

**Document of
The World Bank**

Report No.: 70466

PROJECT PERFORMANCE ASSESSMENT REPORT

ALBANIA

**AVIAN INFLUEZA CONTROL AND HUMAN PANDEMIC PREPAREDNESS
AND RESPONSE PROJECT UNDER THE GLOBAL PROGRAM FOR AVIAN
INFLUENZA (GPAI)
(IDA-42060, TF-56728)**

June 25, 2012

Public Sector Evaluation
Independent Evaluation Group

Currency Equivalents (annual averages)

Currency Unit = Albanian Lek (All)

2006	US\$1.00	All 98.10
2007	US\$1.00	All 90.43
2008	US\$1.00	All 83.89
2009	US\$1.00	All 94.98
2010	US\$1.00	All 103.94
2011	US\$1.00	All 99.99 (March 2011)

Abbreviations and Acronyms

APL	Adaptable Program Loan
EA	Environmental Assessment
EMP	Environmental Management Plan
EU	European Union
FAO	Food and Agriculture Organization (of the United Nations)
GDP	Gross Domestic Product
GIS	Global Information System
GPAI	Global Program on Avian Influenza
HPAI	Highly Pathogenic Avian Influenza
I&R	Identification and Registration
IFSV	Institute of Food Safety and Veterinary
IPH	Institute of Public Health
ISDS	Integrated Safeguards Datasheet
ISRs	Implementation Status and Results Report
KAP	Knowledge Attitudes and Practices
KASH	Albanian Council of Agribusiness
MAFCP	Ministry of Agriculture, Food and Consumer Protection
M&E	Monitoring and Evaluation
MOE	Ministry of Environment
MOH	Ministry of Health
NIL	National Influenza Laboratory
NVEU	National Veterinary Epidemiological Unit
OIE	World Organization for Animal Health (Office International des Epizooties)
PPAR	Project Performance Assessment Report
PVS	Performance of Veterinary Services
UNICEF	United Nations International Children's Fund
USAID	United States Agency for International Development
WAHIS	World Animal Health Information System
WHO	World Health Organization
WRMP	Water Resource Management Project

Fiscal Year

Government: January 1- December 31

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Principal Ratings

	<i>ICR*</i>	<i>ICR Review*</i>	<i>PPAR</i>
Outcome	Satisfactory	n.a.	Moderately Satisfactory
Risk to Development Outcome	Moderate	n.a.	Substantial
Bank Performance	Satisfactory	n.a.	Moderately Satisfactory
Borrower Performance	Moderately Satisfactory	n.a.	Moderately Satisfactory

* The Implementation Completion and Results Report (ICR) is a self-evaluation by the responsible Bank department. The ICR Review is an intermediate IEG product that seeks to independently verify the findings of the ICR.

Key Staff Responsible

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To prepare a Project Performance Assessment Report (PPAR), IEG staff examine project files and other documents, visit the borrowing country to discuss the operation with the government, and other in-country stakeholders, and interview Bank staff and other donor agency staff both at headquarters and in local offices as appropriate.

Each PPAR is subject to internal IEG peer review, Panel review, and management approval. Once cleared internally, the PPAR is commented on by the responsible Bank department. The PPAR is also sent to the borrower for review. IEG incorporates both Bank and borrower comments as appropriate, and the borrowers' comments are attached to the document that is sent to the Bank's Board of Executive Directors. After an assessment report has been sent to the Board, it is disclosed to the public.

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Risk to Development Outcome: The risk, at the time of evaluation, that development outcomes (or expected outcomes) will not be maintained (or realized). *Possible ratings for Risk to Development Outcome:* High, Significant, Moderate, Negligible to Low, Not Evaluable.

Bank Performance: The extent to which services provided by the Bank ensured quality at entry of the operation and supported effective implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of supported activities after loan/credit closing, toward the achievement of development outcomes. The rating has two dimensions: quality at entry and quality of supervision. *Possible ratings for Bank Performance:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Borrower Performance: The extent to which the borrower (including the government and implementing agency or agencies) ensured quality of preparation and implementation, and complied with covenants and agreements, toward the achievement of development outcomes. The rating has two dimensions: government performance and implementing agency(ies) performance. *Possible ratings for Borrower Performance:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Preface

This is the Project Performance Assessment Report (PPAR) for the Albania Avian Influenza Control and Human Pandemic Preparedness and Response Project (IDA-42060) under the Global Program for Avian Influenza (GPAI) and Human Pandemic Preparedness and Response.

The project was approved on June 27, 2006 and became effective on October 16, 2006. The project was supported through an International Development Association (IDA) Grant for US\$5.00 million and a Japanese Policy and Human Resources Development (PHRD) Trust Fund for US\$0.8 million. At project closure US\$3.87 million of the IDA Grant and US\$0.60 million of the Japanese Trust Fund had been disbursed. The project closed on December 31, 2010, one year and a half behind schedule.

The report presents findings based on a review of the project's implementation completion and results report, program paper, legal documents, sector reports, and other relevant material. In addition, an IEG mission to Albania in September 2011 held discussions in Tirana with World Bank country staff, government officials and agencies, project staff, key donors, non-government organizations, and academia and visited organizations such as the Albanian Chamber of Veterinary Surgeons and the Tirana University Hospital Center. The mission also made field visits to Korca and Vlora and held discussions with regional and sub-regional government officials, agencies, and beneficiaries. The mission visited commercial poultry houses in Vlora and Durres, the regional hospitals in Korca and Vlora, the slaughter house in Korca, and also made a trip to the Kapshtica border crossing with Greece. The contributions of all stakeholders, including World Bank staff in Tirana, are gratefully acknowledged.

Following standard IEG procedures, copies of the draft PPAR were sent to the Government of Albania for comments, however no comments were received.

Summary

Albania had one of the fastest growing economies in Eastern Europe in the last decade and has achieved middle income status today, graduating from IDA to IBRD in 2009. With growth have come aspirations to join the European Union (EU). The requirements of EU membership have contributed to political support for major institutional and policy reforms and have also put pressure on the country to live up to EU standards, including when responding to and preparing for emergencies. An emergency arose in 2006 in Albania when there were two outbreaks of avian influenza among poultry on small farms. Outbreaks in neighboring countries in 2005 had already made the Government of Albania aware of the need to prepare for the possibility of an infection. Following the outbreaks, the Government responded swiftly, followed EU procedures, and contained the outbreaks.

The avian influenza emergency provided an opportunity to the Government to demonstrate to the international community, including the EU, the country's ability to respond quickly and effectively to a crisis situation. The Government also began efforts to improve surveillance and detection measures, to prevent further outbreaks, and requested World Bank financing for its efforts. The World Bank approved an emergency project for Albania in the same year under the Global program for *Avian Influenza Control (GPAI)*.

With an IDA Grant of US\$5.0 million, the project development objective of the Avian Influenza Control and Human Pandemic Preparedness and Response Project was to *"strengthen the country's capacity to prevent the spread of avian influenza among poultry, to prevent the transmission of avian influenza from birds to other animals and humans, and to prepare for a potential pandemic of avian influenza transmissible between humans."* The project was restructured on October 15, 2009, and the PDO was revised to *"minimize the threat posed to humans by HPAI [Highly Pathogenic Avian Influenza] infection and other zoonoses and to prepare for, control, and respond to influenza pandemics and other infectious disease emergencies in humans."* This broadened the scope of the project from focus on avian influenza alone to covering other diseases.

The original project development objective was in keeping with country and World Bank priorities. While the outbreak in 2006 was adequately contained by Albanian authorities, the veterinary and health systems in the country could have been challenged again with the return of migratory water fowl in the coming years. More than half of the wild-bird species in Albania are migratory and frequent wetlands that border farming communities. The outbreak in *Cuca* village in 2006 for example, occurred because of contact between poultry and migrant waterfowl around River Bistrica.

The original project design, had several strengths, and provided for international technical organizations such as the WHO, FAO, and OIE to take the lead with the human and animal health components with the World Bank providing funding support. However, the project design was also very ambitious as it included support for several longer term construction and capacity building activities that could be neither well prepared nor easily completed within the quick-preparation period and short time-frame of an emergency operation.

The restructuring was undertaken primarily because there were no further outbreaks of avian influenza in Albania and fatigue had set in with avian influenza issues within the country. Further, the Government also wanted to use one of the last IDA grants to the country, the project, cost-effectively to further bring Albania's capacity on food safety and veterinary issues in line with EU standards. Utilization of the unused resources from the compensation fund sub-component for the construction of a new animal health laboratory was, in the Government's opinion, one way to effectively utilize the resources.

While restructuring the project was a cost effective-strategy, it also broadened the scope from avian influenza only to include other zoonotic diseases. With the broadening in scope and the additional civil works that came with the construction of the animal health laboratory, the project became even more ambitious than at the original design stage.

Covering other zoonotic diseases in an emergency operation also added an element of incompatibility to an emergency project. Other zoonotic infections, such as brucellosis, while a major health problem for Albania, do not spread from human-to-human as avian influenza potentially could. Hence, dealing with them does not require the same scale of immediate preparedness as demanded by a pandemic scenario. In addition, partly because the scope was broadened, the priority given to preventing spread of avian influenza among poultry declined. With very weak levels of biosecurity levels in poultry rearing systems in the country, this reduced the relevance of the objective for preventing the pandemic in humans. Diminishing the possibility of mutation of the virus by improving biosecurity levels was important for diminishing the threat of human infections.

Overall, the project made a substantial contribution to increasing awareness about avian influenza in the population, though the actual communication campaign that was conducted with support from the project to some extent created panic amongst the population, and for some time, negatively influenced the demand for poultry products. The project also contributed to building capacity for disease surveillance and monitoring and diagnostic capacity for animal and human diseases in the country. Albania no longer has to send samples for tests to reference laboratories overseas. The project also helped build an infectious disease Intensive Care Unit at the Tirana University Hospital Center and provided training to key health staff in infection control, triage procedures and clinical management of patients with pandemic flu and other diseases (e.g. tetanus, meningitis, sepsis, even HIV). It also contributed to the drafting of the Veterinary law (passed in Parliament in September 2011) and a new EU compliant contingency plan for avian influenza preparedness was prepared and approved. The experience with the H1N1 pandemic in 2009 demonstrated that the project had substantially improved preparedness of the country.

However, partly because of the broadening of the project scope with the restructuring, the project did little to improve the level of biosecurity which remains weak in both backyard poultry systems and commercial establishments in Albania. Surveillance and monitoring among wild birds, a major cause of spread of avian influenza, also was not improved. Ultimately the animal health laboratory, one of the reasons for the restructuring, also was not constructed because the required permit for its construction could not be obtained. There were also some shortcomings in the efficiency of design and implementation of the project.

The project outcome, reflecting relevance, efficacy (the achievement of the objectives), and efficiency, is rated *moderately satisfactory*.

The current recession, particularly the difficult financial conditions in Europe, have made budget and resource positions tighter in Albania also. Availability of adequate resources for operation and maintenance of improved laboratories and the ICU and training needed for effective utilization of the diagnostic facilities in human and animal health is an issue. On a positive note, the cooperation between international technical agencies and the World Bank, particularly on communication and awareness raising activities that happened during the project, is likely to ensure that were an emergency to arise, resources could be mobilized for disseminating critical information quickly. Overall, the assessment rates the risk to development outcome as *significant*.

Both Bank and Borrower performance are rated *moderately satisfactory*. M&E design, implementation and utilization for project management was weak. Government implementation agencies, particularly the veterinary authorities also showed weak commitment in the early years that negatively influenced project performance. Inadequate procurement capacity was also a major constraint. Given these early weaknesses the World Bank should have also carefully assessed before agreeing to the proposal whether it was realistic to expect the animal health laboratory to be completed in the short project time period left after restructuring.

Building on the project experience this assessment identifies five main lessons:

- In designing an emergency intervention, it is important to distinguish between immediate response and longer-term capacity building activities. The latter are often included to build capacity to deal with future emergencies. However, such activities usually benefit from longer preparation and coordination with other sector interventions.
- Stronger Management oversight is needed to ensure that project M&E is actually utilized as a management tool for effective project implementation.
- Persistent occurrence of H5N1 infections in poultry around the world means that conditions for the mutation of the virus continue to prevail, including in Albania, where biosecurity levels remain weak on poultry farms. Greater effort is needed, both globally and in Albania, to improve surveillance in backyard poultry systems and wild-life to reduce risks.
- Early cooperation with UN agencies and international technical organizations can offer synergy and provide a basis for sustaining at least some programs on project closure.
- More effective ways of working with the media to communicate disease risks are needed to avoid panic and build public confidence.

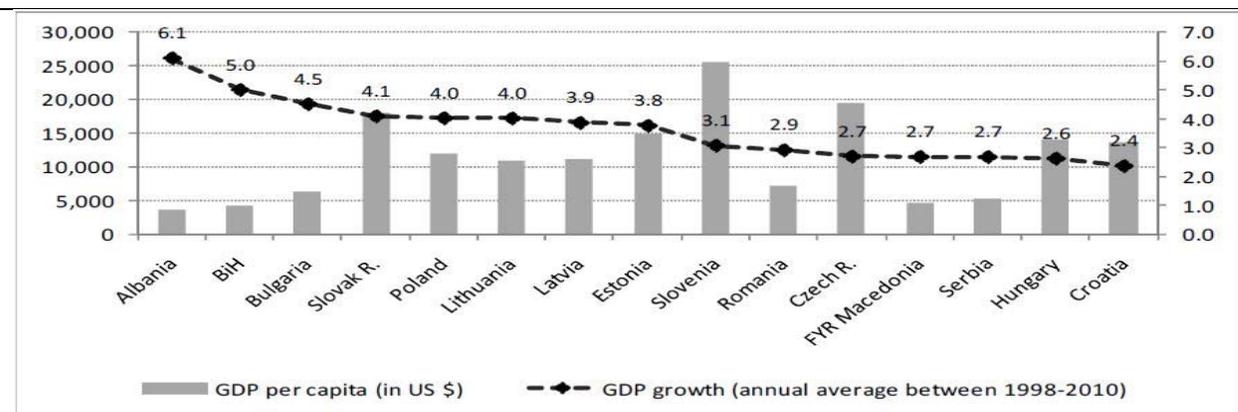
Caroline Heider
Director-General
Evaluation

1. Background and Project Context

Country Background

1.1 Albania, a small mountainous country in south-eastern Europe with a population of about 3.1 million, was once the continent's poorest country. Today it has achieved middle income status, with one of the fastest rates of growth in Eastern Europe in the last decade exceeding 6 percent per year (Figure 1). As a consequence, poverty declined dramatically from about 25 percent of the population in 2002 to 12 percent in 2008, and social indicators improved significantly. The global financial crisis slowed progress, but overall Albania weathered the crisis well and, in contrast to most other European economies, avoided output contraction (IMF 2011). However, the recent global economic downturn has put pressure on budgets and negatively influenced remittances and trade, both of which have become increasingly important for Albania's growth.

Figure 1: GDP per capita (2010) and Growth in Albania compared with other Eastern European countries 1998-2010



Source: World Bank 2010

1.2 Growth in the last decade was accompanied by structural transformation. Construction and services expanded rapidly and now contribute more than 60 percent to GDP (World Bank 2010a). The relative importance of agriculture in GDP declined from over 27 percent in 1998 to about 17 percent in 2010, although the sector remains critically important for livelihoods in rural areas, where more than half of the population lives. The agriculture sector has also seen major shifts in production patterns, with crops such as rice, cotton, and wheat declining and livestock and associated forage crops, fruits, and vegetables increasing in importance. The livestock sector now accounts for about half of total agricultural production. Agro-processing (for example, olive oil production) has also increased significantly in importance.

1.3 Despite high fertility rates, Albania's population has not grown significantly over the past 20 years, as natural growth has been offset by emigration. The country's strong growth

in the past decade was supported by, among other factors, remittances from Albanians living abroad.

1.4 The European Union (EU) is Albania's main trading partner, accounting for 79 percent of the country's exports and 64 percent of the country's imports in 2009. Albania has also been receiving financial assistance from the EU since 1991. In terms of both trade and financial assistance, the current recession in Europe could have serious implications for Albania's future growth prospects.

1.5 With rapid growth in the last decade have come aspirations to join the EU. Albania signed the EU Stabilization and Association Agreement in 2006, the first step towards EU membership, and applied for EU membership in April 2009. While there have been improvements on many fronts, the country still lags in meeting the requirements of the *acquis*¹ in several areas, including consumer health protection, food safety, and veterinary and phyto-sanitary standards. However, the prospect of EU membership has motivated institutional reform and political cooperation for undertaking difficult policy reforms (World Bank 2008). It has also put pressure on the country to live up to EU standards on emergency preparedness. One emergency arose in March 2006 in the form of avian influenza (AI).

Disease and Project Context

1.6 Between 2003 and 2011, the highly pathogenic H5N1 virus that causes avian influenza affected 61 countries, including Albania, mainly in poultry although several countries also reported human infections with the virus. Albania did not have human cases but did report two outbreaks in poultry in early 2006, one in the village of Cuka, near Saranda in south-western Albania, and the other in the village of Peze Helmes, just outside Tirana in central Albania.

1.7 Avian influenza is usually restricted to birds. However, the disease can also infect humans if they come in contact with infected birds. The H5N1 virus is deadly and has led to high mortality in poultry, but also in infected humans. However, avian influenza virus types generally do not readily replicate and transmit between humans and therefore the H5N1 virus has so far largely ravaged the poultry industry. But avian influenza viruses, including H5N1, *could* mutate to a form that is able to replicate and spread easily among humans. When this happens a pandemic *could* occur, leading to massive death tolls in humans (as has happened several times in the past century—see Annex B).²

¹ “The *acquis* is the body of common rights and obligations that is binding on all the Member States of the European Union. It is constantly evolving and comprises: the content, principles, and political objectives of the Treaties; legislation adopted pursuant to the Treaties and the case law of the Court of Justice; declarations and resolutions adopted by the Union; instruments under the Common Foreign and Security Policy; instruments under Justice and Home Affairs; international agreements concluded by the Community and those entered into by the Member States among themselves within the sphere of the Union's activities. Adoption and implementation of the *acquis* are the basis of the accession negotiations.”

http://ec.europa.eu/enlargement/glossary/terms/acquis_en.htm

² Influenza in humans can be caused by type A, B, or C viruses, with the first two causing most human infections. Influenza outbreaks in humans occur annually because of a change in surface proteins in the viruses and the severity of the disease varies from year to year. The viruses are mutating constantly, hence the need to

1.8 However, the actual timing of an avian influenza pandemic in humans depends on when an avian influenza virus circulating in birds acquires the ability to transfer easily among humans—but the risk remains.³ One of the biggest worries for the international community and for countries such as Albania is that the conditions for the mutation of the virus abound with birds living in close contact with humans in backyard poultry production systems common throughout the developing world.⁴ Eighty-five percent of Albania’s nearly six million poultry are reared in such systems where prevention and control measures are difficult to enforce and risk of spread of infection is high. Increased globalization and trade, and natural reservoirs for the virus in migratory birds, have increased the risk that avian influenza caused by the H5N1 virus could spread rapidly from wild birds to poultry and from infected poultry to humans. More than half of the 323 wild bird species in Albania are reported to be migratory and frequent wetlands that border farming communities where a large percentage of the backyard poultry farmers reside. The outbreak in Cuca likely occurred because of the contact between poultry and migrant waterfowl around River Bistrica.

1.9 Avian influenza outbreaks in neighboring countries in 2005 had already made the Government of Albania aware of the need to prepare for the possibility of an infection. Even before the first outbreak in the country in early 2006, the Government established a *National Influenza Pandemic Committee Task Force* on October 28, 2005 under a Prime Ministerial Order. The Government swiftly applied EU procedures to deal with the two outbreaks in poultry.⁵ It also decided to mount immediate efforts to improve surveillance and detection measures to contain any further outbreaks and requested World Bank financing for its efforts. Improving preparedness was also important to demonstrate to the international community, including the EU, that Albania was not only able to deal with emergencies quickly and decisively, but was giving importance to preventing them in the future. The World Bank approved an emergency project for Albania in June 2006 under the Global Program for Avian Influenza Control (GPAI) (Box 1).

continuously update influenza vaccines. By contrast, influenza pandemics occur infrequently when viruses such as those that cause avian influenza to which humans have not been exposed, mutate and acquire the ability to transmit from person to person. On average, three pandemics per century have been documented since the 16th century, occurring at intervals of 10-50 years. Details on the different kinds of avian influenza virus types and their characteristics, including information on past pandemics are in Annex B.

³ The highly pathogenic avian influenza H5N1 viruses continue to circulate in poultry and cause disease, and remain a threat to human and animal health (FAO-OIE-WHO 2011a). During January to March 2011, 826 H5N1 outbreaks in poultry were reported from 12 countries around the world (ibid).

⁴ In these poultry production systems farmers rear several animals, such as chickens, ducks, pigs, and cows, in their backyards and in close proximity with human populations. The virus could change either through *mutation* or *re-assortment*. Mutation occurs when a virus changes its genetic makeup allowing it to transmit from person to person, whereas re-assortment occurs when two different viruses exchange genetic material. The re-assortment could happen if animals that are susceptible to both human and avian influenza, such as pigs, become concurrently infected with both kinds of influenza.

⁵ For example, birds within three kilometers of the infection site were culled and a 10 kilometer quarantine zone was established in accordance with EU procedures. Affected poultry owners whose birds were culled were compensated under the 2004 Veterinary Law, Art. 62-69 at 100 percent of the market price of poultry, with compensation provided within a week.

Box 1: The Global Program for Avian Influenza Control (GPAI)

The threat of a severe global human pandemic arising from mutation of the H5N1 virus has caused great concern to the international community. Billions of dollars have been pledged for efforts to control avian influenza. The Food and Agriculture Organization (FAO), World Organization for Animal Health (OIE) and the World Health Organization (WHO) have committed to work together. The international technical agencies realize that both human and animal health sectors have a stake in tackling pathogens that can threaten animal and human health and that responding to these diseases requires a multi-sectoral and multi-institutional response. The World Bank agreed to provide financial support to the effort being undertaken through these international organizations and has helped more than 50 countries.

The Bank has two main mechanisms to support client countries in this area: the Global Program for Avian Influenza (GPAI) and the multi-donor Avian and Human Influenza Facility (AHIF). The Bank's Board of Executive Directors endorsed the GPAI in January 2006 and extended it in June 2009. The AHIF Facility was also created in 2006 to assist developing countries in meeting financing gaps in their integrated country programs to minimize the risk and socioeconomic impact of avian and possible human pandemic influenza. In many cases, the facility co-finances projects under GPAI.

GPAI is a global horizontal Adaptable Program Loan (APL) that allows for the use of up to US\$ 1 billion (an increase from the original amount of US\$500 million) under which individual countries can obtain separate loans/credits/grants (depending on country case) to finance their own national projects. The overall program development objective for the GPAI is "to minimize the threat posed to humans by HPAI infection and other zoonoses and to prepare for, control, and respond to influenza pandemics and other infectious disease emergencies in humans." (World Bank 2005, p. 16).

The Albania project was the fifth operation to be approved under the GPAI Program. The GPAI draws on an integrated approach developed in conjunction with FAO, OIE, and WHO. Countries can access funding to strengthen their veterinary and health services to deal with avian influenza outbreaks among animals, minimize the threat to people, and prepare for and respond to any potential human influenza pandemic. GPAI operations are processed using emergency procedures, which allow quick preparation and approval. A country qualifies for support for an emergency project under the Program when it demonstrates its commitment and readiness to implement early detection and rapid response measures appropriate to the specific country conditions. Different criteria were established for country participation on the basis of the gravity of avian influenza situation in the country. Albania was considered an "imminent risk case" with the confirmation of the first case of infection in poultry in March 2006.

Note: OIE is an independent intergovernmental organization founded in 1924 with 178 members. Its mandate is to improve animal health worldwide. OIE's headquarters are in Paris and there are 11 regional offices. In 2004 OIE member countries approved the creation of a single list of diseases to be notified to OIE. First outbreaks of all listed diseases should be officially notified to OIE within 24 hours.

Source: World Bank 2005; World Bank website

<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTAVIANFLU/0,,contentMDK:21355695~pagePK:210058~piPK:210062~theSitePK:3124441,00.html>; OIE website: <http://www.oie.int/about-us/our-missions/> and FAO 2007b.

Potential Threats from Avian Influenza

1.10 This report assesses the World Bank supported *Avian Influenza Control and Human Pandemic Preparedness and Response* Project (2006-10, \$4.7 million actual). Building on the disease context discussed above the potential threats from avian influenza can be categorized as follows:

- An outbreak among poultry, with economic cost for animal production.
- Humans come into contact with infected animals and develop influenza, but not of a form that could be easily transmitted between humans. This would lead to a modest number of human influenza cases and possibly deaths.

- A strain of avian influenza transmissible between humans develops within Albania and leads to an influenza epidemic or pandemic if not contained.
- A strain transmissible between humans develops elsewhere, causing a pandemic that spreads to Albania.

1.11 Poultry outbreaks and cases of transmission from poultry to humans have already happened in several countries. However, Albania has only had outbreaks among poultry so far. A strain of avian influenza that is transmissible between humans has not happened recently anywhere in the world but the risk remains, both within countries and as transmitted from other countries.

2. Project Objectives, Design, and their Relevance

Objectives

2.1 According to both the financing agreement and the Technical Annex⁶ the project development objective (PDO) was to "*strengthen the country's capacity to prevent the spread of avian influenza among poultry, to prevent the transmission of avian influenza from birds to other animals and humans, and to prepare for a potential pandemic of avian influenza transmissible between humans*" (World Bank 2006b, p ii).

2.2 The project was restructured on October 15, 2009, and the PDO was revised to "*minimize the threat posed to humans by HPAI [Highly Pathogenic Avian Influenza] infection and other zoonoses⁷ and to prepare for, control, and respond to influenza pandemics and other infectious disease emergencies in humans.*" With the restructuring the project's scope broadened to include other zoonotic diseases of concern, such as brucellosis and rabies.

2.3 Several reasons were given for the restructuring: (i) There were no further avian influenza outbreaks in poultry during the project's first two years and no human infections; the restructuring would bring the PDO in line with the goals of the GPAI (Box 1); (ii) In 2009 there was a declaration of pandemic level 6 by the World Health Organization (WHO)⁸ for the H1N1 virus and the restructuring would allow the country to use project resources to respond to that pandemic; (iii) Resources needed to be adjusted for the construction of the Animal Health Laboratory. Fatigue with avian influenza had also set in within the country and since diseases such as brucellosis, were endemic in the country, broadening the PDO to cover these zoonotic diseases was also expected to enable the Government to devote resources from one of the last IDA grants to Albania for an issue of importance for the EU accession process.⁹ World Bank documents (see, for example, World Bank 2008) reveal that

⁶ In accordance with the relevant Operational Policy at that time –OP and BP 8.50—on Emergency Recovery Assistance, there is a Technical Annex for the project, rather than a project appraisal document.

⁷ Zoonoses are infectious diseases in animals that can be transmitted to people. The natural reservoir for the infectious pathogen is the animal. Rabies and anthrax are examples of zoonoses.

⁸ See Annex B for the WHO epidemic phase definitions.

⁹ Albania graduated to IBRD status in FY09.

meeting EU standards was a concern for Albania; IEG mission interviews with government officials confirmed that through the restructuring, the project was expected to help bring capacity on food safety and veterinary issues in line with EU standards.

Relevance of the Objectives

ORIGINAL OBJECTIVES

2.4 The original PDO was in keeping with country priorities and the goal in the 2010 Country Partnership Strategy of decreasing the country's vulnerability to natural and man-made disasters. It was a Government initiative to mount a rapid response to improve surveillance and detection for which it requested support from the Bank. The outbreak in 2006 had been contained, but the veterinary and health systems in the country could have been challenged again with the return of migratory water fowl in the coming years. The project was also likely to help Albania strengthen its veterinary systems to bring it in line with the EU *acquis*.

2.5 The emphasis on preventing the spread of avian influenza among poultry made the PDO particularly relevant to the country conditions in Albania, where the avian influenza outbreak had occurred in poultry that are reared largely in backyard systems where risk of spread of infection is high. The possibility of infection through infected wild-birds was also high because of Albania's proximity to major flyways for migratory birds—the East Africa West Asia flyway and the Central Asia flyway. Preventing spread of avian influenza amongst poultry was critical to the broader overall goal of eventually containing spread of avian influenza from animals to humans and diminishing the global threat of a pandemic. The GPAI Program document notes that there was consensus among the three international agencies—WHO, FAO, and OIE—on the need to contain HPAI at its source.

2.6 The original PDOs were responsive to all four disease scenarios—that is, to prevent outbreak of avian influenza in poultry and the possibility of human infections through contact with infected animals, and building capacity to respond to an influenza pandemic between humans emerging within Albania or spreading to Albania from other countries. Relevance of the original objective is rated *high*.

REVISED OBJECTIVES

2.7 The restructuring brought the PDO in line with that of the GPAI Program document (Box 1). Since there were no further outbreaks in poultry and human infections with avian influenza did not actually happen in Albania, broadening of the PDO may have been critical to sustain interest more generally for diagnosis and prevention of zoonoses, including avian influenza. The broadening of the PDO was also likely to help the country build capacity and make modifications and adjustments in the overall animal health program in line with EU requirements.¹⁰ Zoonoses, such as brucellosis, are a major public health problem in Albania

¹⁰ The EU accession process worked as a powerful incentive to motivate the government to speed up the improvement and modernization of the veterinary service structure in compliance with international standards (OIE 2008).

(World Bank 2007).¹¹ The revised objectives were hence in keeping with Government priorities for EU membership. Supporting Albania's EU agenda was a priority of the Bank's 2010 Partnership Strategy as well.

2.8 However, it is not clear why the emphasis on controlling the spread of avian influenza among poultry was no more explicitly part of the revised PDO as it was for the original one. For preventing the pandemic in humans it is essential to control it in poultry so that conditions for the mutation of the virus are minimized. The GPAI program document had clearly noted the importance of preventing the spread of the disease in poultry.

“the risk that a pandemic virus will emerge.....will persist as long as the H5N1 virus continues to circulated in animals.” Page 3 World Bank 2005

2.9 On balance, relevance of the revised PDO is assessed as *substantial*.

Design

2.10 The project was processed as an emergency investment operation using procedures under Operational Policy (OP) 8.50 on Emergency Recovery Assistance (Box 1). The IDA Grant was for US\$5.0 million, with co-financing of US\$0.8 million from a Japanese Policy and Human Resource Development (PHRD) grant to assist with consultant services and training to support project implementation. The Government contribution was to be for US\$0.3 million for a total appraisal project cost of US\$6.1 million.

2.11 **Components.** The project had four components:

2.12 **Public Awareness and Information Campaign** (Original estimate US\$0.5 million; after restructuring US\$0.5 million; Actual US\$0.1 million): to help develop and implement a communication plan to inform the public about the disease's threat, and how its risk of transmission and spread could be minimized. There were two sub-components:

- *Risk Communication*, to identify mechanisms for communication on the avian influenza situation, and establishing and maintaining productive working relationship with the media in propagating essential and consistent information on the disease.
- *Communication for Behavior Change*, to develop and disseminate key messages and materials for different audiences, particularly key high-risk groups, such as farmers and children in wetland areas where the probability of exposure was high.

2.13 After restructuring, the component was to address the remaining knowledge gaps within the population concerning influenza-like diseases, other zoonoses and the H1N1 pandemic

¹¹ “The uncontrolled movement of animals, the non-application of sanitary and quarantine rules as well as the low level of cultural and technical education of farmers, together with a limited budget for implementing an eradication strategy (total screening, total elimination of positive heads), led to an expansion of brucellosis across the country. .. This infection currently affects the entire territory of the country, reaching a prevalence of 10 percent in several districts such as Saranda and Gjirokastrer. The number of persons affected by brucellosis is increasing, particularly in rural areas” (World Bank 2007).

2.14 Animal Health (Original estimate US\$3.7 million; after restructuring US\$3.2 million; Actual US\$1.3 million): to support a national program to develop and implement short and long-term avian influenza prevention, containment, control, and eradication activities in animals. There were three sub-components:

- *Enhancing Highly Pathogenic Avian Influenza Prevention and Preparedness Capacity*, to strengthen the national policy and regulatory environment for veterinary service and inspection, and to improve prevention and control planning. To also support introduction of tools and mechanisms for improvement of bio-safety practices in poultry production.
- *Strengthening Disease Control Capacities and Improving Surveillance Diagnostic Capacities, and Applied Research*, to strengthen veterinary epidemiological surveillance through the creation of a National Veterinary Epidemiological Unit (NVEU). To also support improvement in national diagnostic capacities and bio-safety protocols at the Institute of Veterinary Research (IVR), and animal disease information systems.
- *Strengthening Highly Pathogenic Avian Influenza Control Programs and Outbreak Containment Programs*, to target virus eradication at source through culling and disposal of infected and at-risk poultry, and control of bird movement. This was to be undertaken with the assistance of two properly equipped mobile sub-units from the NVEU. It also included a Compensation Fund of US\$2.0 million, to support the government in compensating farmers for livestock culls.

2.15 After restructuring, the component was to finance the construction of a new (as opposed to reconstruction of the existing) Animal Health laboratory foreseen at project approval. The estimated cost of the new Animal Health laboratory was about US\$1.9 million compared to about US\$0.3 million for the originally planned reconstruction. About US\$1 million was to come from reallocation of the Compensation Fund (US\$ 2.0 million) and the emergency eligible imported goods finance (US\$0.3 million) under the health component (see bullet three under 3 below) available because of absence of disease in the first two years. The Government was to contribute additional financing of about US\$0.7 million. The rest of the resources released from the Compensation fund were redirected towards additional human health component activities.

2.16 Human Health (Original estimate US\$1.6 million; after restructuring US\$2.7 million; Actual US\$2.7 million): to support a national program to develop and implement short and medium-term prevention of an outbreak of avian influenza among humans. It also had three sub-components:

- *Enhancing Coordination and Program Planning*, to strengthen intra-sector command and sector coordination mechanisms, supporting regular revisions, and update of the MOH contingency plan and finance the development of a detailed implementation plan for “social distancing” measures in the case of an epidemic. To also support preparation of a training program and regular simulation exercises.
- *Strengthening the National Public Health Surveillance System*, to increase the capacity of the National Influenza Laboratory through the provision of equipment, kits and reagents, and the training/retraining of laboratory staff; and strengthening the capacity of the Institute of Public Health and regional epidemiological investigation and response teams.

- *Strengthening Health Care Response Capacity*, to strengthen the capacity of medical services to isolate and treat patients with severe communicable diseases, support the purchase and distribution of anti-viral drugs and develop effective guidelines for their use, and expand immunization against seasonal flu for staff and population at risk. In case of a declared influenza pandemic, this component was to also finance emergency imports identified as necessary under a well-defined preparedness and response program to be prepared as part of project implementation.

2.17 After restructuring, the component was to support the revisions of the National Influenza Pandemic Preparedness Plan according to WHO recommendations, take the needed time to capitalize on completed and on-going activities, in particular to raise preparedness in the regions for diagnosis, referrals, and management of outbreak and pandemic, improve triage and intra-hospital procedures for infection control specifically for regional hospitals and enhance knowledge of primary health care workers. About US\$1.0 million was earmarked for all additional activities and for activities that go beyond the original cost estimates.

2.18 **Avian Influenza Task Force¹²(Original estimate US\$0.3 million; after restructuring US\$0.4 million; Actual US\$0.3 million):** to support the inter-ministerial and inter-sectoral Task Force in implementation of the Government's avian influenza response strategy (including the first three components). It had two sub-components to strengthen the Task Force:

- *Permanent Secretariat*, with full-time staff to manage the project. .
- *Monitoring and Evaluation (M&E)*, to support M&E capacities and activities at all administrative levels, and to develop an action plan for M&E with baseline studies, ongoing participatory M&E and a final project evaluation.

2.19 After restructuring, the component did not change except for expanding M&E to include pandemic preparedness and response.

2.20 **Implementation Arrangements.** The project was implemented nation-wide. The Avian Influenza Task Force along with the Ministry of Agriculture, Food, and Consumer Protection (MAFCP) and the Ministry of Health (MOH), were the main implementation agencies, with overall responsibility for coordinating institutional and implementation arrangements being vested in the Task Force. Since the Deputy Minister of Agriculture was the chair of the Task Force, among the two agencies, MAFCP's responsibility was primary. Two full time coordinators (one for animal and the other for human health) reported to the Task Force.

¹² The Task Force was established by an order of the Prime Minister on October 28, 2005 before the project was approved and included the ministries of Agriculture (chair), Health, Interior, Education, Environment and Finance.

Relevance of Design

RELEVANCE OF DESIGN TO THE ORIGINAL OBJECTIVES

2.21 Similar to avian influenza projects in other countries the Albania project was designed as an emergency operation under the GPAI Program. Also in keeping with the overall Program, it had separate animal and human health components. The causal framework emphasized the strengthening of institutional capacity, including capacity in surveillance, and diagnostic and response systems as a means of increasing the country's preparedness for avian influenza and was relevant to the PDO. There is concern, however, as to why the project provided for a compensation fund when a government compensation system for farmers for loss of poultry and other animals was already in place.

2.22 Further, the broad range of emergency and non-emergency activities that were included as a part of the project provided for a very ambitious design for an emergency project, with internal tensions and trade-offs between short- and long-term needs and the time needed to prepare for them (Box 2). Perhaps, being part of a horizontal APL contributed to this. It was decided at the outset that activities under it would be processed as an emergency operation, and hence everything whether it was emergency or not was lumped together.¹³

2.23 Overall, relevance of design to the original objectives is assessed as *substantial*.

¹³ The GPAI document noted: "Since this Program is designed to provide emergency finance to participating countries to contain an outbreak of avian flu through early detection and rapid response measures, the operations under the Program would be processed under the Banks' emergency policy, OP/BP 8.50. The Program would treat specific emergency response projects in each country as "phases" of a horizontal APL...." (World Bank 2005 .p.13).

Box 2: Emergency and Long-Run Capacity-Building Activities Supported Under the Project

Activities requiring immediate support for the avian influenza emergency:

- Identifying mechanisms for communication on the avian influenza situation, particularly establishing and maintaining productive working relationship with the media in propagating essential and consistent information relating to AI;
- Identifying and developing key messages and materials to be disseminated for different audiences, particularly key high-risk groups, such as farmers and children in wetland areas where probability of exposure was high. Managing a communications campaign to inform the general public about the status of avian influenza in the country and actions being taken by the government;
- Helping improve effective coordination and collaboration among different stakeholders involved in communications;
- Strengthening coordination mechanisms between and within sectors;
- Strengthening the capacity of medical services to isolate and treat patients with severe communicable diseases;
- Supporting the purchase and distribution of medicines-- anti-viral drugs and vaccines and expanding immunization against seasonal flu for staff and population at risk.
- Virus eradication at the source through culling and disposal of infected and at-risk poultry,
- Development of contingency plans and simulation exercises and development of a detailed implementation plan for “social distancing” measures in the case of an epidemic
- Training for appropriate transport of samples to be sent to a reference laboratory for confirmation
- Training for improved triage procedures in hospitals

Activities that were more in the nature of longer-term capacity building:

- Strengthening the national policy and regulatory environment for veterinary service and inspection;
- Strengthening veterinary epidemiological surveillance through the creation of a National Veterinary Epidemiological Unit (NVEU) which needed to be integrated with the epidemiology resources and information systems developed under a EU project
- Building diagnostic capacity
- Construction of the Animal Health Laboratory
- Training of primary health care workers

Source: Project documents and IEG analysis

RELEVANCE OF DESIGN TO THE REVISED OBJECTIVES

2.24 The revised objectives brought about two major changes in design—they broadened the scope of the project to cover other zoonoses and increased the emphasis on the capacity building aspects. These changes created several shortcomings.

2.25 First, minimizing the threat to humans from influenza pandemics remained a project objective but the changes led to neglect of a critical aspect of the avian influenza control strategy that had been emphasized by the three technical organizations—WHO, FAO and OIE—containment at source which put emphasis on reducing

“the virus load and circulation in poultry and spread to unaffected areas or countries, and therefore also decrease the risk of human infections or the development of a human pandemic virus.” FAO 2007b.

2.26 This change affected the implementation of activities. For example, before the restructuring, surveys were to be undertaken in the country to understand and develop the most effective approach for improving biosecurity in the poultry industry. During supervision missions the World Bank was asked to provide examples of terms of reference for organizations that could be hired to conduct such surveys and output from similar work in other countries as the basis for this work in Albania. However, with the emphasis on other diseases as well, the focus changed and the survey and the study on biosecurity were canceled. Discussions with government officials and Bank staff reveal that this de-emphasis came about partly because the objective no longer explicitly included prevention of spread of avian influenza among poultry and partly because of the diversion that came with the HINI pandemic.

2.27 Second, the design after restructuring gave even greater emphasis to longer-term capacity building and construction activities. The building of the Animal Health laboratory is an example.

2.28 Finally, there were two parts to the revised objective as related to other zoonoses. The first, to *minimize threat to humans* and the second part, to *prepare for, control and respond to other infectious disease emergencies in humans*. Project activities essentially covered the second part and were related to improving communication, increasing awareness, surveillance, upgrade of laboratory facilities to undertake tests and creation of an infectious disease ICU. There is a whole area of animal product management activities, including for example, dealing with conditions of slaughter houses and processing of milk products, a major source of infection from diseases such as brucellosis, which are essential to achieving success on minimizing the threat to humans. These were not included as activities under the revised objectives, which comprised a major omission in the results framework of the restructured project. That said, the revised project objectives were quite ambitious and the size of the restructured loan could not possibly do justice to it. Hence, there was some disconnect between the revised and expanded PDO and the activities supported.

2.29 On balance, relevance of design to the revised objectives is assessed as *modest*.

3. Implementation

3.1 The project was approved on June 27, 2006 and became effective on October 16 of the same year. It was formally restructured in October 2009 and closed on December 31, 2010, a year and a half behind schedule. Actual project cost was US\$4.7 million of which the IDA Grant was US\$3.9 million and the PHRD grant was US\$0.6 million. The Borrower contribution was US\$0.3 million. About US\$1.6 million was canceled, as the building permit for the Animal Health laboratory was not issued and hence the construction was not carried out and related furniture was not purchased.

Implementation Experience

3.2 Disbursement was very slow to begin with. As of November 30, 2007, when half the project lifetime had elapsed, about 17 percent of IDA and about 11 percent of the Japanese grant had been disbursed. The delay in the first year was primarily because of the limited

procurement management capacity. Given the urgency of launching the emergency project, MAFCP and the Bank had agreed to use the project management unit of the ongoing Water Resource Management Project for handling procurement issues until a procurement specialist was hired. However, the avian influenza project had far too many small contracts to be processed in a short time, overwhelming the staff of the Water Project.

3.3 There was also limited buy-in of project activities in the initial period by the veterinary directorate. In fact, supervision reports note the poor involvement of and ownership by the Chief Veterinary Officer as a major factor negatively affecting project implementation. While the National Veterinary Epidemiological Unit was established to enhance disease monitoring, surveillance, and control, it lacked a clear work plan and vision. Supervision missions report that until December 2007, the Unit had little to show for its utilization and relevance. Its newly hired staff were paid for by the project with the understanding that as of January 1, 2008 they would be absorbed by MAFCP. However, the employment status of the Unit's staff remained an unresolved issue for a long time, negatively influencing morale and work in the unit.

3.4 As designed the project was to invest in the improvement of isolation rooms in 15 hospitals, including three in Tirana, to receive suspected avian influenza patients. However, infection control procedures in the regional hospitals were found to be weak during the WHO assessment of existing facilities. The Ministry of Health then opted to have one central modern facility, to serve as a referral hospital for avian influenza patients for the whole country, and agreed to refurbish the Intensive Care Unit at the Tirana University Hospital Center to WHO standards for patient management. Regional hospitals were to undergo a review of triage practices with emphasis on implementing WHO standards for control of infections in health facilities.

3.5 Implementation of the public awareness and information campaign component progressed well in the early period partly, because of support provided by UN agencies and USAID. Ultimately the component spent only a fifth of what was planned. A communications working group comprised of representatives of the Institute of Public Health, the Institute of Food Safety and Veterinary (IFSV), the Albanian Council of Agribusiness (KASH), Task Force Secretariat, WHO, United States Agency for International Development (USAID), the United Nations Children's Fund (UNICEF), the Ministry of Environment, and the Food and Agriculture Organization (FAO) was established to work on a strategic communication plan for the prevention of avian influenza. However, the communication campaign that was implemented with support from the project created panic amongst the population. UNICEF-conducted Knowledge, Attitudes, and Practices (KAP) surveys reported a decline in consumption of poultry meat.

3.6 Towards the end of 2007 the implementation of activities for the awareness-raising component slowed partly because it was difficult to sustain interest in avian influenza when there were no new outbreaks. In 2009, the focus of the public awareness component shifted to H1N1, with the Ministry of Health playing a leading role in the communication strategy.

3.7 As early as the July 2007 supervision mission, about 9 months after project effectiveness, MAFCP expressed its interest in broadening the project scope. However,

because the animal husbandry component was not progressing well, the Bank postponed considering this request until the mid-term review. With some improvement in implementation by mid-term, the Bank mission agreed to the restructuring and endorsed the construction of a new animal health laboratory for the IFSV.¹⁴ However, the mission also noted that the construction of the new facility was contingent upon clarification and verification of the ownership status of the premises and the issue of a building permit calling for extension of the project closing date. MAFCP proposed to use its own reserves (which amounted to approximately US\$850,000) with the balance being contributed by the project through the partial utilization of the compensation fund.

3.8 After the restructuring in October 2009, and particularly after June 2010, the main focus of the Task Force Secretariat was on trying to obtain the building permit for the Animal Health Laboratory. This, however, could not be obtained from the Tirana Municipality Committee. As a result, even though the property on which the laboratory was to be built had been registered with the Immovable Property Registration Office, the design had been completed, an environmental impact assessment and update of the Environment Management Plan had been done, and the tender of the civil works had been launched, the construction could not be completed.¹⁵

3.9 When the H1N1 pandemic occurred in Albania in the fall and winter of 2009 the Ministry of Health (MOH) and Ministry of Finance requested additional financing of US\$3 million for purchase of H1N1 vaccines as well as some additional medical equipment for dealing with pandemic preparedness. The Bank team responded promptly and the negotiation package was ready on January 11, 2010. However, the pandemic had peaked by then. Hence the Government decided not to purchase additional doses of pandemic vaccine and negotiations for additional financing were cancelled.

Safeguards

3.10 The project was assigned an Environment category B since it supported investments to deal with poultry carcass disposal, laboratories, and hospitals. The project Operational Manual was to include an Environmental Assessment and an Environmental Management

¹⁴ The merger of the Institute of Veterinary Research (IVR) with the Institute of Food Research resulted in the creation of a new organization the Institute of Food Safety and Veterinary (IFSV) in 2006 after the project started. An OIE evaluation (2008) also pointed to the limited space available in IFSV for undertaking work to international standards. The evaluation notes that the “space available for all laboratory activities, especially for the extended food safety activities is limited. In addition, office space has been included within the laboratory units at a great risk to biosecurity and to the workers’ health.”

¹⁵ The ICR notes that on May 19, 2010, the client informed the Bank that the civil works had commenced. The Bank in its response of June 7, 2010 asked that the construction be stopped until such time that the building permit had been obtained to ensure that the Project remained consistent with national laws and regulations. According to the task team the construction had started with the contractor using his own resources expecting the permit to come through.

Plan. Given the emergency nature of the project, the requirement for completing the EA and EMP during project preparation was waived. The Assessment and the Management Plan were to address the procedures for culling and disposal of poultry, the handling of medical waste generated by laboratories and health care facilities, and civil works for rehabilitation of laboratories and hospitals. They were completed in July 2006, before project effectiveness.

3.11 Overall safeguard compliance was satisfactory. The prevention-focused activities for intensive care, infection control, and hospital-waste management are likely to have a positive environmental impact. A legal review to ensure that the Animal Health Laboratory was to be constructed on land owned by MAFCP and had been registered by the Immovable Property Registration Office was also carried out. The Government also undertook the additional Environmental Assessment for the laboratory and updated the Environmental Management Plan.

Fiduciary

3.12 The challenges in getting adequate support on procurement that led to delay in implementation have been mentioned earlier. The large number of small contracts and incorporation of civil works in an emergency project created a challenge. The Bank agreed to the use of procurement staff from another project, but that was not adequate. Government officials told the IEG mission that the Bank's inflexibility in requiring procurement specialists to have past experience with the Bank or international agencies was partly responsible for the delay. According to them, the Bank could have agreed to train eligible candidates even if they did not have prior Bank or international agency experience, and this would also have helped build capacity in the country.

3.13 Procurement post-reviews found that overall the procurement function was discharged satisfactorily, although there were some unjustified delays. There were also some problems related to a consultant working without a contract for some time. In December 2010 financial management arrangements, including internal controls, project accounting, and flow-of-funds and auditing arrangements were reviewed to assess continued adequacy of systems and controls and were found adequate for project completion. The previous mission had recommended strengthening monitoring which was carried out. Though there were some delays in some project audit reports, no major issues were reported to have been identified in the Interim Financial Reports submitted to the Bank on a quarterly basis.

4. Achievement of the Objectives

4.1 The original and restructured project each had three parts to the development objectives, two of which were the same – preventing the spread of avian influenza from birds to other animals and/or to humans and preparing for a pandemic of avian influenza transmissible between humans. The objective of strengthening the capacity to prevent the spread of avian influenza among poultry was only in the original project, while the objective to minimize the threat posed to humans by other zoonoses was only in the restructured project. This chapter assesses the achievement of each of the four objectives, summarized in Table 1.

Table 1: Achievement of Original and Revised Project Objectives			
Objective	Original	Revised	Rating
Strengthen the country's capacity to prevent the spread of avian influenza among poultry	√		Modest
Preventing transmission of avian influenza from birds to other animals and to humans	√	√ ^a	Substantial
Prepare for a potential pandemic of avian influenza transmissible between humans	√	√	Substantial
Minimize the threat posed to humans by other zoonoses		√	Modest

Source: IEG

a. The revised objective included preventing transmission of avian influenza from birds to humans only, otherwise the same.

Strengthen the country's capacity to prevent the spread of avian influenza among poultry

4.2 This report looks at project contribution in the following areas to assess whether it helped strengthen the country's capacity to prevent the spread of avian influenza among poultry.

- **Awareness** in the country about the disease;
- **Biosecurity** in commercial poultry establishments and backyard systems to prevent spread of AI;
- **Surveillance and monitoring** of avian influenza in poultry and wild birds;
- **Compensation system** to ensure that farmers have the incentive to report incidence of avian influenza in their poultry;
- **Response system** to ensure that measures such as culling can be taken in time to prevent infection from spreading among poultry if it does occur in some areas.

4.3 **Awareness.** The project, along with the activities supported through the UN agencies and USAID, made a substantial contribution to increasing awareness about avian influenza in the country. It supported a widespread public awareness and information campaign that involved production of a large amount of communication material (12,000 printed leaflets, posters, guides and television messages). Training sessions were held in Tirana and other cities for health care workers, teachers, school directors and deputy directors, and education inspectors on symptoms, prevention, and transmission. The Albanian Council of Agribusiness (KASH), through its extended network of farmer associations and regional branches, also supported awareness-raising among farmers for avian influenza signs and prevention.

4.4 KAP Surveys by UNICEF show an increase in safe handling practices for poultry and poultry meat including: washing hands after touching poultry or poultry products (16.4 percent in 2006 increased to 63.8 percent in 2009); cooking poultry products well (21.7 percent to 59 percent); awareness about avoiding contact with dead poultry and wild birds

(13.4 percent to 50.2 percent) (UNICEF 2009). The KAP surveys also reported that a large number of respondents had seen and read leaflets and brochures and understood them. A significant increase in the proportion of the population who knew what kinds of signs to expect for an avian influenza infection in the population was also noted. However, the KAP survey in 2006 also showed that nearly 28 percent of the population reported having reduced their consumption of poultry meat as a result of the information campaign and nearly 34 percent had stopped consuming poultry meat. Hence, the need to carry out a public information campaign on diseases such as avian influenza without causing panic that can damage the poultry industry is an important lesson from the project experience.

4.5 Biosecurity. Improving the level of biosecurity is critical to preventing the spread of avian influenza among poultry (Box 3). The IEG mission's discussions with stakeholders in the country however, revealed that the project has created general awareness about the importance of good biosecurity in rearing poultry. Yet, the project did not do much in this area. A planned survey on biosecurity issues was canceled. Government officials confirmed that there are no specific laws on biosecurity in the country as yet. The new veterinary law, to the drafting of which the project contributed, was passed in the Parliament in September 2011 and is expected to initiate changes in this area.

4.6 Surveillance and monitoring. The project started the process of enumeration of poultry, but it has since stalled. Today the few epidemiologists that now remain in the National Veterinary Epidemiological Unit are focused on monitoring and reporting incidents of all animal diseases, including avian influenza. The project could not make any significant contribution in increasing collaboration with the Ministry of Environment in monitoring of wild birds.¹⁶

¹⁶ Currently the main source of information on unusual death rates among wild animals (including birds) is informal –feedback from hunters, hunter's associations, and forestry and fishing service experts. However, the IEG mission's discussions with stakeholders at various levels revealed that in Albania there is a culture of notifying anything unusual to the authorities, partly a spinoff from the awareness campaign and partly because farmers are aware that they themselves will be negatively affected by disease. Hence, if an avian influenza outbreak were to begin in commercial establishments or in backyard poultry because of contact with infected wild birds close to cities, as happened in 2006, it is very likely that the veterinary department will know quite soon. However, were the infection to occur in the remote hilly areas of Albania, it would be a while before the veterinary department would find out. There is however, one factor that could complicate the whole reporting process: a large part of the population in the rural areas has access to veterinarians who do not have graduate level degrees and interviews suggest that these veterinarians may have limited capacity to identify avian influenza cases in poultry, particularly when clinical symptoms for avian influenza are very similar to Newcastle disease that is endemic in the country. Farmers may consider their responsibility done if they report the existence of an outbreak to these veterinarians.

Box 3: Biosecurity and its enforcement in poultry farms/commercial establishments in Albania

Biosecurity refers to measures taken to prevent incursion and spread of disease. It includes hygiene and management measures to minimize the risk of introducing pathogens on farms or poultry establishments (“bio-exclusion”) and measures to minimize the risk of transmission of infection to other farms in case a disease outbreak occurs (“bio-containment”). These two sets of measures would require, among other things, appropriate construction of poultry houses to prevent entry of wild birds and rodents, proper ventilation, limiting entry of non-essential visitors, use of appropriate disinfectants in foot and wheel dips, hand hygiene, aerial and litter disinfection, and protective clothing. These measures are often supplemented with vaccination.

Biosecurity levels are very weak in backyard poultry systems in Albania where about 85 percent of birds are reared. However, even in commercial poultry houses the level to which sound management practices are adopted is variable. The IEG mission visited three large commercial egg-producing poultry establishments, one in Vlora district and two in Durres, and found variable enforcement of biosecurity. Only one of the three establishments was found to be practicing biosecurity norms that would be in keeping with international standards. While arrangements for wheel and foot dips in disinfectants were available in all three, all of which also had a vet on site, the level of cleanliness was not high in two of them and there were limited restrictions on entry and no requirements for wearing protective gear in entering buildings where the birds were kept.

For large farms, taking appropriate biosecurity measures is in their commercial interests, although high costs that come with good prevention measures can discourage compliance. For village level producers, concerns about biosecurity are not related to production and profit given that birds often die and this is accepted as the norm in low-input systems. There is a public good element in bio-containment; large producers have little incentive to limit an outbreak from spreading to others once infection occurs in a poultry establishment.

In the interest of food safety and disease control, governments have laws to enforce specific standards of biosecurity. In Albania as yet there is no specific government law on biosecurity and no specific requirements are enforced. Biosecurity by-laws have still to be drafted as part of the National Strategy for Development and Integration (2007-2013), which is a comprehensive and ambitious plan providing for the approximation of national legislation to the EU accession requirements.

Source: FAO 2007a, University of California 2008, Blackwell 2010, IEG mission findings

4.7 Compensation system. A compensation system to farmers for loss of poultry and other animals was in place before the project and remains in place now. During the 2006 outbreak affected poultry owners whose birds were culled were compensated within a week under the 2004 Veterinary Law, Articles 62-69 at 100 percent of the market price. The compensation fund established under the project was not used because there was no further outbreak in poultry. There is provision for compensation and contingency funding under the national budget and this provides an incentive for poultry and livestock owners to report sick and dead animals to veterinarians. The Ministry of Finance is able to provide timely compensation within 10 days. The new veterinary law that was passed in Parliament in September 2011 lays down very clear rules for compensation. However, the resources set aside by the Government can only cover a limited number of cases. The compensation arrangements would not be sufficient to cover a widespread outbreak.

4.8 **Response system.** The project provided only a limited number of vehicles and transport remains one of the biggest constraints for the veterinary service to respond in time if outbreaks of disease occur, particularly in remote areas and in wildlife. IEG mission discussions with stakeholders at the regional level revealed that veterinary officials find it difficult to travel to distant villages for regular inspections because they have either no means of transport or a very limited budget for reimbursement of travel expenditures. The OIE evaluation of the Performance of Veterinary Services for Albania had similar findings and noted that transport facilities are totally insufficient for early warning and emergency response.¹⁷

4.9 Overall the project made a *modest* contribution to the achievement of the objective to prevent transmission among poultry.

Prevent the transmission of Avian Influenza from birds to other animals and to humans

4.10 There were no outbreaks and therefore to assess this objective project contribution to improving preparedness in preventing the transmission of avian influenza from birds to other animals and to humans is examined along the following dimensions:

- **Capacity to prevent** avian influenza from occurring in humans and other animals through precautionary measures, including vaccines and medicines
- **Capacity to detect and diagnose** disease in humans and other animals and transport samples

4.11 **Capacity to prevent avian influenza from occurring in humans and animals:** The information campaign supported under the project has improved awareness of measures for disease prevention and safe handling of poultry meat. The Project Technical Annex (World Bank 2006b) found that seasonal influenza vaccination was very limited in the country at the time of project approval and vaccination uptake is reported to have increased by the Implementation Completion and Results Report (ICR) because of better awareness, though it does not say by how much. Overall, stakeholders in the country also report greater awareness of the importance of priority vaccination for vulnerable groups as per WHO guidelines. That said, a large amount of H1N1 vaccine went to waste because of lack of demand. IEG mission discussions with government officials revealed that one of the reasons for the lack of demand in this case was the late arrival of the H1N1 vaccine in the country and once that pandemic peaked it was natural for the demand to fall.

4.12 Some capacity in procuring vaccines for humans in a timely manner has likely also been built because of the project, though attribution is difficult. This is an important achievement for a small country such as Albania that may have limited bargaining power with multilateral companies to procure vaccines during an emergency.

¹⁷ OIE undertakes a Performance of Veterinary Services (PVS) analysis to assess the conformity of the veterinary services in a given country with OIE standards. The PVS tool is recognized by all OIE members and donors as the reference tool for the evaluation of veterinary services. Governments that are striving to achieve international standards request OIE to undertake the evaluation.

4.13 The project provided for stockpiling of anti-viral drugs for humans. The ICR reported that around 7,000 doses of Tamiflu (expiry date 2017) are available for the next expected wave of influenza in the country. While stockpiles, if not used, may be a waste of resources, there was overall positive learning from the experience. A procurement system to secure anti-virals quickly from the only producing company (Roche) that has two main distributors in Albania has been put in place.

4.14 **Capacity to detect and diagnose avian influenza among humans and animals.** For detection and diagnosis, laboratory testing of the virus is critical.¹⁸ On the human health side, the project provided support for the complete reconstruction of the virology laboratory at the Institute of Public Health to upgrade it at biosecurity level 2 (BSL2) standards and one section was also upgraded to BSL3. The (reverse-transcription polymerase chain reaction (RT-PCR)¹⁹ test equipment was installed and the upgraded laboratory has made it possible to do molecular diagnoses. Laboratory staff were trained extensively and are capable of performing tests for diseases such as hepatitis, measles, rubella and avian influenza. The virology laboratory was certified by WHO and is a part of the Global Flu Network. The National Influenza Laboratory is being accredited.

4.15 On the veterinary side also, the laboratory at the Institute of Food Safety and Veterinary was equipped with RT-PCR equipment and is capable of undertaking routine tests for avian influenza and other diseases. Laboratory staff received training in undertaking tests.

4.16 The project provided training in internationally acceptable norms for transporting samples and by November 15, 2007 International Air Transport Association (IATA) procedures (for example, triple-packaging) were in place for packaging potentially dangerous specimens sent to reference laboratories overseas. Until recently, Albania sent samples for confirmation of veterinary diseases to the OIE reference laboratory in the United Kingdom. Similarly, for human testing for virus diseases, samples had to also be sent overseas (such as to the Cantacuzino Institute, Romania). The project support for laboratories has enabled Albania to test for numerous animal and human diseases in country. However, such state of the art facility is available only in Tirana; the animal health laboratories in the regions continue to be poorly equipped and face personnel and budget shortages.

¹⁸ Evidence of the critical role of laboratories can be found in the literature. See for example Pertric and others 2006 where it is noted that “Laboratory diagnosis of influenza has become a cornerstone of the prevention, containment, surveillance, and treatment of the associated illness. The emergence of novel, highly pathogenic avian influenza viruses, such as H5N1, has extended the role of the laboratory to include isolation and subtyping of the virus for disease surveillance and vaccine development. ...Laboratory testing for influenza has historically been of questionable value for the management of patients with influenza, because of limited test sensitivity, long turnaround times, and a lack of effective antiviral therapies. The development of more rapid and accurate tests for the detection of influenza now enables the laboratory to provide a prompt, definitive diagnosis, which allows clinicians to initiate antiviral therapy, limit the injudicious use of antibacterials, implement appropriate infection-control measures, decrease the duration of hospitalization, reduce ancillary testing, and decrease health care costs.”

¹⁹ The RT-PCR is one of the most sensitive tests for diagnosis of influenza.

4.17 Overall, the project contribution to achievement of this objective is assessed as *substantial*.

Prepare for a potential pandemic of avian influenza transmissible between humans

4.18 The criteria for determining the level of preparedness and responsiveness for avian influenza as gleaned from WHO/FAO/OIE documents and conversations with staff from these organizations. Briefly, they include:

- A communications strategy
- Surveillance in birds and in humans
- Diagnostic capacity for identification of the disease in birds and in humans
- A control strategy for animals
- Health care response capacity, with stockpiles of anti-virals and vaccines
- A legal and regulatory framework
- Simulation exercises
- Coordination between donors and between ministries

4.19 The extent to which the project helped Albania prepare for, control and respond to influenza pandemics is assessed against these criteria in the last column of the Table in Annex C. A National Influenza Pandemic Preparedness Plan was prepared and regional training was carried out for hospital pandemic preparedness based on the preparedness checklist for pandemic influenza. Laboratories at both the Institute of Food Safety and Veterinary and the Institute of Public Health can test for avian influenza and other diseases in animals and humans. In fact, staff at IPH, have been trained to test for hepatitis, measles, and rubella, among other diseases. The National Veterinary Epidemiological Unit collects regular data on all animal diseases and regional veterinary inspectors received refresher training on diagnosis and control of avian influenza and Newcastle disease as well.

4.20 Albania's experience with the H1N1 influenza pandemic during the fall and winter of 2009 provided a test for the level of preparedness of the country and how effectively it could utilize investments in communication training and awareness-raising, in laboratory and hospital infrastructure, and in equipment. The information campaign was quickly tailored towards H1N1, MOH was able to procure the H1N1 vaccines (albeit the supply was delayed) and antivirals, and the IPH laboratory was able to undertake tests as needed. The ICU at the Tirana University Hospital Center was also functional.²⁰

4.21 Overall the project contribution to achievement of this objective is assessed as *substantial*.

²⁰ The 2009 influenza H1N1 pandemic affected most countries within months of its emergence. Despite early identification of the virus and massive scale-up of vaccine production, initial responses were largely based on preexisting pandemic plans due to the pandemic's rapid spread before the vaccine's availability months later (Lee and others 2010).

Minimize the threat posed to humans by other zoonoses

4.22 The project's contribution to this objective is assessed against the following factors:

- **Management practices for other animal products** including condition of slaughterhouses;
- **Capacity to satisfactorily test** for zoonotic bacteria and viruses;
- **Surveillance and monitoring** of avian influenza in wild birds and in backyard systems to detect first infections, and systems for surveillance of other zoonoses;
- **Farmers' incentive** to report incidence of diseases;
- **Measures to prevent infection from spreading** among birds and other animals such as culling taken in time.

4.23 **Animal products management practices:** The project contribution (or lack of it) to improving the conditions for biosecurity in poultry has already been discussed. Other than contributing to the drafting of the new veterinary law, the project did not contribute to improvements in other animal product management practices, including conditions of slaughterhouses or processing of meat and milk products through which zoonoses can spread (Box 4). Data obtained from IPH shows that the incidence of zoonotic diseases has fallen over time in the population but it is not possible to attribute this decline to the project.

4.24 **Capacity to satisfactorily test.** As already noted the project has helped build capacity in laboratories at the central level for testing for all zoonoses, but is weak at the regional level.

4.25 **Surveillance and monitoring.** The project made some contribution in this area through establishing and equipping the National Veterinary Epidemiological Unit and expanding its mandate to cover all zoonoses, including avian influenza.

4.26 **Farmers' incentives.** A compensation system exists in the country although the project did not make a contribution to its establishment.

4.27 **Measures to prevent infection from spreading.** The animal health component as originally designed was to provide for the purchase of two properly equipped mobile sub-units for culling and disposal of infected and at-risk poultry. The ICR notes that these mobile units were not bought because the main method of disposal for infected birds is burial in a pit and since the two incidents in 2006, there have been no further outbreaks. However, the project Environmental Assessment and Management Plan found that at Peze Helmes, where one of the two outbreaks had occurred, the burial hole was poorly sited with high risk for ground and water contamination. The assessment noted that the project would provide training to farmers on proper burial pit construction. There is no mention of such training being carried out in the ICR. Whatever the existing practices and their safety level for disposal of diseased animals other than poultry, the project did not make a contribution in this area.

4.28 Overall the project's contribution to achievement of this objective is assessed as *modest*.

Box 4: Slaughterhouses and conditions for management of food of animal origin

There are no specific slaughterhouses for poultry in Albania. None of the three large commercial egg producing poultry establishments that the IEG mission visited had attached slaughter houses. Poultry meat from backyard farms is prized highly in Albania and there is an accepted practice of selling (and buying on the consumer side) only live birds from farmers that ensures that diseased birds normally do not exchange hands. However, imported poultry meat is widely available and it is difficult to know how far it has been tested for zoonoses. The OIE assessment (OIE 2008) found that there was no continuous program for monitoring of food-borne zoonosis in the country in accordance with international standards, although it noted that checks on the basis of samples were often carried out.

Large animals are slaughtered in slaughterhouses around the country, although, as in the case of poultry, imported meat is also available. The IEG mission visited one of these slaughterhouses in Korce district. A veterinarian was present on site at the time of the visit and described how the animals were inspected before slaughter and the kind of precautions that were taken to prevent disease transmission. However, the overall conditions at the slaughterhouse did not appear very hygienic, with the slaughterhouse open to flies and insects. The OIE assessment also noted several deficiencies in the slaughterhouse that was visited by the team. That assessment noted that raw milk production, quality, and transport of milk are not in accordance with international standards.

Source: OIE 2008, IEG mission findings

5. Efficiency

5.1 Efficiency analysis for a project that is helping prepare a country for a potentially catastrophic, but unpredictable event is difficult. The recent outbreaks have not yet led to an avian influenza pandemic among humans, but the risk that it could happen in the future remains.²¹ In Albania there were also no human cases of avian influenza arising from contact with infected poultry, as there were in several other countries (see Annex B). There were, however, two outbreaks in poultry before the project became effective and none after effectiveness even though, given the low level of biosecurity, there was a high risk that they could occur. Partly because of the lack of further outbreaks the project was restructured and its scope broadened. In the following paragraphs project efficiency is assessed keeping in mind the disease scenario in Albania—a high risk situation because of low biosecurity, no human pandemic yet, no human infections even from contact with infected poultry, only two outbreaks in poultry before project effectiveness.

5.2 **Cost-benefit analysis:** There were avian influenza outbreaks in poultry in Albania prior to the project, and therefore the analysis undertaken at appraisal and completion based on probabilities associated with incidence and spread of avian influenza *in poultry* seems a reasonable exercise to undertake. The analysis at appraisal assumed that with the project the probability of both sporadic outbreaks and widespread outbreaks among poultry would fall:

- **Without the project**, the probability of continued sporadic outbreaks was assumed to be certain (100 percent) whereas that of a widespread outbreak was assumed to increase from 40 percent in year one to 50 percent in year three.

²¹ FAO-OIE-WHO 2011a.

- **With the project** the probability of both sporadic and a widespread outbreak was assumed to fall. The *with* and *without* project analysis based on the assumptions in Table 2 showed an internal rate of return of 44 percent. A sensitivity analysis suggested that the project would break even if it succeeded in reducing the probability of a widespread outbreak by 3.5 percent in each year.

5.3 Given that the avian influenza outbreak did not occur and the project objective was revised to include other zoonotic diseases, a re-estimated cost and benefit stream comparison was neither considered relevant nor undertaken for comparison at the completion stage. Many factors could influence the probability levels both for continued sporadic and widespread outbreaks, and these in turn would determine the actual value of the rate of return. The price of the bird would also not likely remain constant as was assumed in the appraisal analysis, but could actually fall, as people may be worried about consuming poultry products. Hence, this assessment finds it difficult to accept the estimated rates of return as calculated at appraisal. Having said that, the overall argument that the probability would fall *with the project* appears reasonable given that the project was attempting to strengthen the country's capacity to prevent the spread of avian influenza and prepare it for a pandemic.

	YEAR 1	YEAR 2	YEAR 3
Probability of outbreaks (without the project)			
Continued contained sporadic outbreaks	100%	100%	100%
Widespread outbreak	40%	45%	50%
Probability of outbreaks (with project)			
Continued contained sporadic outbreaks	90%	80%	70%
Widespread outbreak	35%	30%	25%

Source: Project Technical Annex

5.4 **Cost-effectiveness.** Both the design of the operation and the efficient use of project resources affect the cost-effectiveness as implemented. Broadening the scope of the project to other zoonoses likely improved the cost-effectiveness of the operation in terms of cost-sharing of laboratory activities and capacity with other diseases. However, the design included a compensation fund that was not really needed, since the government had already responded quickly to earlier outbreaks. As a result, the funds were unused until they were reallocated toward the end of the project, an inefficiency in design. There were a number of shortcomings in implementation that reduced the efficient use of project resources. There were major delays in implementing the emergency project, which had disbursed only 11 percent of the IDA funds mid-way through the operation. Lack of experience about procurement procedures, delayed hiring of key staff, and confusion in reporting lines in management and implementation structures contributed to delays. There was some wastage that could have been avoided—for example, only about 40 percent of the HINI vaccine procured with project resources was actually utilized; the rest could not be used before expiry because of low demand, due in part to delays in arrival of the vaccine. Finally, the project was extended and restructured to build the Animal Lab, but the lab wasn't built and \$1.6

million was cancelled. Collectively these shortcomings in efficiency of design and implementation are significant.

5.5 Efficiencies from donor collaboration: The fact that a range of donors was working together and not separately—for example, UN agencies working collaboratively with the Ministry of Health and Ministry of Agriculture, Food, and Consumer Protection—seems to have also contributed to cost effectiveness in use of project resources. In fact, the public awareness component spent about 20 percent of the appraisal amount but was still able to carry out a widespread communication campaign and disseminate critical information quickly because of the contribution (both in terms of funds and human resources) from USAID and UNICEF. Foreign technical assistance resources were also effectively utilized, when, for example, participants from neighboring countries were trained together in a two week seminar on epidemiology carried out in Tirana for the Epidemiology Units of both Albania and Kosovo. Because donors including USAID were part of the whole collaborative approach to improve preparedness, some training was also offered free—for example for laboratory specialists of IPH who attended training at the U.S. Naval Medical Research Unit in Cairo²² on use of PCR techniques. While these supporting investments from other donors used real resources provided to Albania that would count as costs in an overall program economic analysis, they did enhance the leverage of the Bank funding.

5.6 On balance, efficiency is assessed as *modest*, due to inefficiencies in implementation and, to some extent, design.

6. Ratings

Outcome

6.1 The project as assessed under the original objectives and as assessed under the revised objectives is rated *moderately satisfactory*. Relevance of the original objectives was *High* and that of design was *Substantial*. The project substantially achieved the objectives of preventing transmission of avian influenza from birds to other animals and to humans, and of preparing for a potential pandemic of avian influenza transmissible between humans, whereas it modestly achieved the objective of strengthening Albania's capacity to prevent the spread of avian influenza among poultry. Efficiency was *Modest*.

6.2 Relevance of the revised objectives was *Substantial*, whereas the relevance of design was *Modest*. While the broadening of the objectives embraced the use of the capacity and laboratory equipment for other zoonoses, other key activities involved in animal product management – essential to minimizing the threat to humans – were not added. The objectives of preventing transmission of avian influenza from birds to humans and of

²² The U.S. Naval Medical Research Unit No. 3 (NAMRU-3) is based in Cairo, Egypt. Its goal is to study, monitor, and detect emerging and re-emerging disease threats of military and public health importance. NAMRU-3 works closely with the Egyptian Ministry of Health, the U.S. National Institutes of Health (NIH), WHO, USAID and the U.S. Centers for Disease Control and Prevention (CDC). NAMRU-3 has been a WHO Collaborating Center for HIV/AIDS since 1987. For more information see <http://www.med.navy.mil/sites/namru3/CommandInfo/Pages/AboutUs.aspx>

preparing for a potential pandemic of avian influenza transmissible between humans were both *substantially* achieved, while that of minimizing the threat posed to humans by other zoonoses was *modest*.²³

Risk to Development Outcome

6.3 The current recession, particularly the difficult conditions in Europe, have also made budget and resource positions tighter in Albania. But coordination mechanisms established between UN agencies (WHO, UNICEF, FAO), OIE, and MAFCP and MOH because of the project, particularly on communication and awareness raising activities, are likely to ensure that, were an emergency to arise, resources could be mobilized for disseminating critical information quickly. The appointment of the Animal Health coordinator as the Chief Veterinary Officer, the Human Health coordinator as a public health specialist in the MOH and some of the staff at NVEU in permanent positions with the MAFCP has provided for some continuity in skills.

6.4 With the passing of the Veterinary Law in September 2011, clearer and more effective provisions for general disease control in line with EU requirements will likely also be introduced. But numerous challenges remain. The ICR itself acknowledges the existence of “legal administrative vacuums, on-going institutional reshuffling and budgetary restrictions” that affected the sustainability of key project outcomes for the animal health component (World Bank 2011 p.16).

6.5 The expansion of laboratory capacity has increased the country’s capacity to undertake tests and research in emerging infectious diseases. However, the increased capacity also means greater expenditure on operation and maintenance which would be even more difficult to mobilize under the current tight budget conditions. The BSL3 laboratory in the Institute of Public Health has not yet been certified and resources to use it effectively are still an issue particularly for testing for pathogens of diseases other than avian influenza. Resources for kits, reagents and other basic consumables for the laboratories will continue to be a constraint. In addition, there is need for continuous training for taking adequate precautions when dealing with highly dangerous pathogens in high containment biological research laboratories (BSL3 laboratories for example).²⁴

²³ According to the harmonized evaluation criteria used by the World Bank and IEG, when an operation’s objectives are revised by restructuring, an outcome rating is assigned for the project under both the original and the revised objectives, and the two outcome ratings are weighted by the share of the actual credit disbursed before and after the restructuring to arrive at a single outcome rating. In this instance, however, the outcome ratings for the project under both the original and revised objectives are identical, so no weighting is necessary.

²⁴ The high costs associated with continuous training for technicians working in high containment laboratories were discussed at a workshop of the American Association for the Advancement of Science (AAAS) where participants discussed similarities and differences in infrastructure, oversight and personnel training between biosafety level 3 (BSL-3) and biosafety level 4 (BSL-4) laboratories. There was consensus among the participants at the workshop that “hands-on proficiency training, mentorship, and didactic training are critical for establishing and evaluating the researcher’s ability to work in a high-containment laboratory; a variety of individuals, from researchers to administrators and support staff to equipment service personnel, require some level of training before gaining access to high-containment laboratories; biosafety training programs have to be flexible to account for the research (one size does not fit all), model systems, facilities, and job function; and the

6.6 Continuity in training is also an issue if the National Veterinary Epidemiological Unit has to effectively serve the purpose for which it was established. During the project the training of the newly hired staff was given attention.²⁵ An international veterinary epidemiologist was also hired to train and advise the staff on epidemiology and animal disease surveillance. However, the project was an emergency intervention and for veterinarians to become good epidemiologists continuity in training is essential.

6.7 There is also the issue of availability of resources for maintenance of the Intensive Care Unit at the Tirana University Center. The project would have done well to tie-up its maintenance with issues of hospital management being addressed under the on-going Health Systems Modernization Project. There is some linkage between the two projects on hospital waste management and it could have been undertaken more widely to cover issues of maintenance of the Intensive Care Unit as well.²⁶

6.8 Overall, under the current conditions, the risk to development outcome is assessed as *significant*.

Monitoring and Evaluation

6.9 **Design.** At design, eight outcome indicators and several intermediate outcome indicators were proposed. There were four major shortcomings in the results framework. **First**, there was disconnect between the project development objective to “strengthen capacity to prevent and to prepare” and the outcome indicators, which were mainly changes in behavior or actions taken when an infection had already occurred (Table 3). **Second**, there were no indicators to report on the second PDO “to prevent the transmission of avian influenza from birds to other animals and humans”—see Table 3. **Third**, given the country conditions and the weakness in biosecurity, a major factor in the transmission of infection in poultry, change in the level of biosecurity in poultry management, should have been monitored. **Fourth**, as also observed by the completion report, there were too many (28) intermediate outcome indicators, some of which were only output indicators, making the monitoring system very complex.

average cost of personnel training varies from \$4000-\$7000 for researchers to hundreds of dollars to \$4000 for training non-scientists, like administrators.” AAAS 2009. For an explanation of the differences in biosecurity levels, see Annex B.

²⁵ The OIE Performance of Veterinary Services (PVS) evaluation also found that the training of veterinary staff tends to be mainly related to internationally funded projects and that the Albanian Veterinary Surgeons Chamber, though a legal body is as yet not able to regulate the profession (OIE 2008).

²⁶ For example, the study on waste management was funded by the project. The Health Modernization project provided funds for incinerators to be installed in hospitals as part of the effort to support better hospital waste management.

OBJECTIVES	PROJECT OUTCOME INDICATORS
To strengthen the country's capacity to prevent the spread of avian influenza among poultry, to prevent the transmission of avian influenza from birds to other animals and humans, and to prepare for a potential pandemic of avian influenza transmissible between humans.	1. Behavior changes among key veterinary and public health personnel
	2. Public awareness of how to prevent spread increases and behavior changes
	3. Government culls birds at the infection points following international best practice
	4. Government provides timely compensation to farmers for culled birds
	5. Rapid and systematic dissemination of disease information within relevant institutions in the country
	6. Veterinary services provide rapid and accurate information to the OIE
	7. Infection diagnosed and contained
	8. Patients receive appropriate treatment for HPAI infection
<i>Source: World Bank 2006b</i>	

6.10 As designed, the animal and human health coordinators were to report each month on project activities and on the situation on avian influenza to the Task Force Chairman who would in-turn report to the Council of Ministers.

6.11 **Implementation.** Turnover in M&E staff during the project adversely affected reporting. At restructuring the indicators were revised to reflect the broader project objectives and several of the indicators at the appraisal stage were dropped. The first two indicators on behavior change were retained (Table 4) and the total number of outcome indicators was brought down to seven from the eight at appraisal. Changes were made in the intermediate outcome indicators but the total number was not reduced.

6.12 UN/USAID also financed two KAP surveys to evaluate the impact of the public awareness and the communication interventions on behavior change. The surveys were undertaken in 2006 and then again in 2009, with the former serving as a baseline. The data collected under the Second KAP survey provided a useful comparison for the information collected in 2006.

OBJECTIVE	PROJECT OUTCOME INDICATORS
To minimize the threat posed to humans by Highly Pathogenic Avian Influenza (HPAI) infection and other zoonoses and to prepare for, control, and respond to influenza pandemics and other infectious disease emergencies in humans.	1. Behavior changes among key veterinary and public health personnel
	2. Public awareness of how to prevent spread increases and behavior changes
	3. Enhance laboratory diagnostic capacity of zoonotic diseases
	4. Strengthen surveillance of zoonotic diseases on the ground, including modalities for reporting, recording and investigating suspected cases
	5. Ensure prompt and efficient prevention/control/eradication of prevalent zoonoses, including resources and procedures for compensation.
	6. National Integrated Preparedness Plan for control and response to outbreak and pandemic prepared in accordance with WHO recommendations
	7. Contained and diminishing pattern of HPAI and other zoonotic viral threats and infections in humans
<i>Source:</i> Project files	

6.13 **Use of the data.** Overall, the usefulness of the project M&E system was limited for project management. First, because of the restructuring the project objectives and most of the outcome indicators changed mid-stream and therefore there were only limited areas where results could be monitored from start to finish—for example only the first two indicators did not change with the restructuring but then these did not provide very relevant information in the first few years. Second, the restructuring happened in October 2009. After the restructuring the data system shows only two finalized ISRs both of which report on the outcome indicators as included at appraisal and not the revised ones. The ICR provides useful information on six of the seven outcome and 14 of the 28 intermediate outcome indicators. It is not clear why all the indicators included at restructuring are not reported upon. The KAP survey was used to provide information on some of the outcome and intermediate outcome indicators.

6.14 Overall, project M&E is rated *modest*.

Bank Performance

6.15 **Quality at Entry.** Given the urgency of the situation in the country, the Bank responded with alacrity to the Borrower's request for support, taking advantage of the flexibility in its procedures under Operational Policy 8.50. The project went from concept review to approval in under three months, and given the number of steps that are involved in getting approval, Bank staff must have worked under enormous time pressure.

6.16 The project was relevant to the global emergency and the Bank team appropriately coordinated with the UN agencies and international technical organizations and helped build the synergy between the global and national response. The project design incorporated lessons from Albania's experience with dealing with the 2006 outbreaks—among others, the

importance of paying compensation rapidly, need to improve biosecurity, and need to address bottlenecks in surveillance and diagnostics.

6.17 Overall, the design had four strengths.

- First, the project provided for MAFCP and MOH to come together in one intervention allowing for a holistic approach to tackling AI;
- Second, recognizing the difficulty in getting staff from different sectors to work together, the design realistically provided for a multi-sector, multi agency Task Force to take a lead role in project coordination and supervision;
- Third, the project involved cooperation between international technical agencies and the World Bank. WHO, FAO and OIE took the lead with the human and animal health components and the World Bank providing funding support. UNDP and UNICEF were also involved in preparation and implementation. A multi-agency mission, including the World Bank, WHO, UNDP, and UNICEF participated in a pre-appraisal and technical consultations mission in April 2006. Standards recommended by the WHO, FAO and OIE were to be followed in the upgrading/building of laboratories, isolation rooms, and in trainings;
- Finally, through a horizontal adaptable program loan (APL), the country-level effort was to be coordinated with the global effort to control avian influenza.

6.18 Within the Bank, though the project involved staff from both agriculture and health sector units, it was slotted under the Agriculture and Rural Development sector and the main Task Team Leader (there were two over the lifetime of the project) was always from that sector. Interviews with task team members suggest that this did pose a challenge in terms of incentives for the health sector staff and there had to be some learning in getting the two sectors to work together.

6.19 Better understanding of sector-specific issues was needed for some of the training programs supported. For example, in deciding the emphasis that the project would put on training of primary health workers on communicable diseases the project could have benefited from the findings of the Health Sector Note (World Bank 2006a) that showed that many Albanians by-pass primary care staff , preferring to go directly to hospitals.²⁷

6.20 Operational Policy 8.50 notes the importance of considering *urgency* when deciding on support with an emergency project. Though containing an outbreak of avian influenza through early detection and rapid response was an *urgent* need, several project activities supported longer term capacity building and could have been better prepared. An example is

²⁷ “Due to low perceived quality, bypassing of primary care in favor of seeking care at polyclinics or hospital outpatient facilities is widespread even for simple conditions like a cold or a flu. This leads to low utilization of primary care facilities and extremely low productivity of primary care staff. On average, a primary care doctor sees only about eight patients per day, with marked regional variations resulting in as few as three visits per day in certain regions. Analysis of primary care activity in Tirana region further points to substantial inter-facility variation in productivity. The gatekeeper role that general practitioners (GPs) are expected to play is not functioning, even though the MOH has introduced a fee system, which would require payment for care by all those who seek outpatient care directly at a polyclinic or at the hospital. The fee structure, however, is such that it provides the estimated 60 percent of the population without a health insurance card with little incentive to see a primary care physician, particularly if it is felt that the physician will be unable to provide the expected care” (World Bank 2006a)..

the setting up of the National Veterinary Epidemiological Unit. Supervision missions report that mid-way through the project there was still a lack of strategic vision and work plan for the unit. There was also the issue of the Unit's integration with the epidemiology resources and information systems developed under an ongoing EU project, which should have been resolved up front.²⁸

6.21 There were other shortcomings. M&E needed much greater attention. An attempt should also have been made at drawing a distinction between emergency and non-emergency activities being supported under the project. Consideration should have been given to whether the inclusion of the latter could have been avoided to keep the project design less ambitious. Further, clearly defining lines of responsibility in the implementing agencies would also have made implementation easier.

6.22 Quality at entry is rated *moderately satisfactory*.

6.23 **Quality of Supervision.** The Bank continued to give importance to working with other partners and provided intensive supervision and advice to deal with several implementation challenges as they arose. Location of the task team leader in the country office close to the client appears to have helped in this regard. The Bank also played an important role in encouraging the veterinary service in Albania to contact OIE to undertake a Performance of Veterinary Services analysis to understand shortcomings and identify priorities for action.

6.24 However, greater attention should have been given to the quality of M&E and its utilization. It is a particular weakness that even though the indicators were revised after restructuring, M&E reporting in ISRs continued on the earlier indicators. Management oversight was lacking in this regard. Though there were eight outcome indicators at the design stage the Implementation Status and Results Report (ISRs) reported on only five of them. There is no explanation as why the five were selected out of the eight for reporting. There was little information on project outcomes in the initial year as disbursement was very low and reporting was primarily on activities that were being undertaken and was not useful for project management—for example, the first five ISRs for two of the five outcome indicators only note that the “Operational Manual outlines detailed procedures to be followed” with additional information that they are “On track” in the fourth and fifth ISRs. On the other three indicators the information provided in the ISRs was mainly output related, for e.g. for the indicator on *behavior change among key veterinary and public health personnel*, the first three ISRs only note that two trainings were completed and that the baseline KAP questionnaire was developed. Only 8 of the 28 intermediate outcome indicators were reported on again with no explanation as to why they were prioritized.

6.25 Further, given the weaknesses in the implementation of the animal health component in the early years, the Bank should have carefully assessed whether it was realistic to expect that the permit for the Animal Health laboratory would become available and the construction completed in the short time available before agreeing to the extension. The ISRs

²⁸ The EU Small Ruminant Project had component activities similar to the project. The EU project had also developed and was operating a system of field data collection linked to the central server in the Food Safety and Veterinary Institute.

show that the country unit had advised the task team at one point that they consider canceling the project. Greater discussion between the sector and country units within the World Bank was warranted before the extension. Further, once the Bank had actually agreed to the extension, it should have brought pressure to bear at the highest level of Government on getting the approval of the building permit and completion of the construction before project closing.

6.26 Quality of supervision is also rated *moderately satisfactory*.

6.27 Overall Bank Performance is rated *moderately satisfactory*.

Borrower Performance

6.28 **Government performance.** The Government, with the support of the international community, focused on mounting a rapid response, improving surveillance, and increasing awareness for avian influenza prevention and control in the country. It also played an important role in project preparation, and the cross-sectoral nature of the Task Force was critical to the implementation of a multi-sector intervention. There was also continuity in the leadership of the Task Force.

6.29 However, in the early period of implementation there was confusion regarding the reporting lines in the project management and implementation structures which adversely affected implementation. The Government also could not resolve the issue for the building permit for the Animal *Health laboratory which led to a cancelation of IDA resources*. It should have made greater effort to find a way to resolve the issue of obtaining the building permit from the Tirana municipality. One way could have been to raise the profile of the issue to highest levels of Government particularly when it became clear that it was a political rather than a logistic constraint that did not allow the permit to be obtained from the Tirana Municipality Committee

6.30 Government performance is rated *moderately satisfactory*.

6.31 **Implementing agencies.** There were basically three separate implementing agencies—the Task Force, the Ministry of Agriculture, Food, and Consumer Protection, and the Ministry of Health. Overall the Task Force played an important coordinating role and there was good commitment from the project coordinators. In the initial years however, there was lack of inter-ministerial coordination and lack of enthusiasm and ownership among some agencies, particularly the veterinary directorate towards the implementation of the project. The Task Force as the main implementing agency lacked experience with World Bank projects, in particular procurement and financial management procedures and this led to delay in appointment of key staff and in submission of audit reports and negatively affected project implementation. Capacity in MAFCP to implement the project was weak and the limited buy-in of project activities by the veterinary directorate in the initial years also handicapped project implementation. The leadership provided by the MOH could also have been stronger. However, MOH played a key role in the implementation of the public awareness and information campaign component and MOH's role was particularly strong when the focus of the public awareness campaign shifted to H1N1 in 2009.

6.32 Implementing agency performance is assessed as *moderately satisfactory*.

6.33 Overall Borrower performance is assessed as *moderately satisfactory*.

7. Lessons

7.1 Building on the project experience this assessment identifies five main lessons:

7.2 **In designing an emergency intervention, it is important to distinguish between immediate response and longer-term capacity building activities to deal with future emergencies.** However, the latter usually benefit from longer preparation and coordination with other sector interventions. In the Albania project several activities were included that were not of an emergency nature. The quick preparation that was needed in an emergency situation did not allow for adequate consideration of the findings of analytical work or for building coordination with other relevant ongoing Bank sector projects.

7.3 **Stronger Management oversight is needed to ensure that project M&E is actually utilized as a management tool for effective project implementation.** In the Albania project an M&E system was set up but was not utilized for effective management of the project. Had it been used, the Bank would have known that, given the weaknesses in the implementation of the animal health component from the very beginning, it was unrealistic to expect that the permit for the Animal Health Laboratory would become available and the construction completed in the short time available before project closing.

7.4 **Persistent occurrence of H5N1 infections in poultry around the world means that conditions for the mutation of the virus continue to prevail, including in Albania, where biosecurity levels remain weak on poultry farms.** Greater effort is needed, both globally and in Albania, to improve surveillance in backyard poultry systems and wildlife to reduce risks. While increasing awareness, diagnostic and treatment capacity is important, attention to what all three technical organizations—the WHO, FAO and OIE—have emphasized “the need to contain highly pathogenic avian influenza at source” needs to be given priority attention. As Albania strives to conform to EU standards it is likely that efforts will be made to improve enforcement of biosecurity norms. However, it is too soon to tell when this would happen. Biosecurity levels are very weak in backyard poultry systems in Albania where about 85 percent of birds are reared. Even in commercial poultry houses the level to which sound management practices are adopted is variable. Improving biosecurity would be important for reducing the chances for the mutation of the virus and hence the risk that the pandemic occurs.

7.5 **Early cooperation with UN agencies and international technical organizations can offer synergy and provide a basis for sustaining at least some programs on project closure.** Even though budgets are tight, in the case of this project awareness raising activities will likely not face a shortage since several international organizations came together in preparing the communication strategy and resources from one or the other source could be made available were an emergency to arise.

7.6 More effective ways of working with the media to communicate disease risks are needed to avoid panic and build public confidence. While the communication campaign supported through the project successfully spread the information on the disease, it also created panic and led to a large number of people moving away from consuming poultry meat which was harmful for the industry.

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Annex A. Basic Data Sheet

ALBANIA: AVIAN INFLUENZA CONTROL AND HUMAN PANDEMIC PREPAREDNESS AND RESPONSE PROJECT P100273 (IDA-42060, TF-56728)

Key Project Data (amounts in US\$ million)

	<i>Appraisal estimate</i>	<i>Actual or current estimate</i>	<i>Actual as % of appraisal estimate</i>
Total project costs	6.10	4.70	77.00
Loan amount	5.00	3.90	78.00
Cofinancing	0.80	0.60	75.00
Cancellation	-	1.60	-

Cumulative Estimated and Actual Disbursements

	<i>FY07</i>	<i>FY08</i>	<i>FY09</i>	<i>FY10</i>	<i>FY11</i>
Appraisal estimate (US\$M)	1.73	3.66	4.43	5.00	5.00
Actual (US\$M)	0.81	1.18	2.09	4.09	3.87
Actual as % of appraisal	47.00	32.00	47.00	82.00	77.00
Date of final disbursement: March 2011					

Project Dates

	<i>Original</i>	<i>Actual</i>
Initiating memorandum	03/20/2006	03/31/2006
Negotiations	03/21/2006	03/31/2006
Board approval	06/21/2006	06/27/2006
Signing	-	07/11/2006
Effectiveness	10/16/2006	10/16/2006
Restructuring		10/15/2009
Closing date	06/30/2009	12/31/2010

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Other Project Data

There was no follow-on Avian Flu intervention.

Annex B. Background on Influenza and Avian Influenza

Influenza and Avian Influenza (AI).²⁹

Influenza viruses: Influenza in humans can be caused by type A, B or C viruses, with the former 2 causing most human infections. Influenza A viruses naturally infect humans, as well as such animals as birds, pigs, and horses, and they generally cause yearly epidemics and, potentially, pandemics. Infections with influenza B virus are generally restricted to humans and cause epidemics more rarely.

Avian influenza in birds: Avian influenza is caused by A type viruses that occur naturally among wild birds that usually do not exhibit symptoms. Avian influenza is very contagious among birds. Infected birds shed the virus in their saliva, nasal secretions, and feces. Domestic birds such as chickens, ducks and turkeys can become infected through contact with infected wild birds, from other infected domestic birds, or through contact with dirt in cages, water or feed that has been contaminated. Infection in domestic birds can result in either a low pathogenic form of the disease which may go undetected because of mild, not very obvious symptoms (such as ruffled feathers or a drop in egg production) or a highly pathogenic form (where multiple organs get affected) that spread rapidly with mortality rates that can reach 90 - 100 percent within 48 hours. An example of the latter is the H5N1 virus. The subtypes differ based on differences in two main proteins on the surface of the virus (hemagglutinin [HA] and neuraminidase [NA]). There are 16 known HA subtypes and 9 known NA subtypes of influenza A viruses. Many different combinations of HA and NA proteins are possible. Each combination represents a different subtype.

Human infections with avian influenza viruses: The avian influenza virus does not normally infect humans but can infect them if they come in contact with infected poultry or contaminated surfaces. Symptoms of avian influenza in humans range from usual human influenza-like symptoms (e.g., fever, cough, sore throat, and muscle aches) to eye infections, pneumonia, severe respiratory diseases (such as acute respiratory distress), and other life-threatening complications. The symptoms and severity vary depending on the virus type. The highly pathogenic H5N1 virus that has recently been circulating in poultry does not as yet readily circulate in humans. However, where human infections have occurred in contact with infected poultry the virus has been deadly. As of March 16, 2011, the laboratory-confirmed human toll stood at 534 cases, including 316 fatalities, representing a case-fatality ratio of 60 percent.³⁰

Pandemic in humans with the avian influenza virus: Annual or seasonal influenza epidemics are caused by the previous seasons' viruses or by ones with slight antigenic changes. In contrast, a pandemic is caused by an influenza A virus that contains

²⁹Source for this information: Source: CDC 2010, McKibbin and Stoeckel 2006, United Nations and the World Bank 2010, World Health Organization 2005, Lazzari and Stohr 2004, Whitney and Monto 2006, Monto and others 2006, Petric and others 2006.

³⁰ The actual case-fatality ratio (total number of deaths divided by the total number of cases) may be lower because it is likely that the number of deaths is largely accurately counted as autopsies can confirm the cause of death as H5N1, but many mild cases may not be counted as the patients may not visit the doctor or the hospital.

hemagglutinin (HA) for which there is no preexisting immunity, facilitating the virus's rapid spread throughout the world. Through re-assortment or mutation the avian influenza virus could become capable of replicating in humans and spreading easily among them. Mutation occurs when a virus changes its genetic makeup allowing it to transmit from person to person, whereas re-assortment occurs when two different viruses exchange genetic material. The re-assortment could happen if animals that are susceptible to both human and avian flu, such as pigs, become concurrently infected with both kinds of flu. The 2009 H1N1 pandemic was caused by a virus that emerged from pigs. H3N2, H1N1, and H2N2 are examples of avian influenza virus types that have, in the past, circulated among humans. Studies confirm that the 1918-19 Spanish flu likely originated from the re-assortment of avian and human viruses. Since the 1918 pandemic, the population of the world has grown 3-fold and a severe pandemic could lead to even more deaths today. The 1957 H2N2 and 1968 H3N2 pandemics also involved new influenza viruses generated by re-assortment events, and, although they were less virulent than the 1918 H1N1 virus, they still caused significant morbidity and mortality. Both of these viruses resulted from re-assortment of a Eurasian wild waterfowl virus with a previously circulating human H1N1 virus.

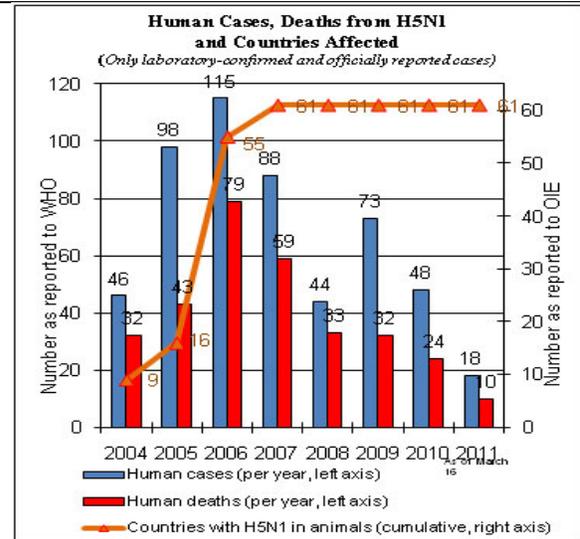
Pandemic date & common name	Area of Emergence	Influenza A Virus Subtype	Viral Change	Estimated case fatality rate	Estimated attributable excess mortality worldwide	Age groups most affected
1918-19 "Spanish flu"	Unclear	H1N1	Mutation from avian virus, in HA gene	2-3%	20-50 million	Young adults
1957-58 "Asian flu"	Sothern China	H2N2	Reassortment of 3 segments from avian virus (HA, NA, and polymerase protein) in combination with 5 genetic segments of the H1N1 virus	<0.2%	1.4 million	Children
1968-69 "Hong Kong Flu"	Sothern China	H3N2	Reassortment of 2 segments from H2N2 virus replaced by H3 and polymerase protein	<0.2%	1-4 million	All age groups

Source: CDC 2010, McKibbin and Stoeckel (2006), United Nations and the World Bank 2010, World Health Organization 2005, Lazzari and Stohr 2004, Whitney and Monto 2006, Monty and others 2006, Petric and others 2006.

For a pandemic to occur through an avian influenza virus, there would need to be three conditions: (i) a new subtype would have to emerge for which there was little human immunity; (ii) it would have to infect humans and cause illness; (iii) it would have to spread easily and sustainably among humans. To date the third condition has not been met because the virus has not improved its transmissibility among humans. The concern is that, with

some re-assortment of genes (through co-infection with two viruses) or adaptive mutation (that could increase the capability of the virus to bind to human cells), this could occur. Resistance in current virus strains to one of the two classes of available antiviral drugs as demonstrated in vitro has added to anxiety about controlling a pandemic if it does occur.

Annex B Figure 1. Human Cases of the Disease Around the World



Source:

<http://web.worldbank.org/WBSITE/EXTERNAL/NEWS/0,,contentMDK:20649058~menuPK:34480~pagePK:64257043~piPK:437376~theSitePK:4607,00.html>

Between 2003 and 2008, 47 countries reported the highly pathogenic H5N1 form of avian influenza in their domestic poultry (IFPRI 2008). H5N1 was first seen in a farmed goose in China in 1996 (IMCAPI Hanoi 2010). The first outbreak was recorded in Korea in December 2003 (World Bank 2008). By 2004 the virus had spread to several East Asian countries and by 2006 had reached several Asian, European and Middle Eastern and African countries. Unchecked trade and movement of infected poultry was one of the main triggers behind the spread of the lethal virus (FAO 2006). In the first three months of 2011, Bangladesh, Cambodia, Hong Kong SAR, China, India, Japan, Korea, Myanmar, and Vietnam reported outbreaks. To date the virus has affected 61 countries (Figure 1).

High Containment Laboratories

There are four levels of bio-safety laboratories (AAAS 2009, Petric and others 2006). The lowest level, biosafety level 1 (BSL-1), includes research “involving well-characterized agents not known to consistently cause disease in immunocompetent adult humans, and present minimal potential hazard to laboratory personnel and the environment.” Biosafety level 2 (BSL-2) includes “work involving agents that pose moderate hazards to personnel and the environment.” Biosafety level 3 (BSL-3) “is applicable to clinical, diagnostic, teaching, research, or production facilities where work is performed with indigenous or exotic agents that may cause serious or potentially lethal disease through inhalation route exposure,” and requires that laboratory personnel receive specific training in handling pathogenic and potentially lethal agents, and be supervised by scientists competent in handling infectious agents and associated procedures. Biosafety level 4 (BSL-4), the highest level, “is required for work with dangerous and exotic agents that pose a high individual risk of life-threatening disease, aerosol transmission, or related agent with unknown risk of transmission.”

Annex B Table 2. WHO Pandemic Phase Descriptions and Main Actions by Phase.				
Phase	Estimated Probability of Pandemic	Description	Main Action in Affected countries	Main Action in not yet affected countries
PHASE 1		No animal influenza virus circulating among animals has been reported to cause infection in humans.	Producing, implementing, exercising, and harmonizing national pandemic influenza preparedness and response plans with national emergency preparedness and response plans.	
PHASE 2	Uncertain	An animal influenza virus circulating in domesticated or wild animals is known to have caused infection in humans and is therefore considered a specific potential pandemic threat.		
PHASE 3		An animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks		
PHASE 4	Medium to high	Human-to-human transmission of an animal or human-animal influenza reassortant virus able to sustain community-level outbreaks has been verified.	Rapid containment.	Readiness for pandemic response.
PHASE 5	High to certain	The same identified virus has caused sustained community-level outbreaks in at least two countries in one WHO region.	Pandemic response: each country to implement actions as called for in their national plans.	Readiness for imminent response
PHASE 6	Pandemic in progress	In addition to the criteria defined in Phase 5, the same virus has caused sustained community-level outbreaks in at least one other country in another WHO region.		
POST-PEAK PERIOD		Levels of pandemic influenza in most countries with adequate surveillance have dropped below peak levels.	Evaluation of response; recovery; preparation for possible second wave	
POSSIBLE NEW WAVE		Level of pandemic influenza activity in most countries with adequate surveillance is rising again.	Response	
POST-PANDEMIC PERIOD		Levels of influenza have returned to the levels seen for seasonal influenza in most countries with adequate surveillance..	Evaluation of response; revision of plans; recovery	

Source: WHO 2009

Annex C. Assessing the Current Level of Preparedness in Albania to respond to Avian Influenza

AREAS	ACTIVITIES IN EACH AREA	CURRENT STATUS IN ALBANIA	WORLD BANK PROJECT CONTRIBUTION
Communication on strategy	Dissemination material, working with media,	Albania has been able to develop a reasonable communication strategy to inform the public about disease conditions. There is awareness on how to communicate with different levels of governments and with schools, NGOs and other groups in society during an emergency. Partnership between public health authorities and media has been strengthened over time and could be used for the future for dissemination of important messages	Bank project component was designed to contribute in this area and worked with international technical organizations and UN agencies. Dissemination material (posters, radio spots etc.) were developed and used through various channels (TV, radio etc.) Media and NGOs were engaged. Training was provided to improve public health reporting in media
Surveillance in birds	Surveillance of disease in poultry	A data system that registers all poultry with farmers is still missing although the NVEU collects regular data on all animal diseases including avian influenza. The risk from migratory birds and water fowl remains. Veterinarians currently get most of the information on diseases in migratory birds and waterfowl from informal sources such as hunters, hunter's associations and forestry and fishing service experts – a formal system of reporting and a surveillance and monitoring plan are lacking in this area	The project helped begin the process on poultry system surveillance under the NVEU but it has stalled. However, disease monitoring generally is happening.
Surveillance in humans	Public health surveillance comprises six core activities: detection, registration, confirmation, reporting, analysis and feedback	The ALERT* system provides for early detection and is a combination of hospital surveillance and weekly reporting from primary health care to monitor influenza like diseases and enables local epidemiologists to get better information on potential threat for emerging outbreak of avian influenza and other diseases. Surveillance is lacking for those with influenza like symptoms who do not go to primary health care centers. There are limitations on how much the ALERT system can pick up because pneumonia death is not a disease that requires coroner inspection and immediate notification (aide memoire Feb	Project provided some limited quantity of equipment for strengthening of ALERT system

AREAS	ACTIVITIES IN EACH AREA	CURRENT STATUS IN ALBANIA	WORLD BANK PROJECT CONTRIBUTION
		2009). There is an identified call center at IPH and the number is known to infectious disease specialists around the country	
Diagnosis capacity for identification of disease in birds	Laboratory capacity to test for virus/bacteria	Diagnostic capacity for avian influenza within country has been consolidated. However, the link between public and private veterinary services remains weak	Project provided for building capacity of laboratories in IVFS. The equipment for the RT-PCR was delivered and installed by end April 2008 in the IFSV and training on its proper use was provided to staff.
Diagnosis capacity and treatment in humans	hospital and laboratory capacity	<p>Diagnostic capacity for avian influenza in humans has been established in the country.</p> <p>In general capacity to isolate infectious patients remains weak particularly in hospitals in the regions.</p> <p>An ICU for infectious diseases exists at the Tirana University Center Hospital and has been treating patients with all kinds of infectious diseases</p>	<p>Bank contributed to upgrading of the laboratories at IPH and training of their staff. Training was also undertaken for staff at district level laboratories. Training was also provided by other international agencies.</p> <p>The ICU was completed at Tirana University Hospital Center and equipment was procured and installed. Key staff such as infectionists, pediatricians and nurses from that Hospital Center were trained in Italy for hospital infections control and clinical management of patients with Pandemic flu and also other diseases (e.g. tetanus, meningitis, sepsis, even HIV) that need pulmonary ventilation and other critical care.</p> <p>A study carried out under the project on triage and management of infectious diseases in regional hospitals found several shortcomings related to shortages on protocols for treatment and management of emergency situations and infectious disease patients, and availability of consumables such as gloves.</p>
Control strategy for animals	culling, bio-security and movement control when infections	Measures to respond immediately generally exist although transportations weaknesses might delay responses in remote areas.	Veterinary Law introducing, clearer and more effective provisions for general disease control purposes

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	occur	Practices for culling etc. are in place Vaccination of animals is given importance	A new EU compliant contingency plan for avian influenza was prepared, approved and published on MAFCP webpage
Health care response capacity with stockpiles of anti-virals/vaccines	Ability to acquire medicines and vaccines at short notice	An antiviral stockpile was created, vaccines also stocked	14,200 antiviral doses procured by the Project. The project also helped with procurement of vaccines and helped establish a system for quick procurement with the producing company (Roche).
Legal and regulatory framework	Veterinary law Compensation for farmers	The government has a compensation strategy in place. A veterinary law introducing clearer and more effective provisions for general disease control and clearly laying down the conditions under which compensation is provided was passed in September 2011	The government has a compensation strategy in place. A veterinary law introducing clearer and more effective provisions for general disease control and clearly laying down the conditions under which compensation is provided was passed in September 2011
Simulation exercises	Desk top simulation HINI pandemic actual event that required all parties to come and act together	Pilot inter-country integrated desktop simulation exercise for avian influenza in animal and human populations conducted in Tirana on Dec.17- 18 as part of FAO-WHO Regional Office for Europe project funded by USAID. It allowed neighboring countries to practice and develop response to avian influenza at the regional level. It provided an opportunity to strengthen working relations between sectors across countries including for issues such as border control January 2008 integrated desktop simulation exercise. The exercise identified gaps and specific needs for training and capacity building. The exercise raised awareness of the coordination arrangements at the regional and local level	World Bank was part of the simulation exercises Bank contributed to awareness campaign which was adapted to communicate messages on HINI
Coordination and rapidity of response	Between donors Between Ministries	The urgency to deal with avian influenza brought together international technical organizations in a way that has not happened before. Simulation exercises brought together and enhanced cooperation between donors and senior government officials from various Ministries, regional authorizes and	The implementation of the project forced staff from both MAFCP and MOH to collaborate and work closely together. This also applied to the sector units in health and agriculture within the Bank. The project also strengthened cooperation between the

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		<p>local levels, Task force helped increase coordination</p> <p>WHO organized regional training for Hospital Pandemic Preparedness in Albania in 2009.</p> <p>The Task Force facilitated preparation of National Contingency Plan with support of WHO, USAID, UNDP and other organizations which is adequate for stage 3 of the pandemic when there is no human to human transmission.</p>	<p>Government and donors such as WHO, FAO and OIE on human and animal health issues.</p> <p>The WHO training was followed by the Global Distance Learning Network (GDLN) session organized by the Bank under the WHO umbrella that provided further information to finalize the plans. Another GDLN session on clinical management was also organized by the Bank under the umbrella of WHO on clinical guidance and management</p>
<p><i>Notes:</i> *An early warning and response system for infectious disease surveillance was set up in 1999 in Albania as a part of the national surveillance network. It used a specific software package known as Albanian Epidemiological Reporting Tool (ALERT) which is based on weekly reporting from primary care systems and hospitals. An external assessment of the system was carried out in 2003. A WHO consultation carried out in 2006 for strengthening avian influenza preparedness in Albania found the ALERT system to be overall useful and timely although with some drawbacks.</p>			