

# IEG ICR Review

Independent Evaluation Group

<b>1. Project Data:</b>		<b>Date Posted :</b> 02/11/2013	
<b>Country:</b>	India		
<b>Project ID:</b>	P073651	<b>Appraisal</b>	<b>Actual</b>
<b>Project Name :</b>	In: Integrated Disease Surveillance Project	<b>Project Costs (US\$M):</b>	88.6
<b>L/C Number:</b>	C3952	<b>Loan/Credit (US\$M):</b>	65.0
<b>Sector Board :</b>	Health, Nutrition and Population	<b>Cofinancing (US\$M):</b>	0
<b>Cofinanciers :</b>		<b>Board Approval Date :</b>	07/08/2004
		<b>Closing Date :</b>	03/15/2010
<b>Sector(s):</b>	Health (55%); Sub-national government administration (30%); Information technology (10%); Central government administration (5%)		
<b>Theme(s):</b>	Other communicable diseases (29% - P); Health system performance (29% - P); Injuries and non-communicable diseases (28% - P); Decentralization (14% - S)		
<b>Prepared by :</b>	<b>Reviewed by :</b>	<b>ICR Review Coordinator :</b>	<b>Group:</b>
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## 2. Project Objectives and Components:

### a. Objectives:

According to the Project Appraisal Document (PAD, page 2) and the Development Credit Agreement (DCA, Schedule 2), the objective of the project was:

- **To improve the information available to the government health services and private health care providers on a set of high -priority diseases and risk factors, with a view to improving the on -the-ground responses to such diseases and risk factors .**

The project was formally restructured on two occasions, the first of which occurred in February 2007, following the outbreak of Avian Influenza in the country in 2006. The original project objective was maintained while *adding* the following as a second objective:

- **To minimize the threat posed to humans by Avian Influenza (AI) infection and other zoonoses from domestic poultry and prepare for the prevention, control and response to an influenza pandemic in humans .**

A second restructuring occurred in March 2010, due to the outbreak of the H1N1 virus in 2009, with the entire project objectives revised as follows:

- **To support the Government of India (GoI) to strengthen the integrated disease surveillance system for epidemic prone diseases by (i) enhancing central level monitoring and coordination functions; and (ii) improving state /district surveillance and response capacity with emphasis on selected (nine) states; and**
- **To support GoI efforts to timely prepare for, detect, and respond to influenza outbreaks in humans and animals.**

### b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

If yes, did the Board approve the revised objectives /key associated outcome targets?

Yes

Date of Board Approval: 02/13/2007

### **c. Components:**

#### ***Original Objectives :***

1: Establishing and Operating a Central-Level Disease Surveillance Unit (Appraisal: US\$2.31 million; Actual: n/a): This component aimed to establish a new Disease Surveillance Unit in the Ministry of Health and Family Welfare to help coordinate and carry out decentralization of disease surveillance activities . Activities included: defining a new list of diseases to be included in the system (along with guidelines and protocols for reporting and responding to the diseases); establishing processes between the central level and regional /district levels for reporting; and establishing institutional arrangements in support of the above .

2: Integrating and Strengthening Disease Surveillance at the State and District Levels (Appraisal: US\$50.6 million; Actual: n/a): This component aimed to strengthen disease surveillance at the sub -national level, including increasing the involvement of local communities and the private sector . Activities included: improving data management capacity; implementing modern technology; and improving capacity to take action based on surveillance data . The project was to support all 35 states and territories in the country .

3: Improving Laboratory Support (Appraisal: US\$23.4 million; Actual: n/a): This component aimed to improve laboratory support for surveillance . Activities included: upgrading laboratories at the state level and introducing a quality assurance system for improving the quality of laboratory data .

4. Training for Disease Surveillance and Action (Appraisal: US\$2.6 million; Actual: n/a): This component aimed to improve the capacity of health staff to implement the surveillance activities . Activities included: providing training to health staff in the public sector, private sector, NGOs, and communities .

#### ***First Revision (2007):***

The original components were maintained, although the allocations for Components 2 and 3 were reduced to a combined total of US\$30.6 million. The following component was also added:

5. Support to India's Country Program for Preparedness, Control and Containment of Avian Influenza (Appraisal: US\$32.6 million; Actual: n/a): This component aimed to improve capacity for responding to human and animal influenza pandemics, as well as to increase public awareness of the disease threats .

#### ***Second Revision (2010):***

The project components were re-organized as follows, with a significant reduction in the geographic and technical scope of activities:

1. Central Surveillance Monitoring and Oversight (Appraisal: US\$6.0 million; Actual: US\$0.9 million): This component aimed to strengthen disease surveillance capacity at the central level for infectious diseases (non-communicable diseases were no longer within the scope of the project) . Activities included: funding for technical and managerial staff; establishing the information technology portal and equipment; and training for staff .

2. Improving State/District Surveillance and Response Capacity (Appraisal: US\$22.7 million; Actual: US\$17.8 million): This component aimed to strengthen disease surveillance capacity in *nine* selected states (reduced from the original scope of 35 states and territories). Activities included: funding for technical staff; funding for outbreak investigations; training of health staff; establishing priority health laboratories; and a pilot laboratory referral network .

3. Flu Surveillance and Response (Appraisal: US\$30.5 million; Actual: US\$7.8 million): This component aimed to strengthen capacity to respond to human and animal influenza outbreaks . Activities included: establishing diagnostic laboratories; funding for technical staff; funding for drugs and kits in response to influenza epidemics among humans; and training for health staff .

### **d. Comments on Project Cost, Financing, Borrower Contribution, and Dates:**

#### **Project cost :**

- The appraised cost of the project (original and first revision) was US\$88.6 million. The appraised cost of the project under the second revision (2010) was US\$80.6 million, due to the reduced scope of the project from 35 states to 9 states.
- The actual project cost was US\$43.6 million, or 54.1% of the appraised cost under the second revision. The reduction was due to the dropping of several project activities (particularly in the influenza response

component), as well as the reduced geographic scope of the project . The government had requested a final extension of the project period in order to complete activities under the animal influenza sub -component; however, the extension was not approved due to lack of readiness of project sites .

**Financing :**

- The original credit amount of US\$68.0 million was reduced to US\$60.0 million during the second revision (2010).
- In 2011, US\$16.0 million was cancelled from the human influenza response component . An additional US\$10.0 million was cancelled from the animal influenza response component . The cancellations were part of an effort to reduce the scope of the project .
- The actual credit disbursement was US\$26.5 million.

**Borrower contribution :**

- The Borrower contribution was appraised at US\$20.6 million, of which US\$17.1 million was provided.

**Dates:**

- *2007:* The project closing date was extended from September 2009 to March 2010, due to the first project revision.
- *2010:* The project closing date was extended again from March 2010 to March 2012, due to the second project revision.

**3. Relevance of Objectives & Design:**

**a. Relevance of Objectives:**

*Original, First and Second Revision: Substantial .*

Communicable diseases constituted a significant share of the disease burden in the country, and although the government's individual, disease-specific programs covered a number of those conditions, there were inefficiencies and lack of timeliness in responding to outbreaks . Therefore, improved surveillance (through increased coordination nationwide and improved quality of reporting ) was an important step towards improving the effectiveness of the government's response . The Bank's Country Assistance Strategy for FY 2009-2012 identifies improving the organization and delivery of public services as a key pillar, as part of efforts to enhance development effectiveness of public spending . The government's development strategy, as laid out in its Eleventh Five Year Plan (2007-2012), also identifies access to essential services in health as a priority .

**b. Relevance of Design:**

*Original, First and Second Revision: Substantial .*

Project activities were likely to lead to the intended outcomes of improved information for high -priority diseases . Infrastructure (in terms of technology and laboratory networks ) and information processes were to be established for collecting surveillance data from decentralized levels, along with building capacity at the central level to coordinate surveillance, analyze the information, and guide responses to potential outbreaks . Greater participation of the private sector and communities aimed to increase the quantity of information available, while training and quality assurance methods aimed to improve the quality of information . Improved diagnostic capabilities for avian influenza would also support the government's preparedness for outbreaks .

**4. Achievement of Objectives (Efficacy):**

According to the ICR (page 19), the project represented the only mainstream disease surveillance and response initiative in the project states, and thus it was the primary financier of surveillance units, training on surveillance, and equipment for laboratories . Although the project funded only the nine selected states from 2010 onwards, the integrated surveillance technical approach was still used by the government in the remaining states, and capacity support provided to the central surveillance unit likely benefited all states in the country . According to the project team, activities continued in the non-project states with government funding, as a step towards longer -term financial sustainability for the surveillance system . The only actual change was that the Bank reimbursed costs to the nine project states, while the other states were not reimbursed .

**To improve the information available to the government health services and private health care providers on a set of high-priority diseases and risk factors / To support the Government of India (GoI) to strengthen the integrated disease surveillance system for epidemic prone diseases**

**Substantial** , for the Original, First and Second Revision, due to evidence of improved availability and timeliness of information.

### Outputs

- Establishment of an information technology network (via an internet portal) in 95% of districts in project states, including connectivity to the central and state surveillance units . The ICR (page 10) reports that creation of the internet portal made data entry, query, analysis, and report generation at the district level possible, as well as making available other information resources related to disease surveillance .
- Establishment of a national Call Center for reporting any unusual health events .
- Provision of monthly feedback to districts in project states on surveillance data .
- Dissemination of weekly outbreak reports by the central unit .
- Establishment of a referral lab network (comprised of 63 private hospitals and 17 district-level labs). Each of the participating facilities underwent an External Quality Assurance System review process, also established by the project.
- Training of 191,433 health staff on disease surveillance and response .

### Outcomes

The ICR primarily reports data from the period 2008 onwards, as the technology-based system did not become "stable" until part way through the project period . In some cases, data are reported only for the nine states still receiving Bank funding, although the key project activities (i.e. establishment of the IT and laboratory network, training of personnel) were actually implemented in all states . The project states, which are the nine largest in the country, account for 48.6% of the national population.

- The percentage of diseases reported via the web portal increased annually, from a range of 40-50% in 2009 to a range of 90-95% in 2011.
- The number of outbreaks reported in the nine project states increased from approximately 400 in 2008 to 1000 in 2011.
- The number of outbreaks investigated in the nine project states increased from approximately 100 in 2008 to 650 in 2011.
- The number of outbreaks confirmed in the nine project states increased from approximately 100 in 2008 to 200 in 2011.
- The percentage of districts in the nine project states that were providing surveillance reports in a timely and consistent manner (i.e. weekly) increased from 25% in 2009 to 67% in 2012, falling slightly short of the target of 70%.
- The percentage of outbreak responses in the nine project states that were assessed to be adequate was 85%, as measured by the two criterion of "investigation taking place within 48 hours of first reported case" and "appropriate samples being sent for lab investigation ." However, the percentage of responses that were assessed to be adequate as measured by a third criterion, "availability of final outbreak investigation report," was only 5%.
- The proportion of blocks (sub-district level i.e. towns) that had at least one private provider sharing weekly surveillance reports was 90%.

### To minimize the threat posed to humans by Avian Influenza (AI) infection and other zoonoses from domestic poultry and prepare for the prevention, control and response to an influenza pandemic in humans / To support government's efforts to timely prepare for, detect, and respond to influenza outbreaks in humans and animals

**Modest**, for the First and Second Revisions . Although infrastructure was established, there was insufficient evidence of the effectiveness of the influenza activities, as well as shortcomings in the implementation of animal influenza activities.

### Outputs

- Establishment of 12 diagnostic laboratories for human influenza .
- Conducting of routine surveillance for human influenza in 36% of hospital sites nationwide .
- Establishment of 3 diagnostic laboratories for animal influenza .
- Provision of training to health staff, veterinarians, rapid response teams, and field staff on influenza surveillance .

The following planned activities were cancelled : Avian Influenza surveillance among commercial poultry farm flocks, surveillance for migratory birds and backyard poultry around wetlands and flyways, satellite mapping of bird sanctuaries, and development of a satellite-based animal disease surveillance and information system .

### Outcomes

- 11 out of 12 diagnostic laboratories for human influenza were fully functioning .

## 5. Efficiency:

**Modest** due to lack of project-specific data confirming that project resources were used efficiently . Project design targeted twenty-four priority diseases for surveillance . It also focused its operations in rural areas rather than urban centers, due to the greater disease burden of infectious diseases in rural populations, although activities targeting vulnerable groups (Scheduled Tribes) were not implemented as planned . However, the project period was extended twice, for a total implementation period of eight years, and the internet -based reporting system did not become fully functional until the latter half of the project period . There were extensive implementation delays due to difficulties in hiring qualified technical staff and in procuring goods and consultancies . The ICR (pages 28-29) also notes that new testing technologies for Avian Influenza emerged during the project period that were more cost -effective than the approach used by the project .

a. If available, enter the **Economic Rate of Return (ERR)/Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation** :

	Rate Available?	Point Value	Coverage/Scope*
Appraisal	No		
ICR estimate	No		

\* Refers to percent of total project cost for which ERR/FRR was calculated.

## 6. Outcome:

*Original, First and Second Revision:* **Moderately Satisfactory** .

Relevance of project objectives and design are rated Substantial . Achievement of the objective to improve information on a set of high-priority diseases/to strengthen the integrated disease surveillance system for epidemic prone diseases (original, first and second revision) is rated Substantial due to evidence of improved information . Achievement of the objective to minimize the threat posed by Avian Influenza /to prepare for, detect, and respond to influenza outbreaks in humans and animals (first and second revision) is rated Modest due to insufficient evidence of the effectiveness of the influenza activities . Efficiency is rated Modest due to lack of project-specific data confirming efficient use of project resources .

a. **Outcome Rating** : Moderately Satisfactory

## 7. Rationale for Risk to Development Outcome Rating:

Operating costs of the surveillance system are relatively low, and therefore it is expected to remain functional and financially viable. There is general support for the surveillance activities from all political spheres and stakeholders . The technical approaches used for disease surveillance remain relevant, including a recent updating of the Avian Influenza testing methodology. Human resource capacity improvements are likely to be sustained, as the project has been integrated into the National Rural Health Mission program; however, the overall stability and quality of a cadre of infectious diseases staff is uncertain .

a. **Risk to Development Outcome Rating** : Moderate

## 8. Assessment of Bank Performance:

### a. Quality at entry:

The project's design was based on international experience and sound technical approaches for integrated disease surveillance systems. Infrastructure investments and institutional arrangements (including the delineation of responsibilities between the central unit and decentralized levels ) were both used to institutionalize disease surveillance. However, some of the risks identified in the risk assessment were under -rated as Moderate and eventually materialized as higher level risks . These included financial management, environmental management, and qualified technical capacity . Overall, these human resource constraints led to delays in project staffing and procurement, which led to significant implementation delays . There were also some shortcomings in monitoring and evaluation (see Section 10).

**Quality-at-Entry Rating** : Moderately Satisfactory

### b. Quality of supervision:

The Bank team's supervision efforts were intensive, focused on identifying and resolving implementation problems. The team frequently drew upon technical expertise from other agencies (i.e. the World Health Organization), and demonstrated flexibility in response to the changing country and global context. The emerging health crises, along with the implementation challenges of the project, led to the scaling down of the geographic and technical scope of the project through two project restructurings. However, task team leadership changed six times, and there was frequent turnover in fiduciary specialists, both of which negatively affected the consistency and continuity of the Bank's support. The addition of the Avian Influenza activities brought coordination challenges, with a second sector unit involved in supervision of the project. The ICR (page 28) reports that it was "not always a very effective relationship" and that "smooth information sharing and collaboration between the two sectors .... never fully established." There were also shortcomings in safeguards compliance (see Section 11).

**Quality of Supervision Rating :** Moderately Unsatisfactory

**Overall Bank Performance Rating :** Moderately Satisfactory

## **9. Assessment of Borrower Performance:**

### **a. Government Performance:**

The central government demonstrated strong commitment to the project's objectives, in part reflected by its decision to assume full repayment responsibility for the Credit, and thereby allocating project funds to the implementing states as grants. It also issued a Public Health Emergency Bill that highlighted the importance of disease surveillance. The government responded to the shortages in human resources by sanctioning (via the National Rural Health Mission) all contractual positions of disease specialists needed for the integrated surveillance system. However, there were significant implementation delays due to difficulties in hiring qualified technical staff. For example, as of project closing, only 127 out of 231 positions for epidemiologists were filled.

**Government Performance Rating** Moderately Satisfactory

### **b. Implementing Agency Performance:**

The Ministry of Health and Family Welfare was the primary implementing agency at the central level and was overall effective in implementing the key activities of the project. However, there were procurement difficulties due to a lack of agreement with the Bank on appropriate rules and procurement methods. There were also significant procurement delays for the animal health component, which led to the cancellation of some activities. There were significant shortcomings in safeguard compliance that were not addressed by project closing (see Section 11). Financial management improved significantly after 2010, with stabilization of the financial management staff at the central level and establishment of more effective arrangements at the decentralized levels, including more streamlined reporting requirements.

**Implementing Agency Performance Rating :** Moderately Unsatisfactory

**Overall Borrower Performance Rating :** Moderately Satisfactory

## **10. M&E Design, Implementation, & Utilization:**

### **a. M&E Design:**

The M&E framework included indicators to measure coverage, timeliness, and responses to surveillance data. However, there were some shortcomings in the choice of indicators, including the omission of sensitivity (correctly identified outbreaks) and specificity (correctly identified non-outbreaks); and time interval between diagnosis and reporting. There were no evaluative activities planned such as under-reporting investigations or cost effectiveness analyses.

### **b. M&E Implementation:**

While data collection on project indicators was carried out regularly, the lack of full-time, designated M&E staff led to limited data analysis during the project period.

**c. M&E Utilization:**

There is limited information in the ICR on the use of M&E to inform project or policy decisions .

**M&E Quality Rating :** Modest

**11. Other Issues**

**a. Safeguards:**

The project was classified as a Category "B" project, triggering OP 4.01/BP 4.01 on Environmental Assessment (due to medical waste issues) and OD 4.2 on Indigenous Peoples (due to Scheduled Tribe populations that would require culturally sensitive strategies). Although a Bio-waste Management Plan was developed for the project, six out of the eight identified actions were not completed according to the agreed timetable . According to the ICR (page 14), there was no documentation to confirm that the required monitoring and reporting system was established .

The Tribal Development Action Plan experienced significant delays in implementation . According to the ICR (page 14), the project did not report disaggregated data to confirm whether the tribal populations participated in and benefited from the project, as mandated in the Action Plan .

**b. Fiduciary Compliance:**

Financial management: A Detailed Implementation Review conducted by the Bank for health sector projects in the country led to the prohibiting of decentralized expenditures as a general rule . However, since the project was designed to finance such expenditures at the local level, there was confusion about expenditure reporting and frequent occurrences of ineligible expenditures . There were significant delays in fulfilling the requirements for financial audit. Although there was no information in the ICR on whether any audits were qualified, the project team subsequently confirmed that issues raised in audits were resolved .

Procurement: There were difficulties in hiring qualified technical staff and in procuring goods and consultancies, which led to implementation delays. There were also significant delays in procurement for the animal health activities, which subsequently had to be dropped .

**c. Unintended Impacts (positive or negative):**

**d. Other:**

<b>12. Ratings:</b>	<b>ICR</b>	<b>IEG Review</b>	<b>Reason for Disagreement /Comments</b>
<b>Outcome:</b>	Moderately Satisfactory	Moderately Satisfactory	
<b>Risk to Development Outcome:</b>	Moderate	Moderate	
<b>Bank Performance :</b>	Moderately Satisfactory	Moderately Satisfactory	
<b>Borrower Performance :</b>	Moderately Satisfactory	Moderately Satisfactory	
<b>Quality of ICR :</b>		Satisfactory	

**NOTES:**

- When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.
- The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

**13. Lessons:**

Lessons from the ICR (page 31-33), adapted by IEG:

- As disease risk is often higher in more socially and economically vulnerable communities, it is important to consider interventions specifically among these communities in project design . Interventions may receive more attention if integrated in the explicit project components, rather than in the safeguard actions .

Lessons drawn by IEG:

- The M&E framework should include not only monitoring indicators, but also evaluative elements . In the case of this project, there were no M&E arrangements to assess whether the project activities led to utilization/analysis of information to improve the government's response to diseases .

**14. Assessment Recommended?**

Yes  No

**15. Comments on Quality of ICR:**

The ICR establishes a clear results chain and adequate analysis of the evidence for the objective to improve surveillance information, in particular linking project outputs to monitorable outcomes . However, although project outputs were reported for the objective to mitigate the threat of an influenza outbreak, the outcomes attributable to such outputs were less clear . The ICR is overall consistent with guidelines; however, it does not follow specific guidelines in applying a weighted rating in the case of restructured projects .

**a.Quality of ICR Rating :** Satisfactory