for the health sector.</p> |

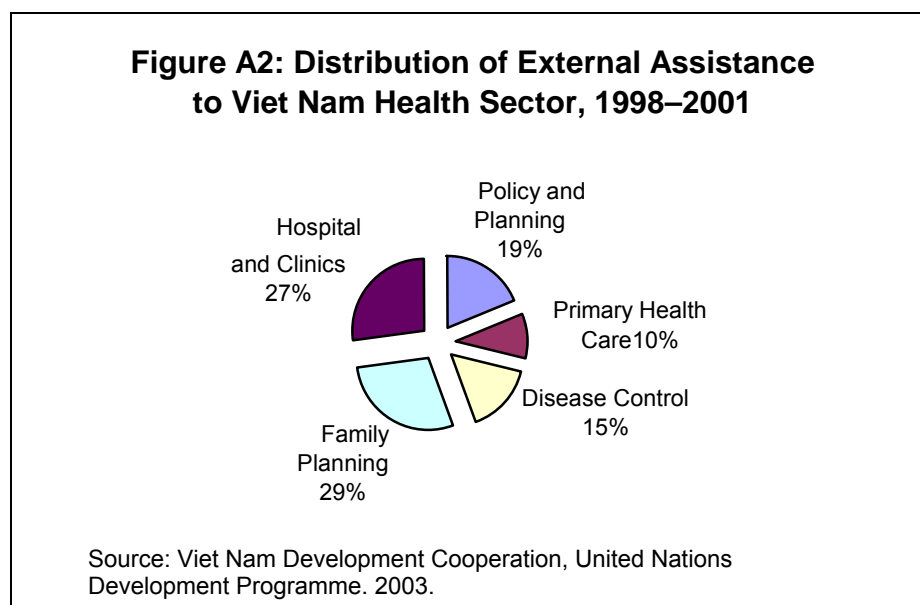
| Design Summary   | Performance Targets/Indicators  | Data Sources/Reporting Mechanisms  | Assumptions and Risks  |
|--|---|--|--|
| <p><b>Outputs</b></p> <p>1. An integrated and well-functioning health surveillance system for communicable and noncommunicable diseases</p> <p>2. Improved capacity in 17 priority provinces to combat gastrointestinal, vector, viral, and bacteria diseases</p> <p>3. Strengthened capacity of health personnel for prevention and control of communicable and noncommunicable diseases</p> <p>4. Effective health facilities for prevention and control of existing and new communicable and noncommunicable diseases</p> | <ul style="list-style-type: none"> <li>• Number of diseases covered and tracked by health surveillance</li> <li>• Complete reports from all provinces</li> <li>• Evidence of usage of health statistics in health sector planning at both national and provincial levels</li> <li>• Number of visits and response time by communicable disease response team to emerging outbreaks</li> <li>• Increased budget for targeted disease control programs</li> <li>• Use of epidemiology maps and information to allocate resources for health programs.</li> <li>• Laboratory test results meet national laboratory standards for reliability 90% of time, following specific guidelines</li> <li>• About 45% of professional staff at provincial preventive health centers educated at postgraduate level by 2010</li> <li>• All provinces have at least two staff trained in food safety by 2010</li> <li>• All project provinces have at least two staff trained in epidemiological monitoring by 2010</li> <li>• Laboratory test results meet national laboratory standards for reliability 90% of time by 2010, following national standards</li> <li>• Number of laboratory tests made through referral increases by 10% annually from 2002 to 2010</li> <li>• A quality of services monitoring system is designed and implemented by 2006</li> <li>• Establishment of one or two class 3 laboratories</li> </ul> | <ul style="list-style-type: none"> <li>• National disease statistics</li> <li>• Health surveillance reports</li> <li>• Health sector strategy, 2010</li> <li>• Provincial budgets</li> <li>• Financial and annual reports of disease control programs</li> <li>• Midterm review</li> <li>• Final project review</li> <li>• Provincial reports</li> <li>• Preventive Health Master Plan, 2010</li> <li>• Provincial reports</li> <li>• Health surveillance reports</li> <li>• Referral records from the national institutes and provincial health centers</li> <li>• Quarterly project reports</li> </ul> | <p><b>Assumptions:</b></p> <ul style="list-style-type: none"> <li>• Investments are coordinated with curative health system.</li> <li>• Financial support for other activities in the preventive health masterplan is adequate.</li> <li>• Nationally targeted programs (or their equivalent) continue to function efficiently.</li> </ul> <p><b>Risks:</b></p> <ul style="list-style-type: none"> <li>• Targeted programs divert resources from the integrated health services.</li> <li>• Planning capacity in Ministry of Health is not sufficient.</li> <li>• Provinces do not provide sufficient recurrent expenses.</li> <li>• Trained staff do not stay in their province.</li> <li>• Trained staff do not stay in the preventive health system.</li> </ul> |

| Design Summary   | Performance Targets/Indicators   | Data Sources/Reporting Mechanisms  | Assumptions and Risks   |
|--|--|--|---|
| <p>5. Improved responsiveness of the preventive health system to individual and community needs.</p> <p>6. Improved national and provincial health care waste management</p>   | <ul style="list-style-type: none"> <li>• Number of community meetings held by provincial preventive health service and local preventive health teams increases</li> <li>• Number of outreach missions by preventive health center</li> <li>• Number of ethnic minorities employed by preventive health system</li> <li>• Number of women employed by the preventive health system</li> <li>• All provincial preventive health centers have waste management plans by 2007</li> <li>• All provincial preventive health centers have staff trained medical waste management by 2007</li> </ul> | <ul style="list-style-type: none"> <li>• Provincial reports</li> <li>• Human resource reports</li> <li>• Quarterly project reports</li> </ul>  |   |
| <p><b>Activities with Milestones</b><br/> <b>Component A:</b><br/> <b>Strengthening the Surveillance System and Priority Health Issues</b></p> <p><b>1. Support the surveillance system</b><br/> 1.1 Expand existing provincial surveillance system.<br/> 1.2 Establish provincial training in surveillance in 2006.<br/> 1.3 Establish district training in surveillance in 2007.<br/> 1.4 Integrate provincial surveillance system at the national level.<br/> 1.5 Utilize the surveillance system.<br/> 1.6 Develop and implement a quality of services monitoring system for laboratory by 2008.</p> <p><b>2. Combat priority diseases in 17 provinces</b><br/> 2.1 Develop province- specific priority action plans in the first quarter of each year.<br/> 2.2 Provide financial support to national target programs in 17 priority provinces.</p> | <ul style="list-style-type: none"> <li>• Number of equipment provided</li> <li>• Number of national and provincial personnel trained in surveillance</li> <li>• Establishment of quality of service guidelines</li> <li>• Submission of requests for additional funding</li> <li>• Additional resources provided to existing provinces</li> <li>• Number of activities and supplies distributed by disease programs</li> </ul>   | <ul style="list-style-type: none"> <li>• Quarterly project reports</li> <li>• Review missions</li> <li>• Quarterly project reports</li> <li>• Project audit reports</li> <li>• National audits of disease programs</li> <li>• Review missions</li> </ul> | <p><b>Inputs</b></p> <p><b>Component A:</b><br/> ADF grant: \$4.9 million<br/> Government: \$0.4 million</p> <p><b>Component B:</b><br/> ADB loan: \$21.2 million<br/> Government: \$3.9 million</p> <p><b>Component C:</b><br/> ADF grant: \$4.5 million<br/> Government: \$0.4 million</p> <p><b>Component D.1:</b><br/> ADB loan: \$3.7 million<br/> Government: \$1.1 million</p> |



## MAJOR EXTERNAL ASSISTANCE TO THE PREVENTIVE HEALTH SECTOR

1. While Viet Nam has received significant external support for the health sector, little of it has been targeted to support preventive health. From 1998 to 2001, Viet Nam received disbursements to the health sector of \$364 million. Figure A2 shows that hospitals, clinics, and family planning have received the bulk of external support. Primary health care, which includes both preventive and curative care, only received about 10%.



2. Support for disease control programs accounts for around 15% of external support to the health sector. According to figures from the Ministry of Health (Table A2.1), approximately 80% of the committed amount has focused on malaria, tuberculosis, and human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS). Support for other disease control programs have come mostly from the Government budget.

**Table A2.1: External Support to Preventive Health Projects**  
(\$)

| Program                     | Projects | Commitment         | Disbursed <sup>a</sup> |
|-----------------------------|----------|--------------------|------------------------|
| Acute Respiratory Diseases  | 1        | 4,000,000          | 2,376,000              |
| Community Injury Prevention | 3        | 5,547,000          | 52,000                 |
| Dengue Fever                | 4        | 1,019,568          | 131,000                |
| HIV/AIDS                    | 25       | 19,433,546         | 2,793,275              |
| Immunizations               | 3        | 4,272,000          | 1,960,000              |
| Iodine Deficiency           | 1        | 273,000            | 205,000                |
| Leprosy                     | 6        | 2,552,293          | 952,000                |
| Malaria                     | 10       | 63,503,478         | 28,702,119             |
| Occupational Health         | 2        | 371,000            | 58,000                 |
| Other Communicable Diseases | 4        | 8,861,000          | 56,500                 |
| Parasitic Diseases          | 2        | 503,000            | 100,500                |
| Tuberculosis                | 3        | 39,335,000         | 10,350,900             |
| <b>Total</b>                |          | <b>149,670,885</b> | <b>47,737,294</b>      |

HIV/AIDS = human immunodeficiency virus/acquired immunodeficiency syndrome.

<sup>a</sup> Estimated cumulative disbursement to 2004 for ongoing projects.

Source: MOH Compendium of ongoing Health Projects, (2004).

3. Little external support has focused on the preventive health sector outside of disease control programs, including for laboratories and the health surveillance system. Table A2.2 provides a summary of ongoing preventive health projects.

**Table A2.2: Ongoing Preventive Health Projects in Viet Nam**

| No.          | Name of Project   | Donor          | Duration  | Amount (\$ million) |
|--------------|---|----------------|-----------|---------------------|
| 1            | WHO Cooperation Projects 2004-2005  | WHO            | 2004–2005 | 0.5                 |
| 2            | Improving Supervision Capacity on Communicable Diseases in 2004–2005              | WHO            | 2004–2005 | 0.1                 |
| 3            | Sanitary Environment Project  | UNICEF         | 2001–2005 | 2.0                 |
| 4            | Child Injury Prevention Project   | UNICEF         | 2002–2005 | 3.2                 |
| 5            | HIV/AIDS Preventive Equipment Project   | Germany        | 1996–2006 | 6.6                 |
| 6            | Prevention of Trachoma in Seven Provinces in the North—Phase II                   | ITI            | 1999–2004 | 15.0                |
| 7            | Prevention of HIV/AIDS in Vietnam—Phase II  | CDC            | 2001–2006 | 10.0                |
| 8            | Prevention of HIV/AIDS in Vietnam—Phase III                                       | FHI (USA)      | 2003–2005 | 3.6                 |
| 9            | Support to Prevent HIV/AIDS in Viet Nam   | United Kingdom | 2003–2008 | 25.0                |
| 10           | Strengthening Counseling, Care and Support to HIV/AIDS—Affected in all Activities | Global Fund    | 2003–2007 | 13.0                |
| 11           | Community Network on Drugs and HIV/AIDS Preventive Project                        | Canada         | 2003–2008 | 3.5                 |
| 12           | Community-Based Dengue Fever Prevention Project                                   | UK             | 2004–2006 | 0.5                 |
| 13           | Technical Assistance for HIV/AIDS Prevention Project                              | WB             | 2004–2005 | 0.5                 |
| 14           | HIV/AIDS Prevention Project   | WB             | 2005–2010 | 35.0                |
| 15           | Technical Assistance for Strengthening the Preventive Health System Project       | ADB            | 2004      | 0.6                 |
| 16           | Strengthening the Preventive Health System Project                                | ADB            | 2006–2009 | 38.0                |
| 17           | Regional Communicable Diseases Control Project in the Greater Mekong Subregion    | ADB            | 2005–2010 | 15.0                |
| 18           | Technical Assistance for HIV/AIDS Prevention Against Youth                        | ADB            | 2005      | 0.4                 |
| 19           | Rural Health Project  | ADB            | 2001–2007 | 1.6                 |
| 20           | Mekong Delta Health Project   | WB             |           | tbd                 |
| 21           | Health Systems Development Program  | EU             |           | tbd                 |
| <b>Total</b> |   |                |           | <b>174.1</b>        |

ADB = Asian Development Bank; CDC = centers for disease control and prevention; EU = European Union; FHI = Family Health International; ITI = International Trachoma Initiative; tbd = to be determined; UK = United Kingdom; UNICEF = United Nations Children's Fund; WB = World Bank; WHO = World Health Organization.  
Source: Ministry of Health Reports, 2004.

4. A number of projects with a preventive health services component are planned and will be implemented over the next few years. These projects include the Asian Development Bank (ADB) Health Care in the Central Highlands Project and Rural Health Project. The Health Care in the Central Highlands Project supports preventive health centers in all five central highland provinces with approximately \$1.5 million in support. The Rural Health Project supports preventive health centers in eight provinces, with support of approximately \$200,000 per province. The European Union's Health Systems Development Program Project provides support to provincial preventive health centers in three provinces. The World Bank is currently preparing a comprehensive project for the Mekong Delta region, which will include an estimated \$4 million for preventive health services development to 13 provinces. The World Health Organization continues to provide significant technical support to the health surveillance system and food safety.

## EPIDEMIOLOGICAL TRANSITION

1. Viet Nam has made remarkable progress over the past decades in improving the living and health standards of its population. As a result of rapid economic growth and targeted public investment, Viet Nam will be able to achieve several of the health-related Viet Nam development goals (VDGs) by 2015. Viet Nam has also made significant gains in the control of several communicable diseases, including malaria and tuberculosis.

2. However, the country faces increased regional inequality in health, with differences in epidemiological patterns growing throughout the country. This is reflected by an increase in noncommunicable diseases and reduction in the burden from communicable disease due to higher levels of development. However other provinces still have traditional epidemiological patterns, with communicable diseases still a major public health risk.

3. The burden of disease is a tool that aggregates the total morbidity and mortality in one measure, called disability adjusted life years (DALY). The analysis expresses morbidity in terms of years that have been lost through disability due to contacting or living with a specific disease. The analysis also expresses mortality in terms of years lost due to a premature death, again from specific diseases. Table A3.1 and A3.2 illustrate the distribution of disease incidence in terms of communicable and noncommunicable diseases.

**Table A3.1: Burden of Disease for Selected Health Indicators in Viet Nam Provinces<sup>a</sup>**

| Indicator  | 46 Project Provinces |              | 17 Priority Provinces |              |                    |              |
|--|----------------------|--------------|-----------------------|--------------|--------------------|--------------|
|  |                      |              | Poor                  |              | General Population |              |
|  | DALYs                | %            | DALYs                 | %            | DALYs              | %            |
| <b>CNPM</b>  | 404.0                | 19.9         | 85.0                  | 39.4         | 125.0              | 32.2         |
| <b>NCD</b>   | 1,343.0              | 66.1         | 113.0                 | 52.3         | 191.0              | 49.2         |
| <b>Injuries and Accidents</b>                        | 285.0                | 14.0         | 18.0                  | 8.3          | 72.0               | 18.6         |
| <b>Total</b>   | <b>2,031.0</b>       | <b>100.0</b> | <b>216.0</b>          | <b>100.0</b> | <b>388.0</b>       | <b>100.0</b> |
| <b>Selected Leading Causes of Burden of Diseases</b> |                      |              |                       |              |                    |              |
| Tuberculosis   | 73.3                 | 3.6          | 15.6                  | 7.2          | 16.0               | 4.1          |
| HIV/AIDS   | 84.6                 | 4.2          | 17.8                  | 8.2          | 8.8                | 2.3          |
| Malaria  | 52.0                 | 2.6          | 11.2                  | 5.2          | 33.4               | 8.6          |
| Parasitic Diseases                                   | 102.4                | 5.0          | 21.5                  | 10.0         | 35.5               | 9.1          |
| Lung Cancer  | 31.9                 | 1.6          | 2.7                   | 1.3          | 4.1                | 1.1          |
| Diabetes   | 49.2                 | 2.4          | 4.1                   | 1.9          | 7.0                | 1.8          |
| Stroke   | 351.8                | 17.3         | 29.5                  | 13.7         | 54.1               | 13.9         |
| Hypertension   | 367.1                | 18.1         | 30.8                  | 14.3         | 50.1               | 12.9         |
| Traffic Accidents                                    | 229.0                | 11.3         | 4.0                   | 1.9          | 6.3                | 1.6          |

DALY = disability adjusted life years; CNPM = communicable, nutritional, and perinatal; HIV/AIDS = human immunodeficiency virus/acquired immunodeficiency syndrome; NCD = non-communicable diseases.

<sup>a</sup> DALYs are based on 2002 and per 1,000 population.

Source: Asian Development Bank estimates and project preparatory technical assistance consultants.

4. The greatest disease burden comes from hypertension, heart failure, stroke, and traffic accidents. General parasitic infections result in the single largest disease burden among communicable diseases, followed by HIV/AIDS, tuberculosis, and malaria. These patterns vary from province to province, with poorer regions suffering more from communicable diseases and richer provinces suffering more from noncommunicable diseases, accidents, and HIV/AIDS.

Table A3.2: Selected Characteristics for 46 Provinces<sup>a</sup>

| Province                        | Priority Province | Total Pop ('000) | % Pop Below Poverty | % EM        | Prevent Staff per 100,000 | % CD | % NCD | Burden of Disease (DALY per 1,000) | Health budget per Capita (D) | Level <sup>b</sup> |
|---------------------------------|-------------------|------------------|---------------------|-------------|---------------------------|------|-------|------------------------------------|------------------------------|--------------------|
| Ha Noi                          |                   | 2,931.4          | 1.5                 | 0.4         | n.a.                      | 10   | 79    | 141                                | 106,912                      | 2b                 |
| Hai Phong                       |                   | 1,726.9          | 7.3                 | 0.1         | 4.81                      | 17   | 77    | 69                                 | 108,338                      | 2b                 |
| Vinh Phuc                       |                   | 1,127.5          | 7.7                 | 3.4         | 3.99                      | 17   | 71    | 38                                 | 64,915                       | 1                  |
| Ha Tay                          |                   | 2,452.5          | 5.8                 | 1.2         | 2.08                      | 11   | 81    | 89                                 | 44,542                       | 2a                 |
| Bac Ninh                        |                   | 971.3            | 8.3                 | 0.1         | 0.00                      | 13   | 80    | 34                                 | 67,787                       | 1                  |
| Hai Duong                       |                   | 1,684.2          | 5.1                 | 0.3         | 3.21                      | 10   | 80    | 57                                 | 62,042                       | 1                  |
| Hung Yen                        |                   | 1,101.4          | 12.8                | 0.1         | 3.00                      | 9    | 76    | 36                                 | 61,161                       | 1                  |
| Ha Nam                          |                   | 805.8            | 11.6                | 0.1         | 5.71                      | 14   | 75    | 24                                 | 63,765                       | 1                  |
| Nam Dinh                        |                   | 1,931.7          | 7.4                 | 0.1         | 1.76                      | 11   | 84    | 59                                 | 53,991                       | 2b                 |
| Thai Binh                       |                   | 1,828.8          | 7.0                 | 0.1         | 3.26                      | 14   | 81    | 57                                 | 69,399                       | 1                  |
| Ninh Binh                       |                   | 894.3            | 9.3                 | 2.1         | 5.37                      | 14   | 75    | 29                                 | 53,451                       | 1                  |
| Ha Giang                        | X                 | 637.7            | 22.0                | 87.9        | 4.39                      | 45   | 38    | 12                                 | 86,890                       | 1                  |
| Cao Bang                        | X                 | 505.7            | 20.3                | 95.3        | 8.11                      | 55   | 23    | 11                                 | 95,176                       | 1                  |
| Lao Cai                         | X                 | 628.7            | 22.2                | 66.9        | 7.00                      | 38   | 42    | 17                                 | 88,779                       | 1                  |
| Bac Kan                         | X                 | 286.3            | 26.5                | 86.7        | 12.22                     | 42   | 47    | 9                                  | 122,952                      | 1                  |
| Lang Son                        | X                 | 719.9            | 14.5                | 83.5        | 9.03                      | 26   | 51    | 23                                 | 49,110                       | 2a                 |
| Tuyen Quang                     |                   | 702.9            | 7.0                 | 51.8        | 6.97                      | 26   | 64    | 23                                 | 66,152                       | 1                  |
| Yen Bai                         | X                 | 707.3            | 17.3                | 50.4        | 5.37                      | 35   | 47    | 22                                 | 86,568                       | 2b                 |
| Thai Nguyen                     |                   | 1,072.8          | 10.9                | 24.8        | 8.39                      | 15   | 61    | 42                                 | 75,970                       | 2b                 |
| Phu Tho                         |                   | 1,301.4          | 16.4                | 14.6        | 4.99                      | 19   | 69    | 38                                 | 71,893                       | 2b                 |
| Bac Giang                       |                   | 1,534.9          | 13.9                | 11.9        | 2.41                      | 22   | 71    | 47                                 | 49,370                       | 1                  |
| Quang Ninh                      |                   | 1,039.8          | 13.0                | 11.1        | 7.21                      | 24   | 53    | 52                                 | 124,912                      | 2b                 |
| Lai Chau                        | X                 | 320.5            | 28.9                | 83.1        | 8.11                      | 64   | 28    | 15                                 | 116,392                      | 1                  |
| Dien Bien                       | X                 | 431.9            |                     |             |                           |      |       |                                    |                              | 1                  |
| Son La                          | X                 | 938.7            | 23.8                | 82.6        | 3.52                      | 46   | 31    | 18                                 | 78,839                       | 1                  |
| Hoa Binh                        | X                 | 782.6            | 17.9                | 72.3        | 3.83                      | 32   | 55    | 23                                 | 59,406                       | 1                  |
| Thanh Hoa                       | X                 | 3,534.1          | 16.1                | 16.4        | 1.73                      | 19   | 74    | 70                                 | 51,836                       | 2b                 |
| Nghe An                         |                   | 2,951.5          | 17.3                | 13.3        | 1.52                      | 24   | 67    | 88                                 | 40,850                       | 2b                 |
| Ha Tinh                         |                   | 1,299.6          | 18.9                | 0.1         | 3.54                      | 37   | 54    | 47                                 | 49,926                       | 1                  |
| Quang Binh                      | X                 | 825.5            | 38.0                | 1.9         | 5.21                      | 28   | 49    | 27                                 | 78,223                       | 1                  |
| Quang Tri                       | X                 | 596.8            | 27.6                | 9.0         | 9.55                      | 33   | 48    | 18                                 | 87,466                       | 2a                 |
| Thua Thien Hue                  |                   | 1,091.6          | 27.4                | 3.7         | 0.00                      | 25   | 67    | 34                                 | 47,855                       | 2b                 |
| Da Nang                         |                   | 724.0            | 12.0                | 0.6         | 8.98                      | 20   | 67    | 38                                 | 183,267                      | 2b                 |
| Quang Nam                       | X                 | 1,420.9          | 26.0                | 6.8         | 2.53                      | 17   | 55    | 37                                 | 78,431                       | 1                  |
| Quang Ngai                      | X                 | 1,223.6          | 22.9                | 11.6        | 0.00                      | 24   | 49    | 30                                 | 71,224                       | 1                  |
| Binh Dinh                       |                   | 1,513.1          | 10.7                | 2.0         | 3.37                      | 16   | 64    | 49                                 | 87,373                       | 1                  |
| Phu Yen                         |                   | 823.6            | 9.4                 | 5.1         | 4.86                      | 28   | 58    | 27                                 | 62,746                       | 1                  |
| Khanh Hoa                       |                   | 1,080.8          | 10.0                | 4.6         | 4.90                      | 20   | 62    | 44                                 | 139,002                      | 1                  |
| Ho Chi Minh                     |                   | 5,479.0          | 10.9                | 8.8         | 0.00                      | 16   | 71    | 251                                | 222,874                      | 2b                 |
| Ninh Thuan                      | X                 | 542.6            | 15.1                | 22.0        | 5.90                      | 41   | 38    | 16                                 | 101,090                      | 1                  |
| Binh Phuoc                      | X                 | 719.4            | 16.7                | 19.2        | 6.95                      | 33   | 34    | 26                                 | 86,445                       | 1                  |
| Tay Ninh                        |                   | 1,001.6          | 7.3                 | 1.5         | 6.09                      | 20   | 62    | 32                                 | 104,999                      | 2a                 |
| Binh Duong                      |                   | 787.5            | 5.4                 | 2.5         | 7.62                      | 16   | 51    | 43                                 | 108,322                      | 2b                 |
| Dong Nai                        |                   | 2,095.5          | 5.1                 | 8.3         | 2.82                      | 13   | 66    | 87                                 | 84,473                       | 2b                 |
| Binh Thuan                      |                   | 1,096.7          | 11.8                | 6.9         | 3.83                      | 20   | 58    | 38                                 | 77,711                       | 1                  |
| Ba Ria- Vung Tau                |                   | 856.1            | 7.9                 | 2.7         | 7.83                      | 21   | 62    | 38                                 | 118,399                      | 2b                 |
| <b>Total Priority Provinces</b> |                   | <b>14,822.2</b>  | <b>21.4</b>         | <b>39.0</b> |                           |      |       |                                    |                              |                    |
| <b>Total Project Provinces</b>  |                   | <b>58,730.4</b>  | <b>12.9</b>         | <b>14.2</b> |                           |      |       |                                    |                              |                    |

CD = communicable disease, D = dong, DALY = disability adjusted life year, EM = ethnic minority, NCD = non-communicable disease.

<sup>a</sup> Table A3.2 excludes Central Highlands region (5 provinces, with 4.1 million people, of which 33.2% are ethnic minorities.) and the Mekong Delta (13 provinces with 14.5 million people, of which 8.6% are ethnic minorities).

<sup>b</sup> Level and capacity of laboratory: Level 1, 2, 2a, 2b (Ministry of Health, Preventive Health Master Plan, 2004).

Sources: MOH and provincial annual reports, 2002; Ministry of Health, 2002. *Health Statistics Year Book*. Hanoi; Ministry of Health, 2002. *Provincial Preventive Health Center Annual Report*. Hanoi; and TA team analysis.

## SUMMARY OF THE PREVENTIVE HEALTH SUBSECTOR

1. The health system consists of the health network managed by the Ministry of Health (MOH) plus institutions under the authority of other ministries and corporations. The principal unit responsible for the delivery of health care, responsible for managing and directing provincial health care, is the provincial health service. The provincial health service is under control of the People's Committee and receives technical direction and monitoring from the Ministry of Health (MOH). The district health center is a unit of the provincial health service and is responsible for formulating and implementing a district health plan including curative and preventive services, and family planning. The district health center provides technical support to commune health centers, which are the first level of health care in the public health system.
2. The preventive health system includes the control of communicable and noncommunicable disease, human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS), prevention of injuries, school health, occupational health, community nutrition, safe water, vaccines and biomedical products, chemical and pesticide control, food safety, health promotion, and production of vaccines and biomedical products. The preventive health system operates through preventive institutions and specific health programs. The preventive institutions are established from the national to the district levels.
3. The central policy units in MOH are the Department of Preventive Medicine and HIV/AIDS Control and the Food Safety and Hygiene Administration. In addition, 12 preventive medicine institutes and 2 centers provide technical guidance for national and regional preventive health activities.
4. At the province level, the preventive health center (PHC) is the primary institution responsible for providing preventive health services.<sup>1</sup> The PHC is responsible for planning and management, supervision of district services, and laboratory services. The PHC has an epidemiological unit responsible for monitoring disease and providing support to epidemic control measures. There are a total of 64 provincial PHCs, 28 malaria stations, 20 social disease centers, 4 occupational health centers, and 4 stations for border quarantine.
5. Each district has a preventive health team, with 5 to 7 technical staff, as part of the district health center. They supervise and support commune preventive activities and have a limited laboratory capacity. Each commune health center has at least one staff with primary responsibility for preventive health activities in its jurisdiction. Other staff perform a mix of curative and preventive health tasks.
6. For priority communicable diseases, such as malaria, tuberculosis, dengue, leprosy, and HIV/AIDS, national targeted programs (NTPs) are organized in a vertical structure. Most of the preventive activities are implemented in the communities with the help of commune health staff and village health workers. For family and village-based activities, such as mosquito control, and water, sanitation, the health staff work closely with local people's committees and mass organizations such as the Women's Union.

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<sup>1</sup> MOH Decision No. 2468/1999/QD-BYT. 17 August 1999. *Regulations, Functions, Authority and Organization of the Provincial Preventive Health Center.*

7. In 2004, MOH drafted a master plan for the preventive health system in Viet Nam<sup>2</sup> as part of its preparation of the Health Sector Strategy, 2006–2010. The master plan articulates MOH's goals for the preventive health system for 2010 and its broad vision for 2020. The master plan provides a broad description of the preventive health system and the epidemiological situation of Viet Nam; identifies the key objectives and financing needs of the preventive health system, including investment alternatives; and identifies a number of targets and indicators for monitoring inputs and outputs of the proposed investments.

8. The master plan identifies the overall objective of the preventive health system is to "...meet the (preventive health) requirements for the socio-economic development of the country." This requires that Viet Nam "...develops a preventive health system based on...an advanced scientific and technical foundation through continuous improvement of the organizational system and investment in material facilities, equipment, and human resources..."

9. Following from the overall objective, the master plan identifies several specific objectives:

- (i) proper organization of the preventive health network at levels;
- (ii) central level has capacity for quick and timely diagnosis of pathogenic agents and can provide support to lower levels in epidemic prevention activities;
- (iii) vaccine and health products manufacturing are at international standards;
- (iv) provincial facilities have the capacity to control infectious diseases, monitor food hygiene, improve work and environmental health, and support school health and community nutrition; and
- (v) preventive health workers have the technical knowledge and qualifications to meet the system's requirements.

10. The master plan identifies several key constraints confronting the preventive health system:

- (i) limited budget for preventive health, with most government and private spending focused on curative health;
- (ii) low remuneration and poor incentives for the preventive health system;
- (iii) lack of understanding on the part of the public and policymakers of the importance of preventive health;
- (iv) overreliance on specific health programs targeted at specific diseases;
- (v) limited health surveillance system, particularly for noncommunicable diseases; and
- (vi) unequal capacity of the provinces to provide preventive health services.

11. The master plan focuses on consolidating the preventive health system by clarifying the roles of the different levels. This involves better definition of responsibilities and a reduction in duplication. The plan proposes specific investment at all levels in the preventive health system, including the rehabilitation and construction of facilities, training, and provision and replacement of equipment at all levels.

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<sup>2</sup> Department of Preventive Medicine and HIV/AIDS Control of the Ministry of Health. 2004. *The Master Plan on the Development of the Preventive Health Network in Vietnam by 2010 and Vision for 2010*.

## GRANT RATIONALE AND PURPOSE

1. The Asian Development Bank (ADB) will provide financing of \$38.1 million for the project. Given the Project's significant contribution in reducing the burden of communicable diseases of the poor, the Government is requesting a grant of \$10,140,000 from the Asian Development Fund (ADF) for human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) and infectious disease control. ADF has allocated 2% of its resources (an estimated \$140 million) to reduce the spread of HIV/AIDS and other infectious diseases for ADF-eligible countries, including Viet Nam.

### A. Rationale

2. The goal of the Preventive Health System Support Project is to assist the health system in meeting the health-related Viet Nam development goals (VDG) by 2015. The Project will provide substantial support to combating and reducing the burden of communicable diseases, with a particular focus on poor and ethnic minorities.

3. **Alignment with Government Strategy.** The Project is closely aligned with Viet Nam's Comprehensive Poverty Reduction and Growth Strategy and the Health Sector Strategy, 2001–2010. Both of these documents highlight several concerns that are addressed by the Project, including the control of infectious and communicable diseases, the need to close the widening gap in health outcomes, and the need to increase investment in basic laboratory services.

4. **Infectious Disease Control.** Most of the project components directly support Viet Nam's efforts to detect and control infectious diseases. This is done by strengthening the health surveillance system, supporting communicable disease control (CDC) efforts, providing new equipment in the areas of infectious disease control and food safety (which account for two thirds of the investment in equipment), and targeting training particularly in the area of CDC. The Project focuses on reducing the burden of communicable diseases in 17 provinces where they are still significant threats, and it will prepare the country as a whole for the risk of new outbreaks from emerging communicable diseases such as avian flu and SARS.

5. **Viet Nam Development Goals.** The Project will support Viet Nam's efforts to meet the health-related goals in the VDG, particularly goals 4, 5, and 6 related to reduction of child mortality; maternal mortality; and HIV/AIDS and communicable disease. The Project will target vulnerable populations by providing targeted assistance to 17 poor provinces that lag the country in health statistics. This directly supports ADB's commitment to poverty reduction and assists developing member countries in achieving the Millennium Development Goals.

### B. Proposed Grant Activities

6. The Project has four components: (i) health surveillance and priority health issues, (ii) strengthening the preventive health system, (iii) human resource development, and (iv) project management. The Project will provide equipment, training, and support to 46 provinces,<sup>1</sup> representing around 75% of the population of Viet Nam and four national institutes. The Project will provide additional, targeted support to the preventive health system in the 17 priority

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<sup>1</sup> The Project excludes provinces in the central highlands and Mekong Delta regions because their preventive health systems will receive substantial and parallel support from other projects.

provinces.<sup>2</sup> These provinces are the poorest among the 46 provinces and have a high proportion of ethnic minorities. The burden of disease is substantially higher in these provinces and is largely due to communicable diseases. The Government requests financing through an ADF grant for \$10,140,000 for the following components:

- (i) **Component A.1 Public Health Surveillance System.** Strong public health surveillance is essential for monitoring and tracking the epidemiological situation, particularly of communicable diseases. An improved surveillance system will allow provinces to accelerate and target their responses to outbreaks of communicable diseases.
- (ii) **Component A.2 Quality of Services.** Strengthening the quality of services of preventive health services is essential to ensure the relevance of the preventive health systems. This component will improve the management capacity of the preventive health services to manage communicable diseases and to integrate their activities with the curative health system.
- (iii) **Component A.3 Support to Combat Priority Communicable Diseases.** The Project will support the provinces to control communicable diseases through increased surveillance and behavior change and communication activities, increased technical support, and materials support. This component will focus on 17 provinces with high levels of poverty and burden of disease from communicable diseases. The component will support existing NTPs operating in the provinces. Because of the significant support for HIV/AIDS, this component will focus on other communicable diseases.
- (iv) **Component C Human Resource Development.** The Project will provide significant support to strengthening the capacity of staff in the preventive health system, with a particular focus on management of communicable diseases, public health, and epidemiology. Staff will be trained in the areas of behavior change communication, infectious disease control, occupational health, environmental health, food safety, medical waste management, and school health. This will update the knowledge of frontline preventive health staff and laboratory technicians on CDC and improve the system's capacity to manage communicable disease outbreaks. The Project will also support the training of commune and district preventive health staff in the 17 priority provinces with courses focusing on maternal mortality and controlling the spread of communicable diseases.

## C. Monitoring and Evaluation

7. Grant effectiveness will be assessed within a broader context of the project performance, which emphasizes the quantifiable improvement of health in Viet Nam. The design and monitoring framework (Appendix 1) has clearly distinguishable indicators to measure the inputs, activities, and outputs financed through the grant. The outcomes and impact are closely aligned to the VDGs and to the Government's health strategy.

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<sup>2</sup> These provinces are Binh Phuoc, Cai Bac, Cao Bang, Dien Bien, Ha Giang, Hoa Binh, Lai Chau, Lao Can, Lang Son, Ninh Thuan, Quang Binh, Quang Nam, Quang Ngai, Quang Tri, Son La, Thanh Hoa, and Yen Bai. The total population of these 17 provinces is 14.8 million, of which 39% are ethnic minorities.

## SUMMARY POVERTY REDUCTION AND SOCIAL STRATEGY

|  |  |
|--|--|
| <b>A. Linkages to the Country Poverty Analysis</b>   |  |
| <b>Is the sector identified as a national priority in country poverty analysis?</b><br><input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No  | <b>Is the sector identified as a national priority in the National Poverty Reduction Strategy?</b><br><input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No |
| <b>Contribution of the sector or subsector to reduce poverty in Viet Nam:</b> <p>Poor health is a leading cause of poverty in Viet Nam. Many households are forced to drain their savings to pay for expensive medical bills, in addition to losing the income from sick family members who are unable to work. Thus, well-targeted investment can improve equity and efficiency within the economy. The preventive health system in Viet Nam plays an important role in protecting the health of the poor. The poor have less access to both public and private preventive health services and suffer from a higher burden of disease, particularly communicable disease.</p>   |  |
| <b>B. Poverty Analysis</b> <span style="float: right;"><b>Targeting Classification:</b> Targeted intervention</span>   |  |
| <b>What type of poverty analysis is needed?</b> <p>Using the international poverty line, the poverty rate in Viet Nam rapidly decreased from 58% to 29% from 1994 to 2002. The poverty rate in the ethnic minority population has been estimated to be from two to three times higher than the national average and has not declined as rapidly as poverty in the general population. The burden disease is largely determined by geographic conditions, economic opportunities, and access to education. Even controlling for these factors, ethnic minorities have a greater burden of disease.</p> <p>Viet Nam has achieved a high level of human development nationwide. However, the level of inequality in a number of areas, including health status, has increased. The public health system faces challenges in protecting the health of the poor and in responding to the changing patterns of disease associated with ongoing social, demographic, and epidemiological transitions. The poor and disadvantaged tend to suffer from a greater burden of disease. The health status of the rural population and ethnic minorities is significantly worse than that of their urban counterparts. The Project will address preventive health concerns through national investment to support the preventive health system for communicable and noncommunicable diseases. This Project has a number of targeted investments that focus on poor provinces and diseases that disproportionately affect the poor. The Project supports training and provides support to help bring the provincial preventive health centers closer to the community. Using the national poverty line (which is lower than the international poverty line), 38% of the project benefits are expected to accrue to the poor population, which represent about 12% of the population of the project provinces.</p> |  |
| <b>C. Participation Process</b>  |  |
| <b>Is there a stakeholder analysis?</b><br><input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No <p>A stakeholder analysis was prepared to help identify key project stakeholders, their project-related interests, and the ways in which they affect project feasibility and success. Primary stakeholders include the Ministry of Health (MOH), preventive health staff at different levels, line ministries, development partners, and mass organizations.</p>   |  |
| <b>Is there a participation strategy?</b><br><input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No <p>Participation is integrated into the overall project design. MOH will coordinate with different departments at various levels within the ministry, and other line ministries. During project design, MOH carried out initial consultations with different stakeholders, and held a number of regional workshops. The involvement of stakeholders will continue during project implementation. A project cell will be established within the Department of Science and Training, and the Department of Preventive Medicine and HIV/AIDS Control to assist with project implementation. Moreover, confirmation of a training and equipment needs assessment for each province will involve continued stakeholder participation.</p> <p>In addition, coordination with other agencies and mass organizations working with vulnerable communities will help deliver information about quality preventive health services. As part of the support to the national targeted programs (NTPs) in the 17 priority provinces, the Project will improve information, education, and communication (IEC) materials for use by health care workers. These IEC materials will be used to enhance community outreach to ethnic minority and other disadvantaged groups on the availability and importance of seeking preventive care. The materials will discuss prevention of communicable and noncommunicable diseases that are commonly found within each province through improved surveillance. Health care workers will be trained in delivering these IEC materials through annual district and commune workshops.</p>  |  |
| <b>D. Gender Development</b>   |  |
| <b>Strategy to maximize impacts on women:</b> <p>Women comprise about 51% of the population in the 46 project provinces. The burden of disease profile for disadvantaged groups remains heavily influenced by common communicable and infectious diseases, and by</p>  |  |

morbidity and mortality associated with childbearing. According to the Vietnam National Health Survey 2001–2002 on reproductive-aged women (18–34 years), the coverage for prenatal care and immunization in ethnic minority groups is lower (about 1.5 times) than that for the Kinh population. Women and children in these population groups continue to bear a health burden that is not comparable with those of better-off communities.

The Project will provide training to commune and district health care workers in the 17 priority provinces focusing on woman and child preventive care, and family disease control. The IEC materials that will be prepared for use in these communities will take into consideration the special needs of ethnicity and gender. The Project will also support equal opportunity for training for women. A gender strategy for the Project has been prepared.

Has an output been prepared?  Yes  No

#### E. Social Safeguards and other Social Risks

| Item                                      | Significant/<br>Not Significant/<br>None   | Strategy to Address Issues   | Plan Required   |
|---|--|--|---|
| <b>Resettlement</b>                       | <input type="checkbox"/> Significant<br><input type="checkbox"/> Not significant<br><input checked="" type="checkbox"/> None | The Project does not support any new civil works. Land acquisition and resettlement are not expected.  | <input type="checkbox"/> Full<br><input type="checkbox"/> Short<br><input checked="" type="checkbox"/> None |
| <b>Affordability</b>                      | <input type="checkbox"/> Significant<br><input checked="" type="checkbox"/> Not significant<br><input type="checkbox"/> None | Issues pertaining to affordability are not expected to arise in the Project.   | <input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No                                      |
| <b>Labor</b>                              | <input type="checkbox"/> Significant<br><input checked="" type="checkbox"/> Not significant<br><input type="checkbox"/> None | Labor is not a potential issue. The Project provides training opportunities for current and additional preventive health staff at the national, provincial, and local levels.  | <input type="checkbox"/> Yes<br><input checked="" type="checkbox"/> No                                      |
| <b>Indigenous Peoples</b>                 | <input checked="" type="checkbox"/> Significant<br><input type="checkbox"/> Not significant<br><input type="checkbox"/> None | Ethnic minorities constitute about 14% of the total population in the 46 project provinces. The Project supports efforts to improve curricula with supplements to better respond to ethnic minority needs. IEC materials and training curriculums will be developed or improved to reflect ethnic minority cultural and language needs. An ethnic minority development plan has been prepared. | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No                                      |
| <b>Other Risks and/or Vulnerabilities</b> | <input type="checkbox"/> Significant<br><input checked="" type="checkbox"/> Not significant<br><input type="checkbox"/> None | The Project is not expected to have an adverse effect on the environment. Risks related to health care waste disposal will be marginal, if not insignificant. A summary initial environmental examination has been prepared for the Project, which outlines steps for improving current health care waste management practices.  | <input checked="" type="checkbox"/> Yes<br><input type="checkbox"/> No                                      |

## SUMMARY INITIAL ENVIRONMENTAL EXAMINATION

### A. Introduction

1. The Preventive Health Systems Support Project in Viet Nam is classified as environment category B. During project preparation, the Government and the Asian Development Bank (ADB) prepared a summary initial environmental examination (SIEE) outlining recommendations and steps taken to protect the environment from potential adverse effects. The SIEE is based on field visits to project provinces, discussions with relevant preventive health staff, consultations with various stakeholders, and the consultant report on health care waste management for the Project.

### B. Description of the Project

2. The Project will help strengthen the provincial preventive health systems in 46 provinces, with a special emphasis on the prevention and control of communicable diseases in 17 provinces identified as priorities because of socioeconomic and health conditions. Eighteen provinces are not a part of this Project because they are included in other similar ADB- and World Bank-financed projects. The goal of the Project is to improve the health status of the population to allow the country to achieve the health-related Viet Nam development goals. The specific purpose of the Project is to support the health system to develop a comprehensive public health system that integrates the reduction of major communicable diseases and addresses emerging challenges including food safety, occupational safety, and health.

3. The Project will purchase new and more environment-friendly laboratory equipment to replace existing and outdated equipment. The Project will also contribute to improving the environment by improving waste management procedures to meet Government and ADB environmental standards and regulations. The Project supports training for waste management, and selected capital investments for improved solid and liquid waste management.

4. The Project emphasizes the main principle of health care waste management—early segregation of hazardous from nonhazardous waste at the health facilities and the continuous training for health care staff.<sup>1</sup> The Project will improve the current management of infectious and chemical waste based on the national guidelines for waste management in health care facilities, as issued by the Ministry of Health (2000), and in accordance with ADB's *Environment Policy*.

### C. Forecasting Potential Environmental Impacts

5. The Project supports the procurement of laboratory equipment in 46 provincial preventive health centers (PHCs) and at 4 national institutes. The majority of PHCs are at ground level with reasonable natural drainage potential.

#### 1. Function of the Preventive Health Center

6. The PHC is the primary institution responsible for implementing preventive health activities in the country. The PHC is a duly authorized administrative entity under the direct

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<sup>1</sup> The principle is included in the Viet Nam regulation on health care solid waste management, which is attached to the Health Minister's Decision No. 2575/1999/Qđ-BYT (27 August 1999). There are a number of other related decisions on the handling of toxic and non-toxic waste.

responsibility of the provincial health service.<sup>2</sup> The PHC receives technical support from several technical departments of the Ministry of Health (MOH) and a number of national and regional institutions. The PHC has a number of administrative and technical departments, such as epidemiology, labor health, food safety and hygiene control, malaria and goiter control, laboratory, border health control, HIV/AIDS, and environmental health. The PHC also has a number of laboratories, including microbiological; chemistry; food safety and sanitation; occupational, environmental, and school hygiene; HIV/AIDS (hematology); and malaria (parasitology). The exact organization varies from one province to another, following the general model prescribed by MOH.

7. According to a survey of PHC laboratories, about 12% of the equipment is more than 15 years old and 23% is more than 10 years old. Only 34% of available equipment is relatively new (less than 5 years of age). Much of this older equipment produces unnecessary waste that could be harmful to the environment; newer and better functioning equipment will help protect the environment from old deteriorating equipment.

## 2. Potential Wastes Generated at Preventive Health Centers

8. **Solid Waste.** Based on the characteristics of solid waste produced in the PHC, solid waste is divided in three main groups: (i) infectious health care waste, including cotton wool, swab, gloves, test tubes, culture, and pipetting tip; (ii) sharp items, including needles and broken glass; and (iii) general waste. Hazardous waste in PHCs is often not treated safely before being sent to waste disposal facilities due to the lack of infrastructure, financing, and training.

9. Medical solid waste, including glassware, syringes, dressing of wound, bandages, plasters, plastic syringes, and test swabs, account for 10–15% of the total solid waste generated by hospitals in Viet Nam. At most PHCs, hazardous health care solid waste is often segregated, especially sharp items. However, handling, collection, and storage methods are often not appropriate. Segregation of infectious waste is done at production points but is typically mixed with other waste at the disposal stage. In some cases, PHCs do not have a temporary holding facility for solid waste. Commonly, wastes are burned in an incinerator or disposed of with other domestic waste without treatment. Therefore, both the Government and public have expressed concern about the potential impacts of hazardous health care waste on the environment and on people's health.

10. **Liquid Waste.** The liquid waste has potentially hazardous components. These components include microbiology pathogens; hazardous chemicals from chemical laboratory, cleaning, and disinfection operations. Although the PHC staff are aware of the liquid treatment plant system, they generally do not have the necessary financial resources to purchase them. Liquid clinical waste is often discharged without proper treatment.

11. **Gaseous Waste.** Gaseous waste is generated from the laboratory when conducting tests. Laboratories typically lack ventilation and equipment to protect health workers from inhalation of the toxic gases while conducting the testing. Only 20% of preventive health laboratories have adequate biological and chemical safety cabinets. Some chemical safety cabinets at chemical laboratories are old and have no filter to absorb the toxic gases.

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<sup>2</sup> Ministry of Health Decision No.2468/1999/QĐ-BYT of 17 August 1999 on *Regulations, Functions, Authority and Organization of the Provincial Preventive Health Center*.

12. **Reusable Items.** In most laboratories, petri dishes, test tubes, and containers are washed and recycled. However, disposal and washing of the contents could lead to contamination of subsequent specimens. The provision of distilled water is often problematic. Budget is not sufficient to purchase suitable quality control materials. In most laboratories no monitoring of internal quality is conducted.

13. **Laboratory Practices.** Protective clothes and gloves are usually available, but mouth pipetting is not uncommon and other basic principles of hygiene are sometimes not followed. Although microscopy for tuberculosis is common, proper safety cabinets to protect the staff working with sputa and other infected specimens are often not available. Where they are available, it is not clear if any maintenance is carried out on the safety hoods. The challenges in effective waste management include (i) use of inappropriate technology; (ii) lack of training and awareness among staff; (iii) high capital cost of treatment systems and low cost efficiency; and (iv) lack of periodic maintenance and internal monitoring.

#### **D. Mitigation Measures**

14. The Project will improve medical waste management at PHCs by replacing and improving the quality of equipment used in laboratories. When appropriate, equipment procured under the Project should meet internationally recognized environmental standards to minimize harmful discharge. The Project will establish quality standards and support laboratories with the provision of basic protective clothing and supplies.

15. The Project includes provisions for (i) proper disposal of general and solid clinical waste, (ii) treatment of liquid clinical waste before disposal, and (iii) disposal of discarded medical equipment. A waste management system for handling, storing, and disposing of waste will be developed, with medical waste will be separated at the source, and placed into clearly labeled dedicated containers, with appropriate lining. Similar segregation procedures will be undertaken for chemical waste and domestic waste. This follows regulations issued under Minister of Health's Decision No. 2575.

16. The PHCs have existing health care waste practices and equipment. These provisions will be reviewed against government standards. If necessary, technical guidance will be made to improve waste management. Old and nonfunctioning waste management equipment may be replaced or alternative methods of waste disposal sought. For example, hazardous waste may be transported to nearby provincial hospitals, which have the facility to manage and dispose of hazardous waste.

17. The technology for liquid waste disposal for each district health center will vary based on local conditions and current practices. Depending on the type, nature, and organisms in the health care waste, risk waste will be inactivated and rendered safe before final disposal. Normally, liquid clinical waste comes from laboratories and utility rooms where chemical and active solutions are stored. PHCs have two options to minimize discharge of wastewater. Both require low maintenance service and are cost efficient. The first option is to have an underground separate sewerage system that allows liquid clinical and bio-hazardous waste to be properly channeled into dedicated treatment tanks before discharge. The second option is to localize the discharge of clinical wastewater directly into a dedicated collection tank. Appropriate tank size with minimal filtration and small dosage of active solution allows dilution and sedimentation of the raw wastewater and slow transfer to the reaction tank for proper treatment. The waste will be properly treated before the disposal.

18. During project preparation, a number of alternative disposal options were considered. Based on the analysis, a single-barrel incinerator is the most appropriate and cost-efficient option for PHCs that cannot rely on the provincial hospital for waste disposal. It has the capacity to treat and dispose of waste generated (less than 250 kilograms per week). At present, 15 local manufacturers have the necessary production licenses for medical waste incinerators. The Government has recently issued provisional regulations on incinerators, including technical and emission standards. Steps to prevent toxic emissions from filtering into the air will be taken. PHCs that already have functioning incinerators should purchase incinerator covers.

19. To increase the level of awareness and skill in waste management, the Project will provide training for staff at PHCs on proper segregation and handling of health care waste. Protective clothing will be given to health staff managing and disposing of medical waste. This training will focus on proper handling and sorting of hazardous waste at PHCs. These courses will be offered annually to ensure continuity and follow up.

### **E. Institutional Requirements and Review Procedures**

20. MOH will be the Executing Agency, with a project management unit (PMU) established with MOH. Project cells will be established in the Department of Science and Training, and the Department of Preventive Medicine and HIV/AIDS Control. The provincial health service is responsible for project implementation at the provincial level, including compliance with government and ADB environment standards. A local environmental specialist (10 person-months) will provide overall technical guidance. The environmental consultant will develop a set of screening criteria to identify when a site-specific initial environmental examination (IEE) is required. The screening will categorize the proposed investment and set up criteria to identify investments that cannot be supported by the Project.<sup>3</sup>

21. The Project will support investments to improve waste management in each of the PHCs, based on local needs. The following steps review procedures will be followed.

22. **Step 1.** Each PHC will carry out an environmental screening for the scope of the proposed investment needs and existing health care waste management procedures for its PHC. The purpose of this screening is twofold: (i) to identify the need for a site-specific IEE, and (ii) to develop an appropriate environmental management plan (EMP) following appropriate laws and regulations. The EMP will be developed by the staff of the PHC and will be approved by the director of the provincial health service. The EMP will take into account the expected generation of health care waste, the current waste management procedures, and the options available to mitigate waste (including using provincial facilities). It will include the following:

- (i) a description of the PHC's procedures for proper disposal of hazardous medical waste;
- (ii) an outline of the PHC's equipment needs to support its EMP, subject to review by the PMU within the context of the overall project budget and allocation for waste management equipment; and
- (iii) options for the proper disposal of old equipment that is replaced due to the Project.

23. **Step 2.** Based on the screening criteria, if a site-specific IEE is not necessary, the

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<sup>3</sup> The Project will not support investments classified as B sensitive or A. Given the nature of the Project and the amount of waste generated, this is very unlikely to occur.

provincial health service will submit a draft EMP to the PMU and ADB for endorsement before implementation. The provincial health service will also publicly disclose its EMP.

24. **Step 3.** Based on the screening criteria, if a site-specific IEE is necessary, the PHC, with support of the Project's environmental consultant, will prepare an IEE. In case an incinerator is procured, the IEE will identify the necessary steps or measures to prevent toxic emissions from filtering into the air. When an incinerator is purchased under the Project, there will be full public disclosure of the IEE with a 60-day period for discussion prior to approval of the final document by the provincial authorities.

25. **Step 4.** The IEE will be endorsed by the director of the provincial health service and submitted to the PMU for review and endorsement. The PMU will forward the IEE to MOH and ADB for concurrence. Once the review is endorsed, the PMU will authorize financing and assist the provincial authorities with required permits and approval needed from national and provincial authorities and concurrence by national authorities and ADB.

26. **Step 5.** Monitoring will be mainstreamed with each provincial authority, preparing regular updates as part of the standard reporting. The provincial authorities will produce an annual report reviewing the Project's status in applying required environmental regulations that will be incorporated in the Project's regular reporting cycle. The midterm review will include a general review of the Project's compliance with environmental standards.

#### **F. Public Consultation and Disclosure**

27. Each province will publicly release its EMP and discuss the EMP with local stakeholders. This will ensure that the public is informed about the potential environmental hazards generated by the PHC.

#### **G. Conclusion**

28. The Project will contribute to improving the environment by improving existing health care waste management procedures to meet government and ADB environment standards and regulations. Based on the SIEE prepared for the Project, a detailed environmental impact assessment for the Project is not required.

## SUMMARY ETHNIC MINORITY DEVELOPMENT PLAN

1. An ethnic minority development plan (EMDP) was prepared to assess the preventive health needs of ethnic minorities in the Preventive Health Systems Support Project in Viet Nam. This appendix summarizes the full EMDP, which was agreed to by the Government during project preparation. The EMDP highlights project benefits for ethnic minorities in the 46 project provinces, of which 17 priority provinces will receive additional and targeted support.<sup>1</sup> The preventive health needs of ethnic minorities have been taken into consideration in the design of the Project. The Project will have no adverse effects on the ethnic minority population in terms of land acquisition and resettlement or the environment. The EMDP ensures compliance with the ADB *Policy on Indigenous Peoples*.

### A. Background

2. The Project will benefit about 59 million people in 46 project provinces, of which 14% of the population come from ethnic minority groups.<sup>2</sup> In Viet Nam, the poverty rate for the general population is estimated at 29% (2002), and is thought to be two to three times higher for ethnic minority populations. Geographical remoteness, lower human development levels, and slower economic growth are contributing factors to the increasing differentials in income and living standards between ethnic minorities and the Kinh population. Smaller ethnic minority groups (less than 10,000 per group) are the most vulnerable. Out of 53 ethnic minority groups, 36 are estimated to have a population size of 100,000 or less.

3. In Viet Nam, a major challenge for the health system is to reduce inequalities in the use of health services. For ethnic minority groups, the burden of disease is almost twice as high as for the general population. Typical communicable diseases in ethnic minority areas are malaria, tuberculosis, typhoid fever, and cholera. Lifestyle diseases are also causing concern among ethnic minority communities. Among some ethnic minority groups, the rate of female smoking is much higher than the national rate of 1.8%.

4. The epidemiological situation is worse for ethnic minority women and children. The infant mortality rate in 1998 was about 64 per 1,000 in the central highlands and 44 per 1,000 in the northern uplands, compared with about 37 per 1,000 for Viet Nam. From 1994 to 1998, the rate of infant mortality reduced in all regions with the exception of the central coastal provinces where an increase of 10% was found. The average child mortality rate is 2.8%, with the highest rates in ethnic minority regions. Most cases of child mortality are a consequence of perinatal conditions (38.8%), infectious disease (24.9%), noninfectious disease (17.0%), and accidents. Ethnic minority children suffer more from respiratory diseases, dengue fever, malaria, and nutritional disorders as a consequence of poor living conditions.

5. Maternal mortality of women ages 15–49 was 130 per 100,000 live births. Likewise, maternal mortality was the highest in the central and northern highlands. Reasons for maternal deaths include lack of trained professional attendant at childbirth, quality of prenatal care, limited equipment and facilities, and distance or lack of transport to health services. Preventive and health care services make it easier for the majority of women to have a safe delivery, as home delivery is the most common practice for ethnic minorities.

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<sup>1</sup> Selection is based on criteria that weigh their relative poverty (as measured by the provincial Viet Nam development goal rating) and a measure of their health needs.

<sup>2</sup> Ethnic minority refers to the 53 ethnic groups that differ from the Kinh majority ethnic group.

## B. Legal Framework and Principles

6. The EMDP is based on Vietnamese laws. The Government recognizes ethnic minorities as poor and underprivileged groups. The Central Communist Party Executive Committee directive<sup>3</sup> provides guidelines for MOH to formulate policies with priorities for people in remote and mountainous areas, especially ethnic minorities. The Comprehensive Poverty Reduction and Growth Strategy for 2001–2010 (CPRGS) sets 11 goals, 7 of which deal directly with issues of gender and ethnic minorities: (i) achieve better education for all; (ii) reach gender equality and empower women; (iii) reduce infant and child mortality; (iv) improve maternal health; (v) combat HIV/AIDS, malaria, and other communicable diseases; (vi) reduce vulnerability; and (vii) eradicate poverty and preserve ethnic minority culture.

7. During the last decade, the Government has issued decrees and guidelines<sup>4</sup> that aim to reduce poverty among ethnic minority populations. Current government policies and programs for enhancing the health status of ethnic minorities will continue to (i) increase access to health facilities, (ii) encourage their participation in training courses, and (iii) improve utilization of services. MOH has also developed specific goals<sup>5</sup> for mountainous ethnic minority regions, which are in line with the Government's CPRGS for 2010, Strategy for People's Health Care and Protection for 2001–2010, Policy for Public Preventive Health, and other related documents.

## C. Project Benefits

8. The Project aims to improve the health status of the general population, including ethnic minorities by strengthening the capacity of preventive health staff to provide comprehensive preventive health services at the community level, based on improved surveillance systems. The objective for the poor and ethnic minority groups is to reduce their burden of disease from common communicable diseases by increasing accessibility and acceptability of preventive health services in ethnic minority communities. The Project will increase the coverage of preventive services for noncommunicable diseases with priority given to food safety, occupational health, and school health, including an increase in services for early diagnosis of diseases associated with life-style behaviors.

9. The Project also supports the implementation of nationally targeted programs (NTPs) in the priority 17 provinces.<sup>6</sup> About 39% of the 14.8 million people are ethnic minorities. There are two underlying assumptions to providing support to the NTPs in these provinces: (i) basic infrastructure for managing the burden of communicable diseases is in place in each province, and (ii) specific interventions will be unique to each province.

10. The Project will support the training of commune and district preventive health staff in the 17 priority provinces. Special courses will be designed to better address the needs of poor and ethnic minority communities, and improve the quality of surveillance activities. The training will support health staff in providing relevant information on maternal and child care and family disease control that families can apply within their community and within available resources

<sup>3</sup> Directive N 06-CT/TW of Central Party Executive Committee (2002).

<sup>4</sup> Decree N 95-CP of 27 August 1994 on free health care; Decision 135/1998QD/-TTG on poverty alleviation.

<sup>5</sup> In particular, these goals apply to the central highlands. MOH. 2001. *Development Strategy for the Central Highlands (2001-2010)*.

<sup>6</sup> National Targeted Programs focus on 10 priority health conditions and provide resources for the health system to address the health conditions.

and capabilities. The training will focus on the health needs of women and children and the prevention of common communicable disease in disadvantaged communities. Special cultural and linguistic needs of ethnic minorities will be considered in information, education, and communication activities and training materials supported by the Project. A set of transparent criteria will be developed for the selection of trainees at all levels to ensure qualified ethnic minorities have an equal opportunity to participate.

11. A needs assessment will confirm equipment and training needs of each province. The following activities will be incorporated as part of the needs assessment:

- (i) identify training needs for health staff in areas with high concentration of ethnic minorities; based on health patterns, needs, and epidemic programs in each province, determine if additional training courses are required;
- (ii) identify any special training needs and appropriate learning methods for health staff to improve service-delivery of preventive health services to ethnic minorities; these needs will vary from province to province; and
- (iii) identify ways in which district and commune health staff can help to strengthen the surveillance system, such as tracking diseases by ethnicity.

#### **D. Implementation Arrangements**

12. Implementation arrangements and estimated costs of the EMDP are part of the overall arrangements and total budget. In provinces with high concentrations of ethnic minorities, each provincial preventive health center will have at least one staff member aware of the traditional ethnic minority health behaviors and practices and at least one member of the project steering committee at the provincial level will represent ethnic minority interests. A national social development specialist to be hired for 10 person-months will help develop implementation guidelines for the EMDP, specific to each province. The specialist will work closely with the other health specialists for the Project.

13. The monitoring of the EMDP will be part of the overall system for the Project. Ethnic minorities will be consulted in the design and implementation of IEC activities and training materials for preventive health services. Progress reports will provide periodic updates on project components that focus on improving preventive health services for ethnic minorities. The midterm review mission will pay special attention to the effects of project components on ethnic groups. Adjustments, if necessary, will be made to the EMDP during project implementation.

## GENDER STRATEGY

1. The Preventive Health Systems Support Project provides significant health benefits for about 29 million women in the 46 project provinces of Viet Nam, of which about 8.3 million are ethnic minority women. A gender strategy has been prepared to highlight the different preventive health needs of men and women in Viet Nam. It also helps to ensure that both men and women have equal opportunities to participate in training at all levels. The gender strategy is based on a situational analysis and assessment that was prepared for the Project, and is designed in accordance with Asian Development Bank (ADB) policy on gender and development.

### A. Background

2. Women comprise about 51% of the total population in the 46 project provinces. Gender division of labor typically adheres to a strict division between the roles of men and women. Traditionally “women’s work” consists of taking care of domestic chores, reproductive and family care, and activities related to hygiene and sanitation. In preventive and health care practices in the household, women play a specific role in the care of common diseases based on local experience and traditional knowledge. They also play an important role in food preparation, cooking, family diet, and household living arrangements. However, many women often lack control over household income and decisions about seeking health care for themselves and their children, even those from ethnic groups that maintain strong matrilineal or traditions (i.e., Ede, and Hmong groups).

### B. Women’s Burden of Disease

3. In Viet Nam, the burden of disease is similar for men and women. However, the patterns of disease differ. Women are vulnerable to diseases associated with reproduction and childbearing, while men suffer a greater burden of disease from accidents and injuries. Similarly, the burden of disease is higher for women than men in certain geographical locations. For instance, in the central highlands the burden of disease for females of reproductive age (15–44) is more than 25% higher than the national average.<sup>1</sup> The lack of knowledge about women’s rights, and prevalence of traditional custom law and practices also negatively affect women’s health and development (i.e., early marriage, and limited decision-making).

4. Women and children in some ethnic groups, bear a health burden that is substantially higher than those of better-off communities. Women and child health is hampered by limited access to preventive and curative services, misuse of self-medication, and lack of trust in modern medicine hamper. Ministry of Health (MOH) guidelines for safe delivery indicate having at least three prenatal exams, taking iron supplements, immunization against tetanus, and monitoring weight regularly. However, because childbirth is viewed as a natural phenomenon, many women pay little attention to safe motherhood care. The Vietnam National Health Survey, 2001–2002 survey found that among reproductive aged women (18–34 years), prenatal care, and immunization in ethnic minority groups was 1.5 times lower than that for the Kinh population.

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<sup>1</sup> This is measured in disability-adjusted life years, a common measure used to aggregate the burden of disease.

### C. Gender and the Public Health Sector

5. The gender division of labor within the public health sector is clearly defined based on qualifications and professional skill. More than half of the public health sector in Viet Nam employs women as laboratory technicians, nurses, midwives, or administrative staff. Out of 46 provinces, data on the number of women employed in the health sector is found in Table A9.

**Table A9: Gender Distribution of Health Staff in Select Provinces\***

| Province        | Total Health Staff |           | Preventive Health Staff |           |          |           | Total Workers |           |         |           |
|-----------------|--------------------|-----------|-------------------------|-----------|----------|-----------|---------------|-----------|---------|-----------|
|                 |                    |           | Province                |           | District |           | Commune       |           | Village |           |
|                 | Total              | Women (%) | Total                   | Women (%) | Total    | Women (%) | Total         | Women (%) | Total   | Women (%) |
| Ha Tay          | 4,436              | 67        | 51                      | 59        | 1,469    | 64        | —             | —         | —       | —         |
| Bac Ninh        | 2,009              | 55        | 37                      | 78        | 14       | 50        | 530           | 55        | 833     | 62        |
| Hai Duong       | 3,598              | 62        | 51                      | 57        | —        | —         | 1,117         | 58        | 1,569   | 58        |
| Hung Yen        | —                  | —         | 33                      | 42        | —        | —         | 997           | 55        | —       | —         |
| Ha Nam          | —                  | —         | 41                      | 39        | —        | —         | 508           | 64        | —       | —         |
| Ha Giang        | 2,666              | 46        | 36                      | 42        | 22       | 50        | 939           | 61        | 1,906   | 39        |
| Cao Bang        | —                  | —         | 52                      | 56        | —        | —         | —             | —         | —       | —         |
| Lao Cai         | 2,076              | 57        | 44                      | 39        | —        | —         | 492           | 45        | 1,693   | —         |
| Bac Kan         | 1,063              | 63        | 34                      | 44        | 16       | 63        | 376           | 58        | 1,166   | 57        |
| Lai Chau        | 2,056              | 52        | —                       | —         | —        | —         | 541           | 46        | 1,793   | —         |
| Son La          | 2,741              | 60        | 33                      | 67        | —        | —         | 903           | 46        | —       | —         |
| Thanh Hoa       | 7,341              | 58        | 55                      | 38        | —        | —         | 2,765         | 52        | 4,817   | 52        |
| Nghe An         | 6,773              | 73        | 61                      | 87        | —        | —         | —             | —         | —       | —         |
| Quang Tri       | 2,004              | 55        | 56                      | 36        | 31       | 61        | 523           | 48        | —       | —         |
| Thua Thien Hue  | 1,970              | 55        | 35                      | 57        | 20       | 75        | 630           | 55        | —       | —         |
| Tay Ninh        | 2,536              | 71        | 61                      | 54        | —        | —         | 526           | 75        | 672     | 52        |
| Binh Duong      | 1,885              | 67        | 54                      | 63        | 24       | 71        | 339           | 74        | —       | —         |
| Dong Nai        | 3,869              | 63        | 59                      | 42        | 32       | 66        | 781           | 67        | 985     | 49        |
| Binh Thuan      | —                  | —         | 41                      | 56        | —        | —         | —             | —         | —       | —         |
| Ba Ria-Vung Tau | —                  | —         | 113                     | 63        | —        | —         | 631           | 50        | —       | —         |

— = data not available.

Source: Provincial Annual Report to Ministry of Health (2002).

### D. Project Benefits

6. The Project aims to (i) improve the health status of the general population; (ii) strengthen the capacity of preventive health staff to provide comprehensive preventive community health services based on improved surveillance systems; and (iii) increase the accessibility and acceptability of health services in disadvantaged communities. Training will be provided in surveillance and management for preventive health staff at all levels, and in developing human resources within the preventive health system. The Project will improve human resources through technical training and postgraduate training.

7. The Project will also provide training to district and commune health staff on improving the quality of women and child preventive care and reducing common communicable diseases within families. This local training will be supported in 17 of 46 provinces, which will receive project support for implementing the national target programs in health (NTPs). Information, education and communication (IEC) activities and training materials that will be developed (or improved based on existing materials) will take into consideration the special needs of men and women. All qualified staff will have an equal opportunity to participate in training programs at all levels, regardless of sex.

8. A need assessment will confirm equipment and training needs of each province, and will require a review of the following activities:

- (i) review proposed project activities against the incidence of communicable and noncommunicable diseases by gender and by ethnic group;
- (ii) prioritize training courses for health staff in each province based on population composition, available health staff, health patterns, health needs, and epidemic programs; and determine if additional training courses are required;
- (iii) identify any special training support and appropriate learning methods for health staff to improve service delivery of preventive health services to women and men; these needs will be based on individual preventive health needs and will vary in each province; and
- (iv) identify ways in which district and commune health staff may help to strengthen the surveillance system in the province so that diseases can be tracked by gender and by ethnic groups.

## **E. Implementation Arrangements**

9. Implementation arrangements and estimated costs of the gender strategy are part of the overall project arrangements and total budget, as women are among the Project's primary beneficiaries. A national health specialist will be hired for 10 person-months during the Project to help execute the gender strategy in project activities during implementation. The specialist will take into account local conditions and arrangements specific to each province when implementing the strategy, and will work closely with the other health specialists for the Project.

10. Monitoring of the gender strategy is incorporated in the overall system for the Project. Where appropriate, both women and men will be consulted in the design and implementation of IEC activities and training materials for preventive health services. Progress reports will provide periodic updates on project components with respect to gender (i.e., number of women that participated in different trainings). The midterm review mission will review these updates against the proposed gender strategy. Adjustments, if necessary, will be made to the gender strategy during project implementation.

## PROJECT COST ESTIMATES AND FINANCING PLAN

Table A10.1 Project Cost Estimates by Component and Financing Source  
(\$'000)

| Item   | ADB           |               |               | Gov.         | TOTAL         |               |               |
|--|---------------|---------------|---------------|--------------|---------------|---------------|---------------|
|  | FX            | LC            | Total Cost    |              | FX            | LC            | Total Cost    |
| <b>I. Project Investment</b>                             |               |               |               |              |               |               |               |
| <b>A. Health Surveillance and Priority Health Issues</b> |               |               |               |              |               |               |               |
| 1. Health Surveillance                                   | 607           | 1,133         | 1,740         | 155          | 607           | 1,288         | 1,895         |
| 2. Quality of Services                                   | 27            | 364           | 392           | 24           | 27            | 388           | 415           |
| 3. Support for Priority Communicable Diseases            | 164           | 2,556         | 2,720         | 177          | 164           | 2,732         | 2,897         |
| <b>Subtotal (A)</b>                                      | <b>799</b>    | <b>4,052</b>  | <b>4,852</b>  | <b>355</b>   | <b>799</b>    | <b>4,408</b>  | <b>5,207</b>  |
| <b>B. Strengthening the Preventive Health Service</b>    |               |               |               |              |               |               |               |
| 1. Support for Provincial Preventive Health System       | 18,136        | 0             | 18,136        | 3,409        | 18,136        | 3,409         | 21,545        |
| 2. Support for National Institutes                       | 4,040         | 0             | 4,040         | 638          | 4,040         | 638           | 4,678         |
| <b>Subtotal (B)</b>                                      | <b>22,175</b> | <b>0</b>      | <b>22,175</b> | <b>4,047</b> | <b>22,175</b> | <b>4,047</b>  | <b>26,223</b> |
| <b>C. Human Resource Development</b>                     |               |               |               |              |               |               |               |
| 1. Postgraduate Training                                 |               |               |               |              |               |               |               |
| a. Professional Skills Development                       | 0             | 552           | 552           | 33           | 0             | 585           | 585           |
| b. Graduate Training                                     | 440           | 138           | 578           | 8            | 440           | 146           | 586           |
| c. Field Epidemiology                                    | 20            | 490           | 510           | 23           | 20            | 513           | 533           |
| 2. Technical Training                                    | 0             | 2,427         | 2,427         | 140          | 0             | 2,567         | 2,567         |
| 3. In-Service Community Health Training                  |               |               |               |              |               |               |               |
| a. Graduate Training                                     | 23            | 211           | 235           | 14           | 23            | 225           | 249           |
| b. Field Epidemiology                                    | 23            | 211           | 235           | 14           | 23            | 225           | 249           |
| <b>Subtotal (C)</b>                                      | <b>507</b>    | <b>4,029</b>  | <b>4,536</b>  | <b>233</b>   | <b>507</b>    | <b>4,262</b>  | <b>4,769</b>  |
| <b>D. Project Management</b>                             |               |               |               |              |               |               |               |
| 1. Project Management                                    |               |               |               |              |               |               |               |
| a. National  | 242           | 738           | 980           | 287          | 242           | 1,025         | 1,267         |
| b. Provincial and National Institute                     | 347           | 945           | 1,292         | 788          | 347           | 1,733         | 2,079         |
| c. Consulting Group                                      | 1,005         | 248           | 1,253         | 0            | 990           | 248           | 1,238         |
| <b>Subtotal (D)</b>                                      | <b>1,594</b>  | <b>1,930</b>  | <b>3,525</b>  | <b>1,075</b> | <b>1,579</b>  | <b>3,005</b>  | <b>4,584</b>  |
| <b>Total (Base Costs)</b>                                | <b>25,075</b> | <b>10,011</b> | <b>35,088</b> | <b>5,710</b> | <b>25,060</b> | <b>15,722</b> | <b>40,783</b> |
| <b>II. Contingencies</b>                                 |               |               |               |              |               |               |               |
| 1. Physical <sup>a</sup>                                 | 1,379         | 325           | 1,704         | 0            | 1,354         | 325           | 1,679         |
| 2. Price <sup>b</sup>                                    | 0             | 551           | 551           | 0            | 0             | 551           | 551           |
| <b>Total (Project Cost)</b>                              | <b>26,454</b> | <b>10,887</b> | <b>37,340</b> | <b>5,710</b> | <b>26,414</b> | <b>16,598</b> | <b>43,013</b> |
| <b>Taxes and Duties<sup>c</sup></b>                      | <b>0</b>      | <b>0</b>      | <b>0</b>      | <b>3,768</b> | <b>0</b>      | <b>3,768</b>  | <b>3,768</b>  |
| <b>III. Interest Charges<sup>d</sup></b>                 | <b>700</b>    | <b>0</b>      | <b>700</b>    | <b>0</b>     | <b>700</b>    | <b>0</b>      | <b>700</b>    |
| <b>Total</b>   | <b>27,154</b> | <b>10,887</b> | <b>38,040</b> | <b>9,479</b> | <b>27,114</b> | <b>20,366</b> | <b>47,481</b> |

ADB = Asian Development Bank, FX = foreign exchange, Gov = Government, LC = local currency

Note: Numbers may not add up due to rounding.

<sup>a</sup> Estimated at 3% for training, communication materials, travel, research, and operations, 5% for equipment, support for communicable diseases, and incremental administrative expenses, and 10% for consulting services.<sup>b</sup> Estimated at 5% of local costs and 0% for foreign exchange costs<sup>c</sup> Estimated at 7% for medical and laboratory equipment, 9% for other equipment, and 230% for vehicles<sup>d</sup> Estimated at an annual factor of 1% on cumulative disbursement during project implementation.

Source: Asian Development Bank estimates.

**Table A10.2: Loan Project Cost Estimates by Category and Financing Source**  
(\$'000)

| Expenditure Categories                  | ADB Loan     |               |               | Govt.        | Total         |
|---|--------------|---------------|---------------|--------------|---------------|
|   | LC           | FX            | Total         |              |               |
| <b>I. Base Cost</b>                     |              |               |               |              |               |
| 1. Laboratory Equipment                 | 0            | 17,379        | 17,379        | 1,217        | 18,596        |
| 2. Reagents and Spare Parts             | 0            | 1,926         | 1,926         | 848          | 2,774         |
| 3. Other Equipment                      | 0            | 3,140         | 3,140         | 169          | 3,309         |
| 4. Support to Provincial Programs       | 0            | 0             | 0             | 0            | 0             |
| 5. Support to Surveillance Activities   | 0            | 0             | 0             | 0            | 0             |
| 6. Training and Material Production     | 0            | 0             | 0             | 0            | 0             |
| 7. Research, Monitoring, and Evaluation | 156          | 39            | 195           | 46           | 241           |
| 8. Operations and Maintenance           | 0            | 0             | 0             | 2,140        | 2,140         |
| 9. Consulting Services                  | 248          | 1,005         | 1,253         | 0            | 1,253         |
| 10. Incremental Administration          | 1,527        | 280           | 1,806         | 741          | 2,547         |
| <b>Subtotal</b>                         | <b>1,930</b> | <b>23,769</b> | <b>25,699</b> | <b>5,160</b> | <b>30,859</b> |
| <b>Taxes and Duties</b>                 | <b>0</b>     | <b>0</b>      | <b>0</b>      | <b>3,739</b> | <b>3,739</b>  |
| <b>II. Contingencies</b>                |              |               |               |              |               |
| 1. Physical                             | 69           | 1,326         | 1,395         | 0            | 1,395         |
| 2. Price                                | 106          | 0             | 106           | 0            | 106           |
| <b>III. Interest Charges</b>            | <b>0</b>     | <b>700</b>    | <b>700</b>    | <b>0</b>     | <b>700</b>    |
| <b>Total</b>                            | <b>2,105</b> | <b>25,795</b> | <b>27,900</b> | <b>8,899</b> | <b>36,799</b> |

ADB= Asian Development Bank, FX = foreign exchange, govt = government, LC = local currency

Note: Numbers may not add up due to rounding.

Source: Asian Development Bank estimates.

**Table A10.3: Grant Project Cost Estimates by Category and Financing Source**  
(\$'000)

| Expenditure Categories                  | ADB Grant     |            |               |
|---|---------------|------------|---------------|
|   | Total         | Govt.      | Total         |
| <b>I. Base Cost</b>                     |               |            |               |
| 1. Laboratory Equipment                 | 0             | 0          | 0             |
| 2. Reagents and Spare Parts             | 0             | 0          | 0             |
| 3. Other Equipment                      | 597           | 32         | 629           |
| 4. Support to Provincial Programs       | 2,720         | 177        | 2,897         |
| 5. Support to Surveillance Activities   | 1,143         | 71         | 1,213         |
| 6. Training and Material Production     | 4,362         | 235        | 4,597         |
| 7. Research, Monitoring, and Evaluation | 0             | 0          | 0             |
| 8. Operations and Maintenance           | 0             | 0          | 0             |
| 9. Consulting Services                  | 0             | 0          | 0             |
| 10. Incremental Administration          | 566           | 35         | 600           |
| <b>Subtotal</b>                         | <b>9,387</b>  | <b>550</b> | <b>9,937</b>  |
| <b>Taxes and Duties</b>                 | <b>0</b>      | <b>30</b>  | <b>30</b>     |
| <b>II. Contingencies</b>                |               |            |               |
| 1. Physical                             | 308           | 0          | 308           |
| 2. Price                                | 444           | 0          | 444           |
| <b>III. Interest Charges</b>            | <b>0</b>      | <b>0</b>   | <b>0</b>      |
| <b>Total</b>                            | <b>10,140</b> | <b>580</b> | <b>10,720</b> |

ADB = Asian Development Bank.

Note: Numbers may not add up due to rounding.

Source: Asian Development Bank estimates.

## PROJECT MANAGEMENT AND IMPLEMENTATION STRUCTURE

### A. The Steering Committee

1. The minister of health has designed a high-level steering committee to supervise and coordinate the activity of Asian Development Bank (ADB) projects. The steering committee will ensure that project implementation is consistent with the Preventive Health Master Plan, the Health Sector Strategy, and other government strategies and policies.

### B. The Project Management Unit

2. The Project will be managed by a project management unit (PMU) that will be a department or unit within the Ministry of Health (MOH). The Project will have a director and a deputy director. Within the PMU, several units will support project implementation: (i) planning, (ii) administration, (iii) procurement, (iv) training, and (v) chief accountant and disbursement. The PMU will comprise MOH and contract staff specifically hired to support project implementation. The PMU will have the following duties and responsibilities:

- (i) serve as a liaison between ADB and MOH, including reviewing all documents prepared by the provinces and national institutes to ensure they meet relevant government and ADB guidelines;
- (ii) prepare and implement the annual work plan, procurement plan, and other strategic planning documents as approved by MOH;
- (iii) develop a set of transparent criteria for the selection of trainees at all levels and a subsequent training master plan for the Project;
- (iv) prepare and implement the procurement of goods, services, and equipment for the Project, in accordance with Government and ADB guidelines, including preparation of bidding documents, review of bids, and award of contracts;
- (v) manage the Project's accounts and ensure that financing is adequate to cover implementation costs; and
- (vi) coordinate the technical activities of the Project, working with the consulting group, relevant departments within MOH, national institutes, and provincial preventive health services.

### C. The Consulting Group

3. The Project will contract a consulting group, from a firm, to provide technical and implementation support for the Project. The consulting group will report directly to the project director. The terms of reference for the consultants are contained in Appendix 14.

### D. The Ministry of Health

4. The Department of Science and Training (DST) and the Department of Preventive Medicine and HIV/AIDS Control (DPH) will actively support the PMU.

5. **The Department of Science and Training.** The Project Cell established in DST will focus on planning, designing, and implementing the Project's training activities in preventive health. In many cases, the curriculum and programs already exist and DST will design the criteria for selection of candidates for training in coordination with the consulting group. If necessary, DST will work with the consulting group to improve curriculums and programs to better address the needs of target populations such as ethnic minorities, women, and children. If

no curriculum exists, DST will take the lead in preparing the terms of reference for the development of programs to meet the Project's training needs.

6. **The Department of Preventive Medicine and HIV/AIDS Control.** The Project Cell established in DPH will focus on implementation of the health surveillance system (Component A.1) and quality of services and support to combat priority communicable diseases (Component A.2) through the provision of technical support.

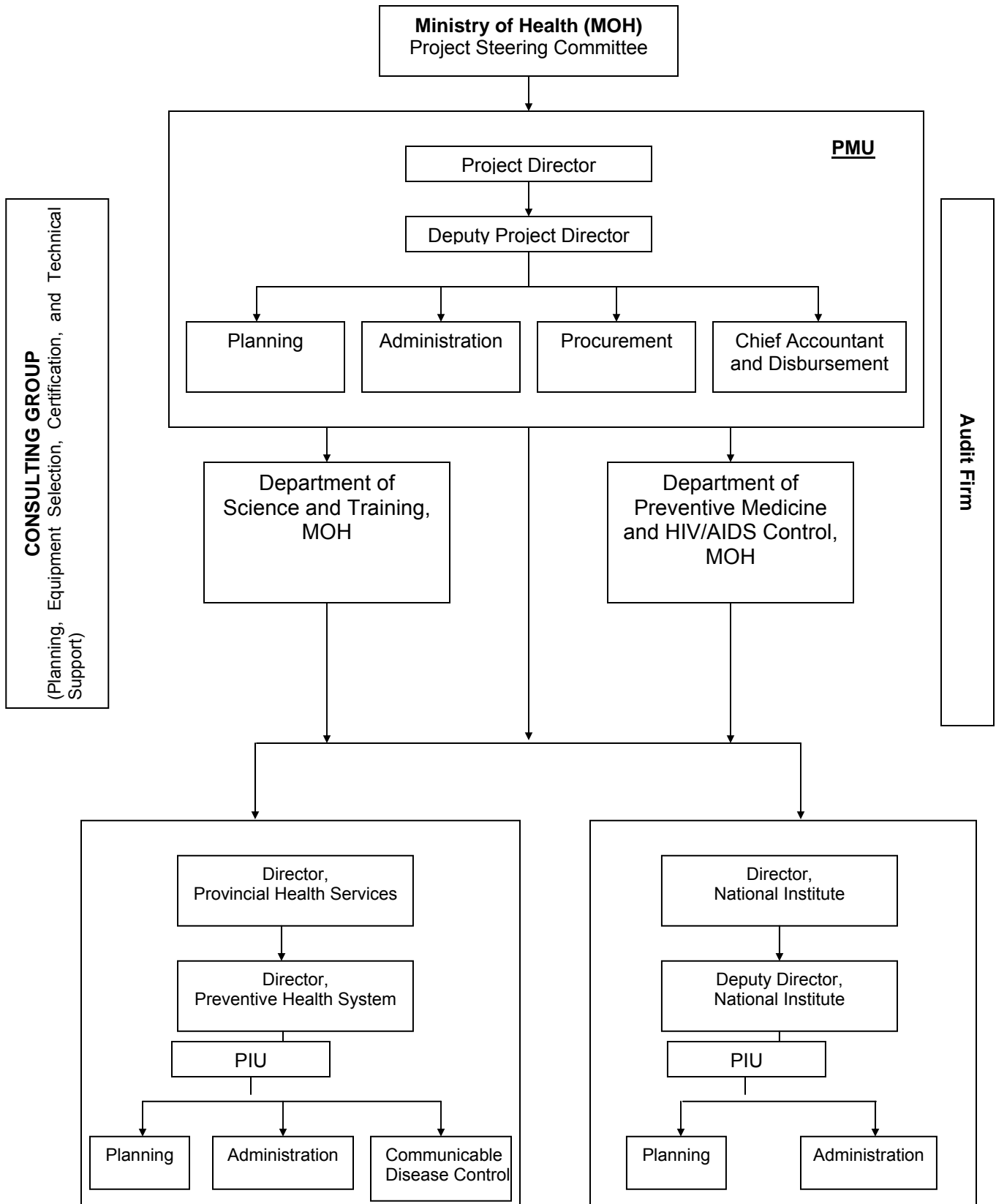
#### **E. Provinces and National Institutes**

7. **Provinces.** The provincial health service is responsible for implementation of the Project at the provincial level. The director of the provincial health service will be the provincial project director and the director of the provincial preventive health service will be the provincial deputy project director. Each province will have a provincial steering committee to provide overall technical guidance. Each province will also establish a small project implementation unit (PIU) that will have several staff to support planning, administration, and implementation of the Project. The provinces have the following responsibilities:

- (i) develop a needs assessment for the provincial preventive health center and for communicable disease control (for selected provinces) for review by the consulting group and the PMU;
- (ii) carry out local, small-scale procurement of goods and supplies necessary to administer the Project locally, including managing the provincial project account and utilizing statement of expenditure procedures;
- (iii) ensure that equipment procured and training provided by the Project are properly utilized by the province, based on the needs assessment;
- (iv) operate health surveillance and provide information to the Project as required; and
- (v) implement community and local training.

8. **National Institutes.** The participating national institutes will implement the Project using the same guidelines as the provinces. The director of the national institute will be the institutional project director and will designate a deputy director within the institute. Within the national institute, a PIU will be established with several staff to support the planning and administration of the Project.

**Figure A11: Organizational Chart**



MOH = Ministry of Health, PMU = project management unit, PIU = project implementation unit.

### IMPLEMENTATION SCHEDULE

| Description  | Year 1 |   |   |   | Year 2 |   |   |   | Year 3 |   |   |   | Year 4 |   |   |   | Year 5 |   |   |   | Year 6 |   |   |   |
|--|--------|---|---|---|--------|---|---|---|--------|---|---|---|--------|---|---|---|--------|---|---|---|--------|---|---|---|
|  | 1      | 2 | 3 | 4 | 1      | 2 | 3 | 4 | 1      | 2 | 3 | 4 | 1      | 2 | 3 | 4 | 1      | 2 | 3 | 4 | 1      | 2 | 3 | 4 |
| <b>A. Health Surveillance and Priority Health Issues</b> |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| 1. Surveillance System                                   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Establish System   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| 2. Quality of Services                                   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Develop Guidelines                                       |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Training   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| 3. Support for Communicable Disease Control              |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Provincial Assessments                                   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Support for Provinces                                    |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| <b>B. Strengthening the Preventive Health Service</b>    |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| 1. Provincial Health System                              |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| 2. National Institutes                                   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Finalize Assessments                                     |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Procurement  |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| <b>C. Human Resource Development</b>                     |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| 1. Post Graduate Training                                |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Assessment and Selection                                 |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Course Development (field epidemiology)                  |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Training   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| 2. Technical Training                                    |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Assessment and Selection                                 |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Training   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| 3. Community Health Training                             |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Assessment and Selection                                 |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Training   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| <b>D. Project Management</b>                             |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Operation of Project Management Unit                     |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Operation of provincial cells                            |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Consultant Group Contract                                |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |
| Implementation Support                                   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |        |   |   |   |

Source: Asian Development Bank estimates.

## INDICATIVE PROCUREMENT PACKAGES

| Item  | Contract |           | Mode of Procurement | Total amount of Contract, ('000) |
|---|----------|-----------|---------------------|----------------------------------|
|   | Number   | Authority |                     |                                  |
| <b>Medical Equipment</b>  |          |           |                     |                                  |
| Infectious Diseases   | 3        | PMU       | ICB/IS              | 5,550                            |
| Food Safety   | 4        | PMU       | ICB/IS/LCB          | 6,231                            |
| Occupational Health   | 3        | PMU       | ICB/IS/LCB          | 1,700                            |
| School Health   | 2        | PMU       | ICB/IS/LCB          | 1,680                            |
| Lifestyle Diseases  | 3        | PMU       | ICB/IS/LCB          | 2,220                            |
| Reagents, Supplies, Spare Parts   | Various  | Provinces | LCB/DP              | 1,926                            |
| <b>Subtotal</b>   |          |           |                     | <b>19,307</b>                    |
| <b>Other Equipment</b>  |          |           |                     |                                  |
| Surveillance System <sup>a</sup>  | 1        | PMU       | ICB                 | 567                              |
| Vehicles <sup>b</sup>   | 1        | PMU       | ICB                 | 1,496                            |
| Basic Equipment (furniture for preventive center and national institutes) | Various  | Province  | LCB                 | 1,430                            |
| Basic Equipment (furniture for PMU)                                       | 1        | PMU       | LCB                 | 244                              |
| <b>Subtotal</b>   |          |           |                     | <b>3,737</b>                     |
| <b>Total</b>  |          |           |                     | <b>23,044</b>                    |

DP = direct purchase, ICB = international competitive bidding, IS = international shopping, LCB = local competitive bidding, PMU = project management unit.

<sup>a</sup> Includes computers and software to establish the health surveillance system under component A.1.

<sup>b</sup> One vehicle for each province and national institution, two vehicles for the project management unit.

Source: Asian Development Bank estimates.

## CONSULTING SERVICES

1. Consulting services will be provided under the loan to support project management and implementation. There will be one consulting services contract for the international consultants covering project management and technical assistance for project activities. The domestic consultants may be hired as individual or through the consulting contract.
2. A total of 236 person-months of consulting services (66 international and 170 domestic) will be required for assistance in project management and technical support for implementation of project components. Four international consultants will be contracted under the consulting contract. Technical assistance will be provided to support (i) strengthening the disease surveillance system, (ii) establishing the quality of services program, and (iii) strengthening disease control programs in selected provinces. A full technical proposal will be required.
3. Consulting services are required to assist the project management unit in administrating the project and to provide technical assistance in selected technical areas of project implementation. The consultant team will be based in Hanoi but will be expected to travel extensively to meet with local implementing authorities.
4. Consulting services will consist of two types of activities: project implementation assistance and technical support. Project implementation assistance will include supporting the project management unit (PMU) in (i) planning implementation activities, (ii) procurement of equipment, and (iii) supervision and monitoring of implementation activities. Technical assistance will include supporting the project management unit and other technical departments of the Ministry of Health (MOH) in (i) strengthening the disease control surveillance system, (ii) establishing a quality of services program for provincial laboratory services and (iii) supporting selected provinces in the planning and implementation of activities to strengthen their disease control programs for priority target communities, particularly ethnic minorities.
5. **Project Management.** Specific tasks include
  - (i) Support the PMU in the review and analysis of provincial needs assessment for each of the project components.
  - (ii) Support the PMU in the preparation of annual implementation plans including budget estimates, detailed scheduling of activities and monitoring indicators.
  - (iii) Develop a final list of medical equipment to be procured, based on provincial needs assessments.
  - (iv) Support the PMU in the preparation of annual procurements plans.
  - (v) Provide technical inputs on equipment specifications to meet the needs of each technical level and service area of the provincial preventive health center laboratory services.
  - (vi) Support the PMU in the preparation of bidding and contracting documents and the review and monitoring of contractors.
  - (vii) Support the MOH and PMU in compliance with safeguard requirements.
  - (viii) Support the PMU in supervision and monitoring of project activities to include (a) preparation of quarterly and other routine and special reports; (b) assessment and monitoring of procurement plans; (c) technical inspection of implementation activities to include equipment, training, and other development activities related to each component; and (d) assessment of monitoring indicators.

6. **Technical Support.** Specific tasks include

- (i) Support the PMU in strengthening the disease control surveillance system, including (a) design of an integrated and comprehensive disease surveillance system, (b) development of specifications for the computer support system of reporting and analysis of surveillance information, (c) preparation of guidelines and training materials, and (d) training in the reporting and analysis of information from the surveillance system.
- (ii) Support the PMU in developing a quality control system for provincial laboratory services to include (a) design of a quality of services program relevant to the needs of provincial laboratories, (b) design of monitoring and reporting system with specific reference to technical quality control measures relevant to each service area of the laboratory, (c) preparation of guidelines and training materials to support implementing of the program and (iv) assistance in the analysis of information from the quality of services reporting system. Data will be disaggregated by gender and ethnicity, where appropriate.
- (iii) Support the PMU in the planning and implementation of priority provincial health programs to include (a) analysis of needs and assessment of strategies for specific provincial plans, particularly in relation to needs of ethnic minorities, (b) monitoring and assessment of disease control programs, and (c) evaluation of control programs and assessment of those activities for implementation.

## CONSULTING SERVICES

| Consultant Position   | Input<br>(person<br>months) | Outputs  |
|---|-----------------------------|--|
|   |                             | <b>For Component A.1:</b>  |
|   |                             | (i) Design surveillance system   |
|   |                             | (ii) Define specifications for software to support surveillance system                         |
|   |                             | (iii) Guidelines for operation and use of surveillance system                                  |
| Public Health Specialist (I)  | 24                          | (iv) Support analysis of information from surveillance system                                  |
|   |                             | <b>For Component A.3:</b>  |
|   |                             | (v) Support provincial planning for control of priority diseases related to national programs  |
|   |                             | (vi) Report and monitor control measures   |
|   |                             | (vii) Analyze and evaluate control measures  |
| Public Health Specialist (N)  | 36                          | <b>For Component A.1:</b>  |
|   |                             | (i) Train staff (central level) in use and operation of the surveillance system                |
| Public Health Specialist (N)  | 18                          | <b>For Component A.2:</b>  |
|   |                             | (i) Design quality of services program   |
|   |                             | (ii) Design monitoring and reporting system  |
|   |                             | (iii) Develop guidelines for quality of services system  |
|   |                             | (iv) Analyze quality of services data  |
| Public Health Specialist (N)  | 18                          | <b>For Component A.3:</b>  |
|   |                             | (i) Help develop provincial plan for control of priority diseases related to national programs |
|   |                             | (ii) Execute control plan  |
|   |                             | (iii) Report and monitor control measures  |
|   |                             | (iv) Analyze and evaluate control measures   |
| Public Health Specialist (N)  | 18                          | <b>For Component B:</b>  |
|   |                             | (i) Develop equipment specifications   |
| Equipment and Planning Specialist (I)                                     | 6                           | (ii) Prepare bidding documents and review bids   |
|   |                             | (iii) Train on use of equipment  |
|   |                             | (iv) Supervise installation and inspection   |
| Training Specialist (I)   | 12                          | <b>For Component C:</b>  |
|   |                             | (i) Support the establishment of the field epidemiology training program                       |
|   |                             | (ii) Support planning for training needs   |
| Public Health Specialist in project implementation (I)/Team Leader        | 24                          | <b>Project Management:</b>   |
|   |                             | (i) Support PMU in planning and implementation   |
|   |                             | (ii) Coordinate consultant activities  |
| Public Health Specialist in project implementation (N)/Deputy Team Leader | 60                          | <b>Project Management:</b>   |
|   |                             | (i) Support PMU in planning and implementation   |
|   |                             | (ii) Provide implementation support to the provinces   |
| Environmental Specialist (N)  | 10                          | <b>Project Management:</b>   |
|   |                             | (i) Support PMU in implementation of all activities impacting on environment                   |
|   |                             | (ii) Provide support in developing waste management training material                          |
| Social Development Specialist (N)   | 10                          | <b>Project Management:</b>   |
|   |                             | (i) Support implementation of the ethnic minority plan and gender strategy                     |
| <b>Total person-months</b>  | <b>236</b>                  |  |
|   | 66                          | International (four consultants)   |
|   | 170                         | Domestic (seven consultants)   |

I = international, N = local.

Source: Asian Development Bank estimates.

## INDICATIVE TRAINING ACTIVITIES

| Training Course  | Duration        | Target Group  | Location                   |
|--|-----------------|---|----------------------------|
| <b>Graduate Training (Component C.1)</b>   |                 |   |                            |
| <b>Professional Skill Development and Specialization</b>   |                 |   |                            |
| 1. Courses in Public Health  | 1–2 months      |   |                            |
| a. Health Management   | Available       |   |                            |
| b. Health Economics  | Available       |   |                            |
| c. Monitoring and Evaluation of Health Programs  | To be developed | Preventive health staff                             | Medical Universities       |
| d. Health Education  | Available       |   |                            |
| <b>Output: 138 people trained</b>  |                 |   |                            |
| 2. Specialization in Public Health, preventive health, microbiology, hematology, chemistry, entomology and parasitology level I                          | 2 years         | Medical doctor, pharmacist                          | Medical Universities       |
| <b>Output: 46 people trained</b>   |                 |   |                            |
| 3. Specialization in Preventive Health with emphasis on knowledge and professional skills to manage communicable disease control (CDC) programs          | 1 year          | Medical doctor                                      | Major Medical Universities |
| <b>Output: 69 people trained</b>   |                 |   |                            |
| <b>Masters Programs</b>  |                 |   |                            |
| 1. Masters in Public Health in epidemiology, preventive health, microbiology, biochemistry, hematology, entomology and parasitology, Community Nutrition | 2 years         |   | Medical Universities       |
| <b>Output: 23 people trained</b>   |                 |   |                            |
| 2. Level II specialization in public health, preventive health, microbiology, hematology, chemistry, entomology and parasitology                         | 3 years         | Medical doctor, pharmacist, nutritionist, biologist | Major Medical Universities |
| <b>Output: 23 people trained</b>   |                 |   |                            |
| 3. Masters in Public Health, in epidemiology or management of communicable diseases  | 2 years         |   | Overseas Universities      |
| <b>Output: 8 people trained</b>  |                 |   |                            |
| <b>Field Epidemiology</b>  |                 |   |                            |
| <b>Field Epidemiology Program. Output: 46 people trained</b>   |                 |   |                            |
| Program includes outbreak investigations, health surveillance systems, disease control and prevention, and monitoring and evaluation                     | 2 months        | Preventive health staff                             | To be determined           |
| <b>Technical Training (Component C.2)</b>  |                 |   |                            |
| <b>Infectious Disease Control</b>  |                 |   |                            |
| <b>Refresher Course. Output: 345 people trained</b>  |                 |   |                            |
| a. Infant and children, blood safety, respiratory infections, sexual transmitted infections, tropical infectious diseases.                               | 1 week          | Health staff  | National Institutions      |
| b. HIV/AIDS diagnosis, treatment, and care   |                 |   |                            |
| c. Infectious disease surveillance   |                 |   |                            |
| <b>Intensive Course. Output: 230 people trained</b>  |                 |   |                            |
| a. Epidemiology of infectious diseases   | 1–2 months      | Health staff  | National Institutions      |
| b. Management of disease programs  |                 |   |                            |
| c. Monitoring and evaluation   |                 |   |                            |

| Training Course  | Duration   | Target Group                      | Location  |
|--|------------|-----------------------------------|---|
| <b>Occupational Health</b>   |            |                                   |   |
| Refresher Course<br>a. Risk assessment<br>b. Occupational hygiene<br><b>Output: 85 people trained</b>  | 1–2 weeks  | Health staff                      | Institutes of Hygiene and Public Health and Hygiene and Occupational Health |
| Intensive Course<br>a. Risk assessment<br>b. Occupational health<br>c. Management of work safety<br><b>Output: 145 people trained</b>  | 1–2 months |                                   |   |
| <b>Environmental Health</b>  |            |                                   |   |
| <b>Refresher Course. Output: 460 people trained</b><br>a. Environmental health<br>b. Waste management  | 1 week     | Preventive health staff           | Institutes of Hygiene and Public Health and Hygiene and Occupational Health |
| <b>Intensive Course. Output: 80 people trained</b><br>a. Management of environmental health<br>b. Management of medical waste  | 1–2 months |                                   |   |
| <b>Food Safety</b>   |            |                                   |   |
| <b>Refresher Course. Output: 230 people trained</b><br>a. Food Poisoning<br>b. Bacteriology<br>c. Prevention of contamination<br>d. Personal Hygiene<br>e. Cleaning and disinfection<br>f. Legislation<br>g. Laboratory techniques | 1–2 weeks  | Health staff                      | NIHE, Hygiene and Public Health   |
| <b>Intensive Course. Output: 230 people trained</b><br>a. Hazards: core issues of food safety.<br>b. Controls: issues of prevention and control.<br>c. Legal compliance: food safety legislation.                                  | 1–2 months | Health staff                      | NIH, Hygiene and Public Health HCMC   |
| <b>School Health</b>   |            |                                   |   |
| <b>Refresher Course. Output: 115 people trained</b><br>a. School health<br>b. Health education   | 1–2 weeks  | Preventive Health Staff           | Institutes of Hygiene and Public Health and Hygiene and Occupational Health |
| <b>Intensive Course Output: 115 people trained</b><br>a. Management of school health program<br>b. Health education  | 1–2 months |                                   |   |
| <b>Laboratory Management</b>   |            |                                   |   |
| <b>Refresher Course. Output: 460 People trained</b>  | 2 weeks    | Laboratory Staff                  | To be developed   |
| <b>Intensive course. Output: 230 people trained</b>  | 1–2 months |                                   |   |
| <b>Community Health Training (Component C.3)</b>   |            |                                   |   |
| <b>Preventive Care for Women and Child</b><br>In-service training on preventing childhood diseases and improving maternal health<br><b>Output: 1,760 people trained</b>  | 10 days    | Commune and District health staff | District Health Center  |
| <b>Family Disease Control</b><br>In-service training on preventive measures for families and communities in disadvantaged areas<br><b>Output: 1,760 people trained</b>   | 10 days    | Commune and District health staff | District Health Center  |

HIV/AIDS = human immunodeficiency virus/acquired immunodeficiency syndrome, HCMC = Ho Chi Minh City, NIHE = National Institute of Hygiene and Epidemiology, NIH = National Institute of Hygiene.

Sources: Asian Development Bank estimates.

## ECONOMIC ANALYSIS

### A. Economic Rationale for Investing in Preventive Health

1. The health sector is a good long-term investment, especially in low-income countries such as Viet Nam. Studies have shown the importance of health in fostering economic growth and household welfare. Poor health is a leading cause of poverty in Viet Nam as many households are forced to drain their savings to pay for expensive medical bills while the income from members who are unable to work is lost.<sup>1</sup> Thus, well-targeted investment can improve equity and efficiency within the economy.

2. The economic rationale for public investing in preventive health is compelling. The preventive health system in Viet Nam provides many services that are true public goods,<sup>2</sup> including communicable disease surveillance and control of large-scale epidemics. The preventive health system also spends significant resources in providing the public with information about good health practices. Without public intervention, many preventive activities would not be carried out since individuals or the private sector have little incentive to invest at the socially optimal level in these activities.

3. While many preventive health activities are private in nature (such as immunization or periodic medical check-ups), they are likely to have significant benefits to the community (positive externalities). Because households tend to take into account only their private benefits and not the benefits to the community, they are likely to underinvest in preventive health. However, other factors lead to a low level of private investment in preventive health. They include lack of information about the immediate and long-term benefits of preventive investments. Even with proper information, households often do not have the means to make preventive investments, due to lower income and credit constraints. Subsidies of preventive health service can help to ensure demand is appropriate. Public provision or subsidies can also help generate economies in scale in production and distribution of preventive health services.

### B. Economic Benefits of the Project

4. **Improved Health Status.** The Project will improve the health status of the population in the Project's provinces. The general population will benefit from the preventive health system's improved capacity to monitor food and environmental quality. The Project will also benefit a number of specific groups, including school children through improved school health programs, and mothers through the community-based preventive health training. The population in 17 provinces with high incidence of communicable diseases, with a total population of 14.8 million, will benefit from the Project's focus on strengthening communicable disease control (CDC).

5. The private benefit from the Project can be measured in terms of the population's improved health. Burden of disease analysis is a tool that allows the total morbidity and mortality of a community to be expressed in one measure, called a disability adjusted life year (DALY). This analysis captures the loss of quality of life due to an illness or disability and the loss of life

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<sup>1</sup> This double shock caused by poor health is well documented in World Bank. 1999. *Voice of the Poor: Vietnam Country Report*. Washington, DC.

<sup>2</sup> A public good is a good that cannot be produced for individual profit. From an individual's point of view, once the good is produced, there is no scarcity of the good (nonrivalry) and everybody can benefit from it. It is also impossible to prevent access or consumption of the good (nonexcludability).

due to a premature death. These losses can be attributed to individual diseases, accidents, and injuries.

6. The analysis estimated the total number of DALYs lost due to 41 diseases that the Project will impact in the 46 project provinces. These diseases account for around one third of total mortality. The analysis calculated the expected change in DALYs without the Project, taking into account the country's expected demographic changes. The Project is expected to reduce the burden of disease through its support for investment in food safety, school health, improved occupational safety and health, and strengthened disease control programs in selected provinces, among other interventions. This will reduce the DALYs lost and improve the health of the population. The analysis made an estimate of the number of DALYs saved as a result of the Project's specific interventions, from the base case scenario with no project.

7. Based on this analysis, the Project is expected to save about 2.0 million DALYs during the estimated life of the equipment at a total cost of \$47.5 million, including the cost of maintenance, supplies, and personnel. This implies a cost per DALY around \$23.75, which is in line with other preventive health programs in low-income countries.<sup>3</sup> The poor will benefit disproportionately from the Project. The analysis shows that around 38% of the total benefits, in terms of DALY, will accrue to the poor, compared with their share of around 12.8% in the population of the Project's provinces.

8. **Lower Spending on Curative Care.** If DALYs were not saved, the diseases would result in substantial cost of treatment as well as travel expenditures and the opportunity cost of the caregiver. Using results of the National Health Survey of 2002–2003, the total savings in spending on curative care are estimated to be \$60.7 million, which is greater than the Project's costs. Based on these savings, the internal rate of return of these investments is 16%. This rate of return calculation only captures the private benefits of the Project. The rate will be substantially higher if the value of the positive externalities and public goods are included.

9. **Improved Health Surveillance System.** The Project will improve the health surveillance system through additional facilities, training, and supervision. Viet Nam's recent experiences with SARS and avian flu show the importance of a strong health surveillance system and the potential economic and social damage that can be caused by not monitoring the progress of the diseases. Strengthening the health surveillance system will allow the faster detection of epidemics, provide better details of disease patterns, and allow better planning and setting of health priorities. The health surveillance system is a classic public good that will not be provided by the market.

### C. Economic and Financial Sustainability

10. For the Project to achieve the rate of returns, the Government must be able to sustain the Project's investments. If the Government is not able to provide the necessary recurrent expenses to complement the Project's investment, the effectiveness of the Project will be reduced. Likewise, at the end of the Project, the Government should be in a position to continue the programs and initiatives that the Project introduces.

11. **Macroeconomic Sustainability.** The Project is financed by a loan of approximately \$28 million and a complementary grant of \$10 million. The loan carries an interest rate of 1% to

<sup>3</sup> World Bank. 1993. *World Development Report on Investing in Health*. Washington, D.C. (figures adjusted for inflation).

1.5%. The economy of Viet Nam is growing at a rate of around 7% and this rate is likely to continue. The economy of Viet Nam is around \$40 billion and the Government will be able to repay the loan.

12. **Project Sustainability.** In addition to capital expenses, the Project will lead to an increase in recurrent costs on the part of the Government. These expenses are due to the additional operational and maintenance costs, additional salaries for staff with higher level of training, and additional staff. These costs will be largely borne by provinces, with subsidies for poor provinces.

13. On average from 1997 to 2002, the provincial health budgets have increased 2.9 times faster than the growth of the provincial gross domestic product, with a range of 7% to 33% and average annual growth rate of 18%.<sup>4</sup> Recurrent expenses account for around 75% of total expenditures and have grown at a similar rate to overall health expenditures. The simulation assumes that in the future, recurrent budget in the provincial health budget grows at only 7% annually, which is very conservative given recent trends. The additional costs associated with the Project will only account for less than 10% of the total increase in the provincial health budgets and will account for less than 2% of the total recurrent budget in 2013. The costs associated with the Project can easily be met.

14. Not all provinces have the same capacity and some provinces may have financing problems, either due to a high level of recurrent costs associated with the Project or a low level of health expenditures. A provincial simulation shows that no province will have to spend more than 20% of the total increase in its recurrent budget to support the Project's investment and only 15 provinces will have to allocate more than 10%. By 2013, only 2 provinces will see recurrent costs associated with the Project that require more than 10% of the growth in the total recurrent budget.

15. In addition to the recurrent costs associated with the Project, the provinces will also have to increase their capital budgets in the long run to replace the new equipment that was purchased under the Project. On average, \$500,000 is allocated to each province for equipment and training. By 2014, the capital budget of all of the provinces will have increased by an average of \$1.9 million per province over the amount in 2005. Only 11 provinces will see their capital budget increase by less than \$1 million by 2015. All provinces should be in a position to replace the equipment purchased and to increase their budget for training by project completion.

16. The Project will also complement the recurrent costs in 17 poor provinces. The support to the national targeted programs amounts to around \$30,000 per province per year. While this amount can make an important contribution if applied strategically, it will account for than 3% of the 2006 recurrent budget in all provinces. By the end of the Project, all of the provinces should be in a position in replace the Project's support for CDC.

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<sup>4</sup> This analysis only refers to the 46 provinces included in the project scope.