INDIA
INTEGRATED DISEASE SURVEILLANCE PROJECT (Credit 3952-IN)
JOINT IMPLEMENTATION REVIEW
AIDE MEMOIRE
April 13-21, 2011

Introduction

1. A Joint Implementation Review (JIR) of the Integrated Disease Surveillance Project (IDSP) was carried out by the World Bank with technical support from the World Health Organization (WHO) from April 13-21, 2011[1]. The review team held consultations with the Bird Flu Cell (BFC) of the Department of Animal Husbandry, Dairy and Fisheries (DADF), to review implementation progress of the Animal Health Component. For the Human Health component, a three-day consultation was organized in Delhi with the Central Surveillance Unit (CSU) in NCDC as well as the State Surveillance Officers from the nine priority states. Prior to the review, joint field visits were organized in all of these nine priority states. The discussions with the Center and states included an assessment of overall progress as well as program implementation in each of the states, including thematic discussions covering monitoring and evaluation, use of information technology for data reporting and management, laboratory based surveillance, status of human resources and capacity building, and surveillance of seasonal and avian influenza.

2. The review team expresses its sincere gratitude to Dr. R. S. Shukla, Joint Secretary, Ministry of Health and Family Welfare (MOHFW), Dr. L. S. Chauhan, Director of National Center for Disease Control (NCDC) and Project Director IDSP, for the useful discussions related to project progress. The team likes to especially thank Dr. Jagvir Singh, the National Project Officer (NPO) for IDSP, for organizing the Joint Monitoring Review on behalf of the MOHFW. The team also expresses its gratitude to Mr. Rajbir Singh Rana, Joint Secretary, DADF, Ministry of Agriculture; Mr. A. B. Negi, Joint Commissioner; and Mr. Subhash Chandra, Financial Specialist, DADF for their cooperation, valuable inputs and support extended to task team during the mission. The review team compliments the state and district surveillance units of Andhra Pradesh, Karnataka, Tamil Nadu, Punjab, Uttarakhand, Gujarat, Rajasthan, Maharashtra and West Bengal for the excellent organization of the field visits prior to the JIR and for their active participation in the three day review meeting in Delhi.

3. The overall objective of the review was to assess operational progress made in the implementation of the IDSP since the last review. Special attention was given to the following topics:

- Assess progress on the agreed key actions for project upgrading the current implementation flags (procurement, FM, disbursement)
- Review implementation progress in each of the nine priority states with a focus on identifying successes and bottlenecks for implementation.
- Agree with the client on the priorities for the last year of implementation, including an estimation of the likely unspent Credit and partial cancellation.
- Review the general procurement and financial management aspects of the project.
- Follow up on progress related to the environmental and social safeguards.

Key Project Data

[1] Members of the review team : **World Bank**: P. Kudesia (Task Team Leader, SASHN), S. Nagpal (Human Health), R. Samantaray (Avian Influenza Animal Health) , S. Balagopal (Procurement), M. Mamak and S. Gupta (Financial Management), S. Mishra (Social Development), S. Pinto and A. Bossuyt (HR, Laboratory Services, IT, Avian Influenza Human Health and operational issues), K. Suresh (Public Health) R. Tavorath (Environment); V. Khanna and N. Singh (Program Assistants); **WHO**: S. Krishnan and H. K. Pradhan (Epidemiology); and R. Samuel (Public Health) and R. Chauhan and A. Sharma (Microbiology).

		Summary Ratings	Last	Current
Approval Date:	July 2004	DO	MU	**MS**
Closing Date:	March 2012	IP	MU	**MS**
% Disbursed:	33%	Financial Management	MU	**MS**
Undisb Amt ($m)	39.6	Project Management	MS	**MS**
		Counterpart Funds	S	**S**
		Procurement	U	**MU**
		M&E	MS	**MS**
		Legal Covenant	CP	**C**
		Safeguard	MS	**MS**

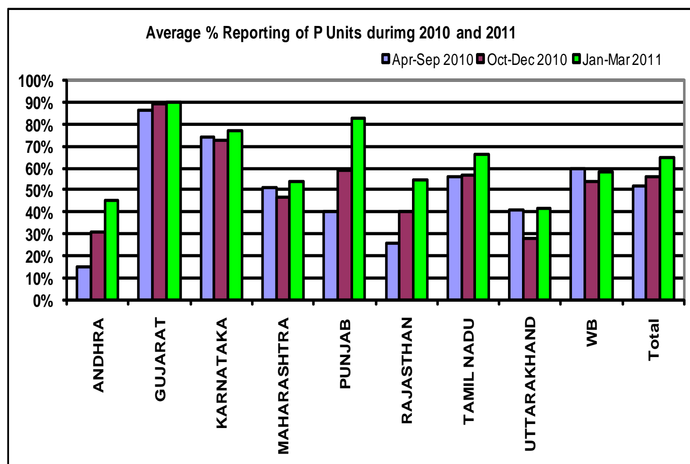
4. As a result of major implementation issues between 2004 and 2009, IDSP was restructured on March 29, 2010, with a two years extension (up to March 2012). At the time of restructuring, progress towards the Project Development Objectives (PDO), Implementation Progress (IP) including Financial Management (FM) was rated Moderately Unsatisfactory, and Procurement as rated Unsatisfactory. During the September 2010 review it was clear that while initial steps have clearly been taken to implement the project at the Center, some important fiduciary and implementation bottlenecks remained and the above ratings could not be upgraded. Actions were agreed with both implementing agencies in order to transit the risk flags from unsatisfactory to satisfactory. Following this review, a training of national data managers as well as a nationwide review meeting of the program by the NCDC and with the participation of all states was organized. Further implementation progress of the activities was monitored closely during two DEA reviews (September 2010 and February 2011) and regular meetings between the Bank team and the client MOHFW. The last DEA review (February 2011) indicated that the following key actions would need to be completed for the project PDO and IP ratings (including FM and Procurement) to improve: i) strengthen human resources at the centre and in the states ; ii) improve reporting through Portal ; iii) submit overdue audit; and iv) finalize audit of decentralized expenditure under DADF. Progress towards these actions have been discussed in details with the implementation agencies and are described below.

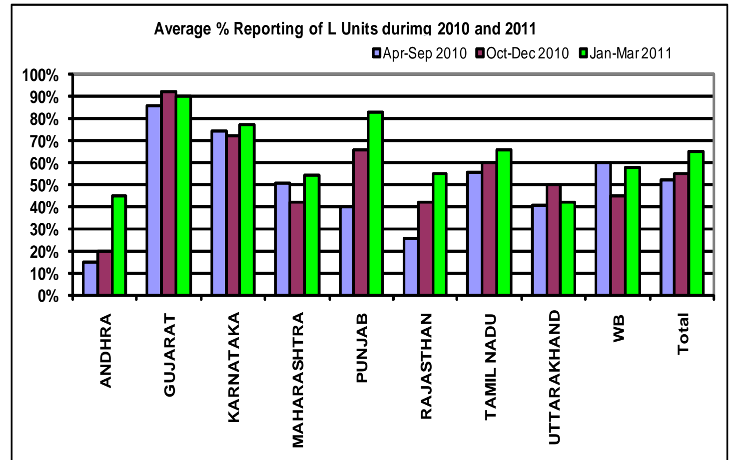
Achievement of Development Objectives (PDO)

5. Preliminary analysis of data available from the states for January to March 2011 indicates a marked improvement on reporting by nine priority states on project portal. During this quarter, an average of 91% of districts, have reported on the 'P' form and an average of 88% on 'L' forms. Data available from nine priority states for the past three quarters demonstrates that the states which have worked significantly to improve district reporting on 'P' and 'L' forms have maintained their performance. Exceptional efforts are now called for to close the final gap and achieve (i) reporting from all districts; and (ii) ensure reporting from all units in a district. The lagging states too have exhibited significant improvement in the number of districts reporting on both 'P' and 'L' forms, while more effort needs to be put in to ensure reporting from all units in the district. The consistency in reporting from reporting districts and reporting units too is encouraging. For the 'P' form: 91% of districts have reported for quarter January-March 2011. 33.5% of districts are reporting consistently and timely for PHCs against the target of 70%; 20.5% districts report consistently for hospitals with OPD and IP surveillance (based on the criterion of reporting by 50% units). Only 14% of reported outbreaks were lab confirmed between September 2010-March 2011 against a target of 70%. 59% (10/17) district priority labs are routinely reporting on outbreaks in the above mentioned period (using the criterion of 50%). While efforts have been made to strengthen the labs of the referral network, no

information is available on the number of labs reporting routinely on outbreaks. While these numbers achieved may seem low against the target, to be noted is that this disaggregated reporting (introduced since April 2010) now appears to be established and all efforts need to be made to improve results.

		District Reporting on P form						**District Reporting on L form**					
		No: of districts reporting			% Average District Reporting 'P' form			No: of districts reporting			% Average District Reporting 'L' form		
State	Total # districts	Apr.-Sept. '10	Oct.-Dec. '10	Jan.-Mar. '11	Apr.-Sept. '10	Oct.-Dec. '10	Jan.-Mar. '11	Apr.-Sept. '10	Oct.-Dec. '10	Jan.-Mar. '11	Apr.-Sept. '10	Oct.-Dec. '10	Jan.-Mar. '11
Andhra Pradesh	23	8	15	18	35	65	78	8	14	17	35	61	74
Gujarat	26	25	25	26	96	96	100	25	25	26	96	96	100
Karnataka	27	27	27	27	100	100	100	27	27	27	100	100	100
Maharashtra	35	28	28	28	80	80	80	27	27	27	77	77	77
Punjab	20	15	18	20	75	90	100	15	18	20	75	90	100
Rajasthan	32	16	25	29	50	78	91	15	23	28	47	72	88
Tamil Nadu	30	27	27	27	90	90	90	24	25	25	80	83	83
Uttarakhand	13	12	10	12	92	77	92	12	9	11	92	69	85
West Bengal	19	18	18	18	95	95	95	18	17	18	95	89	95
TOTAL	225	176	193	205	78	86	91	171	185	199	76	82	88





6. Data from outbreak surveillance indicates outbreak reporting has been steadily improving over the past three year. While the three states of Andhra Pradesh, Tamil Nadu and Rajasthan are providing regular Early Warning Signals (EWS)/outbreak reports 95-100% of the times, the remaining six priority states are assessed to provide EWS/outbreak report on a regular basis more than 50% but less than 95% of the times. Data from January 2010 till March 27, 2011 indicates that human samples from 70% (568 of 812) of reported outbreaks were laboratory assessed.

Priority state-wise total number of outbreaks reported through IDSP

State	2008	2009	2010					2011
			Q1	Q2	Q3	Q4	Total	Q1
Andhra Pradesh	72	64	13	32	16	14	75	8
Gujarat	24	49	12	23	21	27	83	54
Karnataka	54	97	17	32	17	24	90	43

Maharashtra	99	27	17	17	17	14	65	5
Punjab	17	22	2	1	12	3	18	7
Rajasthan	8	43	17	38	18	11	84	17
Tamil Nadu	50	113	17	33	26	14	90	25
Uttarakhand	27	30	3	8	10	4	25	6
West Bengal	49	43	12	27	25	25	89	28

7. Out of six planned BSL-3 laboratories, three have been completed and made functional. The remaining three are likely to be completed during this financial year. Out of 21 BSL-2 labs, six have been already completed and made functional. Remaining labs which are at completion stage will be installed during this year. The Bank had cleared TORs for hiring auditors for the audit of decentralized expenditure using Bank procurement guidelines in February, 2010. On account of pending clearances from Integrated Finance Division (IFD) of the Ministry of Agriculture, the audit is delayed.

8. At the time of restructuring, progress towards the PDOs was Moderately Unsatisfactory. However, consequent to improved timely and consistent district reporting on the portal, a steady increase in outbreak reporting, and the progress with the establishment of functional network of 12 regional laboratories for routine H5N1 and H1N1 surveillance in humans and six BSL3 labs for surveillance in animals, progress towards achievement of PDOs is now rated as Moderately Satisfactory.

Overview of Current Implementation Status

9. As agreed during the previous implementation support mission, both the CSU and the Bank task team have been engaged in close monitoring and supervision of implementation progress of the project. Since January 2011, a Joint Implementation Review team comprising of representatives from the World Bank and the CSU have visited each of the nine priority states to assess progress against planned activities and resolve bottle necks with a faster turnaround time. The World Bank task team and the CSU have had monthly review meetings with a similar mandate. The project has also been reviewed closely in the DEA—World Bank bi-annual portfolio performance review of September 2010 and February 2011.

10. For the Human Health part, data available and analyzed indicates an improved district wise portal reporting. The long pending Expenditure Financial Committee (EFC) meeting was conducted on February 28, 2011 and 13 specialist positions for the CSU were approved. The Terms of Reference for these positions have been provided No Objection to by the Bank and it is expected that recruitments against these positions would be completed by June 30, 2011. Given the limited pool of qualified epidemiologists, microbiologists and entomologists available in the nine priority states, efforts to fill vacant positions have met with partial success. 43% of sanctioned epidemiologist positions are filled, with induction training having been provided to 71% of the newly recruits. 77% of microbiologist positions are filled, with training having been provided to only 15% of the recruited specialists. 78% of entomologists are in position with 86% of these having been trained. The CSU has issued guidelines to the states to recruit epidemiologists against sanctioned vacant positions in line with state norms. More substantive success has been met in recruiting Data Managers (DMs) and Data Entry Operators (DEOs) in the states. As of April 2011, 92% (214/233) DMs and 83% (247/299) DEOs are in position in the priority states. The first round of training has been provided to all DMs in priority states on November 11/12, 2010. 94% (206/219) of the Field Epidemiology (FETP) training load has been addressed as of March 31, 2011. As of April 11, 2011, MOUs have been signed with 15/17 identified district priority labs for diagnosis of epidemic prone diseases; with

only 2 labs the state of West Bengal yet to complete this activity. Reporting by these labs is mixed. While overall, 82% (14/17) of district priority labs are reporting on the weekly 'L' forms to the CSU, the output ranges from a low of 30% average reporting from the District Hospital Lab, Nasik to a high of 100% from the District Hospital Lab, Udupi. Funds have been released by the SSUs to the district priority labs in the five states of Rajasthan, Uttarakhand, Punjab, Karnataka and Andhra Pradesh. Progress towards establishment of a referral lab network with 65 public/private laboratories in nine priority districts has been encouraging. All states have finalized their referral lab plans, with lab certification and MOU signing having been completed in 6/9 states. As of April 2011, the referral lab network is functional in the five states of Gujarat, Punjab, Uttarakhand, Karnataka and Rajasthan. Since November 2010, IDSP has entered into a direct contract with a call center agency to log information and respond to calls made to the dedicated toll free helpline no: 1075. Between April 2010 and March 2011, a total of 42,064 calls were addressed by the Call Center, of which 2,475 related to the H1N1 influenza pandemic.

11. DADF has been able to successfully contain the Avian Influenza outbreak in several states of India. This has been possible with extensive surveillance process undertaken by DADF and access to Labs (Laboratories) facilities in potential risk areas. Over the last six months, the project has consistently achieved its targets, which confirms a moderately satisfactory implementation progress. *BSL-3 labs installation:* Out of six BSL-3 laboratories three have been completed and made functional. The remaining three are likely to be completed during this financial year. BSL-3 lab is highly sophisticated with high bio-security. As agreed during the earlier mission, DADF (through UNOPS) has hired technical consultants to design and supervise the construction of the remaining three BSL-3 labs. Out of 21 *BSL-2 labs, six* have been already completed and made functional. Remaining labs are likely to be installed during this year (as outlined in Annex- 6). As agreed in the earlier mission, the project has already hired a Financial Specialist exclusively responsible for ensuring financial compliance in this project. However, the *audit of Decentralized Expenditure* has been delayed. While this issue has been raised twice jointly by the DEA and the World Bank with DADF, it is yet to be resolved. The Bank had cleared TORs for hiring auditors by using Bank procurement guidelines during February, 2010. DADF reported that they are yet to receive clearance from their IFD of the Ministry of Agriculture for initiating this audit. Any further delay may result in loss or misplacement of records that may be necessary for carrying out the audit. *Thus, the DADF needs to take up this process as soon as possible. With respect to Monitoring and Evaluation,* Annual report and regional laboratory surveillance reports were shared with the mission members. Both the reports reflect the sample analysis outcomes. In most cases they have exceeded the required number of sample analysis and have also made the result public in potential risk areas. The DADF also agreed to accelerate the laboratory construction (for both BSL-3 and BSL-2) process and implementation of the other aspects of the project, including procurement of equipment for collection and dispatch of samples. Our next mission in September 2011 will visit some of the lab construction sites to review the progress of lab installation process. While the DADF has disbursed only Rs 8.89 crores (USD $ 2.2 million) over the last 6 months, the projected amount (by DADF) and the implementation progress suggests that the animal health component is likely to disburse INR 72.20 crores (USD $ 16.04 million) by December 2011.

12. The procurement consultant at the CSU has undertaken the Bank procurement training and is implementing the agreed procurement plan. While only one service contract having been issued (Call Center) since the last mission, all other activities are under process and the benchmarks agreed during the previous mission as described in procurement (Annex 9) have been met and the previous Unsatisfactory procurement rating is upgraded to Moderately Unsatisfactory.

13. In agreement with the previous mission, the project has recruited two Financial Management consultants in November 2010 to support the CSU. Financial Management Reports have been

received from all priority states for the quarter ending December 2010. The audit report for 2009-2010 has been received from all states and union territories with the exception of Kashmir which has not submitted its consolidated audit report. Priority states are actively engaging with the CSU to respond to audit queries. The decentralized audit proposed for the Animal Health component is delayed. Based on progress of the last six months and achievement of key benchmarks outlined in the previous mission, the rating for Financial Management and Performance is revised to Moderately Satisfactory.

14. In keeping with the overall progress detailed above, the overall Implementation Progress rating for the project is upgraded to Moderately Satisfactory.

Key Implementation Issues and Next Steps

15. *Recruitment of manpower at CSU*: It is imperative that subsequent to the EFC completion and Bank providing its No Objection to the revised TORs for the 13 specialist positions at the CSU, *all necessary processes are initiated at the earliest to complete the recruitment process.* It is expected that the momentum gathered by the project will be enhanced with the availability of these specialist skills at the CSU. The CSU has indicated that the end of the contract term for these recruitments will coincide with project closing date of March 31, 2012. In order to not lose the gains of the project, it is important that these positions are seamlessly transferred without any gap to the domestic budget head for 2012-13. Having initiated the necessary processes for this, it is now critical that the project follows up rigorously with MOHFW for inclusion of these positions in the 2012-13 budget.

16. *Ownership of IDSP implementation at State level:* Field visit observations and discussions with states have indicated that (i) recruitment and training of human resources; and (ii) maintenance and management of software/hardware associated with the Information Technology component, are compromised for lack of ownership of the IDSP at the state level. For example, issues pertaining to TORs of staff contracted through decentralized recruitment needs to be decided by individual state authorities; hardware for videoconferencing and data centers is dysfunctional for lack of local low cost maintenance and management and needs to be made operational with locally available resources. While the CSU has already issued a directive to all states, empowering them on this issue, it is essential that routine in-field and virtual follow up by CSU and SSUs is required for improving program performance at state level.

17. *Annual Maintenance Contracts (AMC) for NIC and ISRO equipment and operationalization of the Strategic Health Operations Center (SHOC):* The Bank team has had several substantive discussions with CSU to safeguard the functionality of the IT equipment provided by the project. The AMC contracts for IT equipment stationed at state data centers are yet to be awarded. Also work orders for design, installation and operationalization of SHOC must be issued at the earliest to complete this activity before project closure, for the project to be able to seek reimbursement from the Credit for this activity. It would also be important that there be continuation of the AMC contracts for the state data centers post project end, and for preventive maintenance of SHOC so that benefits of this project supported infrastructure is accrued for years beyond project closure.

18. *Completion of all planned Procurement:* With one year remaining till project closure, *it is important to rigorously comply with agreed timelines and without any delays successfully complete planned NCB and NS procurement.*

19. *Completion of audit of decentralized expenditure by DADF:* TORs for contracting auditors using Bank procurement guidelines for the audit of decentralized expenditure were cleared by the

Task Team in February, 2010. Pending clearance from the IFD of the Ministry of Agriculture, DADF has been unable to initiate this audit. *It is critical that the DADF complete appropriate procurement processes for contracting auditors and facilitate completion of the audit at the earliest.*

20. *Disbursement:* Of the total credit of SDR 41.7 million (as per section 2.01 of the restated and amended Development Credit Agreement), the amount available for the human health component for 2010-11 and 2011-12 at current exchange rates is USD 27.747 million. This includes the unadjusted advance in the designated special account amounting to USD 4.8 million (out of the total USD 6.8 million) allocated to human health component. The amount available in annual health component is USD 18.567 million. The restructuring exercise (Annex 6 of the restructuring paper) worked with the estimated expenditures of USD 15.854 million for the period 2004-05 to 2009-10. However, the actual expenditure for the period amounted only to USD 8.419 million. Further, the dollar amount of the credit also increased on account of gains from exchange variations as the SDR strengthened vis-a-vis the dollar over this period. Thus, for instance, at current rates the USD equivalent of the original SDR allocation would be about USD 75 million as against the equivalent of USD 68 million at original allocation.

21. *Cancellation of Credit*: Based on discussions with the MOHFW, expenditures for April – September 2010 (as per Statement of Expenses) is approximately USD 0.95 (INR 42 million); while the Statement of Expenses for the October-2010-March 2011 is estimated to be USD 2.8 million (INR 124 million). The project estimates an expenditure of INR 410 million in the remaining life of project (April 2011 till March 2012) of which INR 370 million (USD 8.3 million) will be reimbursable. The project team informed the Bank that the EFC concluded recently, after one year of project restructuring, has assigned an amount of INR 680 million for IDA financing. Delays in project implementation have led to a significant reduction in the planned expenditure under the project (details provided in Annex 4). Consequently, the CSU in consultation with the World Bank Task Team has indentified activities which will not be implemented in the remaining life of the project and contributed to the estimation of the unused credit of about USD 15 million. *The Bank team recommends that the project communicate at the earliest a request to the Bank through DEA for partial cancellation of this estimated unused IDA 15 credit at the earliest.*

Procurement, Financial Management and Disbursements

22. *Procurement:* Officers and Staff at the CSU have completed the procurement training and are equipped to manage procurements through NCB and Shopping. The contract for 24X7 call centre was executed in November 2010. For shopping procurements, the process of receiving quotations and preparation of draft evaluation reports for a majority of the items is completed. For NCB procurements, the draft IFB and draft bidding documents are being prepared. Justification for Direct Contracting for Kits and Consumables was shared with the Bank and has been provided clearance. The justifications for single source selection for the AMC of V-SAT and IT equipment are prepared and shared with the Bank. Though delayed, significant progress has been made in the last four months to initiate procurement action in all components - namely, Goods (NCB & Shopping), Goods (DC) and Services (SSS), but no contracts/purchase orders have been issued. For these reasons, the Procurement performance is being revised from Unsatisfactory to 'Moderately Unsatisfactory'. The project must (i) award contracts for all shopping items by June 30, 2011 and (ii) award contracts for all planned NCB items by August 31, 2011, for Procurement performance to be upgraded to 'Moderately Satisfactory' status.

23. *Financial Management:* Against the amended allocation of SDR 41.478 million, the disbursement as on 19-Apr-2011 stands at SDR 16.721 million [at 40.31%]. The undisbursed balance of USD 46.3 million includes the unadjusted advance of USD 6.8 million.

24. With the complete staffing of the financial management function both at NCDC and DADF, a visible improvement in the quality of financial management is noted. The improvements are reflected in the timeliness of submission of audit reports, preparation of interim financial reports etc. and on the overall in the proactive actions taken to resolve the pending FM issues. For these reasons, the FM performance is rated as `Moderately Satisfactory'. There do remain several opportunities to further strengthen the financial management performance and are discussed in Annex 10

Status of Legal Covenants

25. All legal covenants are in compliance. Since the last review, the two financial management experts are now hired at the MOHFW. CSU has also confirmed that an amendment of the MOU with the 9 priority states after the restructuring was not necessary as the current MOU is still valid.

Timing of Next Mission

26. Both CSU as well as the Bank's task team will continue to provide ongoing monitoring and supervision. Joint bi-monthly review meetings on agreed benchmarks between the Bank team and MOHFW and DADF respectively will help assess progress and identify possible bottlenecks in a timely manner. It is agreed that the next JIR will be organized in October 2011. Development of an Integrated Disease Surveillance system in India being a crucial activity, the ICR of IDSP will be a learning ICR, for which the first field-visit by the ICR authors is planned for July-August 2011.

LIST OF ANNEXES

1. Actions and Timelines for Follow Up
2. Follow up of agreed Actions and Timelines from the last review (September 2010)
3. Results Framework: Updated Indicators
4. Project savings
5. Detailed Implementation Review of MOHFW Component
6. Detailed Implementation Review of DADF Component
7. Environmental Issues and Biomedical Waste Management
8. Tribal and Social Action Plan
9. Procurement
10. Disbursement and Financial Management
11. State Visit Reports

ANNEX 1

ACTIONS AND TIMELINES FOR FOLLOW UP

No.	Action	By whom	By when
1	Follow up with NRHM and MOHFW to ensure that the HR at state and central level, routine operating expenses and equipment maintenance is included in the PIP of the 12th plan and the MOHFW budget for 2012-13.	CSU and SSU	Ongoing
2	Provide data manager training for AP and WB	CSU	June 9-10, 2011
3	Provide update on AMC contract of IT equipment	CSU	May 30, 2011
4	Provide the bank an update on the number and trends of health events that were identified through the media scanning and verification cell	CSU	May 15, 2011
5	Prepare and share the technical specifications of the SHOC with the Bank for Non objection	CSU	May 15, 2011
6	Introduce the use of competency assessment and review tool for all outbreak reports	CSU	Immediately
7	Organize workshop with 62 participating labs from laboratory network in 9 states	CSU	August 15, 2011
8	Organize a workshop of experts to develop updated guidelines related to the use of Typhidot, Tube Widal and Blood culture tests for Typhoid surveillance.	CSU with support from WHO	June 30, 2011
9	Final report of laboratory assessment shared with the Bank	CSU	June 30, 2011
10	Revised lab manual to be uploaded on the portal and printed	CSU	July 15, 2011
11	Provide training for the 10 untrained microbiologists	CSU	June 30, 2011
12	(i) Follow up with AP and TN for signing of MOU and release of funds to referral labs (ii) Follow up with WB for signing of MOU and release of funds to referral labs	CSU	(i) June 30, 2011 (ii) July 31, 2011
13	CSU to closely monitor and document the final reports on outbreaks from the states	CSU	Ongoing
14	Community surveillance initiatives from Karnataka and Maharashtra to be reported	SSOs of these states	August 15, 2011
15	Numbering system for Unique ID to be assigned to each outbreak by states to be introduced and guidelines to be issued by the CSU for the same	CSU	May 31, 2011
16	Changes in portal reports so that DSO can review which RUs have reported and which RUs are consistent	CSU	May 31, 2011
17	Portal to include automated message if non-supported browser is being used	CSU	May 31, 2011
Procurement			
18	Submission of draft NCB document for 1st NCB procurement to the Bank	CSU	May 15, 2011
19	Providing Comments and No Objection to draft NCB document for 1st NCB procurement t	Bank	May 18, 2011
20	Publication of IFB for all NCB procurements	CSU	June 06, 2011
21	Issue of NOA / Purchase Orders for all shopping procurements for Equipment, Kits and Consumables	CSU	June 15, 2011

Financial Management Action Points for DADF			
24	Submit the replies to review letter issued by the Bank on November 8, 2010.	DADF	April 30, 2011
25	Submit a reimbursement claim for 2009-10 amounting to INR569,056 based on the review of audit reports for the year.	DADF	April 30, 2011
26	Submit a reimbursement claim for 2010-11 (April to May) INR 1,884,739 based on the review of the IUFR.	DADF	April 30, 2011
27	Finalize the appointment of auditors as per Bank procurement procedures, for auditing the decentralized expenditures for 2008-09 and 2009-10 pertaining to DADF trainings as agreed with the Bank on 23 March 2010.	DADF	June 30, 2011
28	As per the Financing Agreement, submit the FMR on eligible expenditures incurred by DADF on the project at the central level during October 2010 – March 2011.	DADF	May 15, 2011
Financial Management Action Points for CSU			
29	Submit the replies to the three audit review letters issued by the Bank against the audits for FY 2009-10.	CSU	May 15, 2011
30	Submit reconciliation of audited expenditure with the expenditure reimbursed by the Bank for the year 2009-10.	CSU	May 10, 2011
31	To follow up with Kashmir state with regard to the submission of the consolidated state's audit report for FY 2009-10.	CSU	Immediately
32	Finalization of IUFR for the period of 01-Apr-2010 to 30-Sep-2010 and subsequent submission of reimbursement claim to CAAA.	CSU	May 15, 2011

ANNEX 2

ACTIONS AND TIMELINES FOR FOLLOW UP FROM LAST REVIEW (SEPTEMBER 2010) AS UPDATED IN THE APRIL 2011 MISSION

No.	Action	By whom	By when	Status of implementation in April 2011
1	Hire all human resources as agreed at restructuring	CSU and SSUs	December 31, 2010	127/268 human resources hired so far at States. Hiring of additional 13 staff at CSU delayed due to delay in EFC approval.
2	Weekly VC organized by CSU with the 9 priority states to discuss i) technical issues, ii) follow up on outbreaks and iii) follow up on agreed actions in each state for laboratory and improved reporting .	CSU	Starting Oct. 15, 2010	No VCs organized since September 2010. EDUSAT was not functional since mid-September 2010. Moreover, the Inter-wise application was being upgraded by NIC. So, IDSP was not able to conduct VC sessions. Since 15 March 2011, after establishing the Inter- wise application over Broadband, VC being done with States. (Since Sept 2010, 38 VC done till date; of which 19 were done after 15.3.2011)
3	CSU to organize every 3 months a 2 day meeting with SSU of all 9 priority state to assess progress of implementation and identify bottlenecks	CSU (and SSUs)	First meeting early December 2010	Review meetings of SSOs of all 9 priority states organized in Dec. 2010 (along with the other States) and also during JIR in April 2011.
4	Meetings twice a month to assess progress of agreed actions with the Bank team	CSU and WB	Starting Oct. 15, 2010	Yes, Minutes are available.
5	CSU to provide a 3monthly report to the Bank to track record of issues with portal and solutions provided	CSU	First report in December 2010	Reports being shared with World Bank regularly.
6	Organize a 2 day training with State Data Managers	CSU	November 15, 2010	State Data Managers training done during 11-12 Nov 2010; two more states need training
7	100% reporting in portal by all 9 priority states	SSU of 9 priority states	December 30, 2010	On an average 91 % districts of 9 priority states reported in portal during Jan-March 2011
8	All guidelines shared with DSO and	CSU and	October 15,	Guidelines have been

	district priority labs related to the laboratory actions (sample collection/transport, communication between districts/their respective labs, use of provided district budget, etc.)	SSU of 9 priority states	2010	shared with States//Districts/Labs in Oct-Nov 2010
9	Funds released to all participating 63 labs of the referral laboratory network and guidelines shared with participating labs and respective districts	CSU and SSU of 9 priority states	December 15, 2010	5 states (Punjab, Uttarakhand, Rajasthan, Gujarat and Karnataka) have released funds to the labs under Referral lab network.
10	Share the summary of the laboratory post procurement assessment with the Bank	CSU	January 15, 2011	The post procurement audit report for equipments supplied to the Phase-1 states under IDSP has been submitted by the hired consultant M/s Technomed Services. However there are certain deficiencies in the report. To resolve these deficiencies a meeting is going to be held on 26.4.2011, under the Chairmanship of Director, NCDC with the Chief General Manager Procurement, HSCC and the Project Coordinator, M/s Technomed Services. During the meeting the audit report would be finalized, and then shared with the World Bank.
Procurement				
11	For procurements that are within the delegated powers of the project director, administrative orders conveying the immediate commencement of procurement	NCDC/ MOHFW	September 20, 2010	Orders issued on 5 Oct 2010
12	Update the procurement plan	CSU	October 15, 2010	Done on 2 Nov 2010
13	Bank to provide short induction training to CSU and NCDC staff who are involved in procurement	WB	Prior to October 30, 2010	Training attended by IDSP staff (Consultant Procurement, Consultant Finance, Account Officer) and NCDC staff (Store Officer & UDC) on 11 Nov 2010
14	The Procurement specialist at IDSP as well as the Stores Officer/NCDC	CSU and NCDC	November 7, 2010	Training on World Bank procurement procedures

	responsible for the in-house procurement to be sent for training on World Bank procurement procedures at the earliest.			attended by Assist. Director (IDSP), Stores Officer (NCDC) and Consultant Procurement (IDSP) during 17-29 Jan 2011.
15	IDSP to provide the Bank a justification for SSS for AMC for the IT equipment provided by NIC and ISRO	CSU	October 21, 2010	Justification for ③ ISRO equipments: given in Dec 2010 ③ NIC (SIEMENS) equipments (Hi-end VC equipments at SSU): given in Jan 2011 and ③ NIC (MIRC & HCL) equipments (Data centre & Training centre equipments): given in April 2011
16	Initiation of the procurement through shopping for the 16 items by solicitation of quotations	CSU/NCDC	To be described in the updated procurement plan	Details in procurement annex
17	Placing Purchase orders / contract award for all eligible procurements among the 16 items through shopping	CSU/NCDC		
18	Ready for delivery and acceptance of supplies coming through the shopping process	CSU/NCDC		
19	Notification / advertisement of IFB for NCB 6 Items	CSU/NCDC		
20	Bid opening for NCB 6 Items	CSU/NCDC		
21	Contract award for 6 NCB items	CSU/NCDC		
Financial Management Action Points for DADF				
22	The causes for the delay in responding to the fund requests from UNOPS to be addressed expeditiously. Bottlenecks to be identified and resolved.	DADF	Oct. 15, 2010	N/A
23	Submit the audit reports for expenditures incurred at the central level for 2009-10	DADF	Sep.30, 2010 (not received yet)	Completed
24	Submit a reimbursement claim for 2008-09 amounting to Rs 4,474,884 as per Bank's email dated 19 May 2010	DADF	Sep.30, 2010	Completed
25	Submit a draft reimbursement claim for 2009-10 to the Bank for review including only the agreed and eligible expenditures under the project.	DADF	Oct.31, 2010	Completed
26	Finalize the appointment of auditors	DADF	Oct.31,	Pending

	as per Bank procurement procedures, for auditing the decentralized expenditures for 2008-09 and 2009-10 pertaining to DADF trainings as agreed with the Bank on 23 March 2010.		2010	
27	As per the Financing Agreement, submit the FMR on eligible expenditures incurred by DADF on the project at the central level during April – September 2010.	DADF	Nov.30, 2010	Completed
Financial Management Action Points for MOHFW/CSU				
28	Submit the audit reports for expenditures incurred at the central and state levels for 2009-10, along with a reconciliation of audited expenditure with the expenditure reimbursed by the Bank for the year.	CSU	Sep.30, 2010 (not received yet)	Audit report for CSU and all 35 States shared with the World Bank. However, consolidated audit report from Kashmir division is pending.
29	Submit the FMR on expenditure incurred by the project during April – September 2010.	CSU	Nov.30, 2010	Submitted on 18 Nov 2010
30	Finalize the recruitment of second FM staff in the FM cell	CSU	Nov.30, 2010	In position since 30 Nov 2010

ANNEX 3

RESULTS FRAMEWORK: UPDATED INDICATORS:

<table>
<tr><th>PDO Indicators</th><th>Baseline (Sept 30, 2009)</th><th>August 2010</th><th>March 2011</th><th>Target (March 2012)</th></tr>
<tr>
<td>% of districts providing surveillance reports timely and consistently in 9 priority states</td>
<td>25% of Priority state districts</td>
<td>[27%]*
(Note: indicator value needs to be refined. With current information available, the major hospital and private data not yet available)

*based on PHC data only</td>
<td>
<table>
<tr><td></td><td></td><td></td><td colspan="2">Performance</td></tr>
<tr><td>Disaggregated indicator</td><td>Baseline at restructuring</td><td>Target</td><td>April-Sept. 2010</td><td>Oct. 2010 - March 2011</td></tr>
<tr><td>'P' form from PHCs</td><td>25</td><td>80%</td><td>26%</td><td>33.5%</td></tr>
<tr><td>'P' form from CHCs/Major hospitals</td><td>Not available</td><td>50%</td><td>18%</td><td>20.5%</td></tr>
<tr><td>Lab confirmation for outbreaks</td><td>Not available</td><td>70%</td><td>9%</td><td>14%</td></tr>
<tr><td>Reporting from District Priority labs</td><td>Not available</td><td>70%</td><td>Not available</td><td>59% (10/17)</td></tr>
<tr><td>Reporting from Referral Network Laboratories</td><td>Not available</td><td>70%</td><td>Not available</td><td>Not available</td></tr>
</table>
Overall average of 91% districts reporting on P-form; and average of 88 % districts reporting on L-form.
</td>
<td>70 % of the districts in priority 9 states,</td>
</tr>
</table>

<table>
<tr>
<td>% of responses to disease specific outbreaks assessed to be adequate as measured by 3 essential criteria in 9 priority states ^</td>
<td>over all 45% of outbreaks
Range : T& K-66; UK, WB, M-50%; AP-20% ; R-10%; P-0%</td>
<td>[68%]
(Note: indicator value needs to be refined. With available inform-ation, the 3rd criteria of final report is not yet taken into consideration)</td>
<td>
<table>
<tr><th>ESSENTIAL CRITERIA</th><th>% of response to disease specific outbreaks</th></tr>
<tr><td>Investigation within 48 hours of first case information</td><td>80%</td></tr>
<tr><td>Adequate samples sent for lab investigation within 4 days</td><td>75 % (Oct - Dec 2010)
53 % (Jan - March 2011)*</td></tr>
<tr><td>Availability of final outbreak investigation report</td><td>4 % (Oct - Dec 2010)
2 % (Jan - March 2011)</td></tr>
</table>
* In 2010 (Oct-Dec), 62% outbreaks were due to Acute Diarrhoeal Diseases and Food poisoning; and only 7% due to Measles and Chicken pox.

However, in 2011 (Jan-Mar), 52% outbreaks were ADD and Food poisoning; while 27% were due to Measles and Chicken pox where usually diagnosis is based on clinical features.
</td>
<td>At least 75% outbreaks in each of the 9 states</td>
</tr>
<tr>
<td>Improved diagnostic capacity for H5N1 and H1N1 as measured by:
Number of functional diagnostic laboratories for human influenza established
Number of functional BSL3 laboratories for animal influenza established</td>
<td>7/12

2/6</td>
<td>10

2/6</td>
<td>10 (Additionally, MoU signed and funds released to 2 more labs)</td>
<td>(i) 12

(ii) 6</td>
</tr>
</table>

** **Timely & consistently**= Within one week after the last date of every reporting week for at least 40 weeks **(80% of week at any given time)** each year. Reports should have desegregated collated forms of P {i. PHCs, ii Other Govt. Hospitals and iii) Private hospitals separately}, L (PHC labs, district Public Health lab and referral laboratories) and S reporting units.*

^= The three essential criteria of outbreak investigations are i) Timeliness of investigation i.e. within48 hours of first case information (FIR) ii) adequate human samples were sent for laboratory confirmation early in the outbreak (within 4 days) and iii) Availability of a final outbreak investigation report.

@= i. A district with a minimum of 80% of reporting from primary health care institutions and ii a minimum of 50% reporting from hospitals with OPD and inpatients surveillance; iii) laboratory confirmation of at least 70 % of outbreaks and at least 50% district priority labs and referral laboratories network reporting regularly

<table>
<tr><th>No</th><th>Outcome Indicators by Components</th><th>Baseline as of 30/9/09</th><th>August 2010</th><th>March 2011</th><th>Target for 31/3/2012</th><th>Comments</th></tr>
<tr><td>1</td><td colspan="4">Component 1: Central Surveillance Monitoring and Oversight</td><td></td><td></td></tr>
<tr><td>i.</td><td>Induction training completed Epidemiologists /Microbiologists and Entomologists in position</td><td>40%</td><td>22% of sanctioned positions are filled with trained staff</td><td>29% of sanctioned technical staff in position have completed induction training.</td><td>90%</td><td><table>
<tr><th></th><th># sanctioned</th><th># in position</th><th># trained</th></tr>
<tr><td>Epid.</td><td>233</td><td>100</td><td>71</td></tr>
<tr><td>Micro.</td><td>26</td><td>20</td><td>3</td></tr>
<tr><td>Ento.</td><td>9</td><td>7</td><td>6</td></tr>
<tr><td>Total</td><td>268</td><td>127</td><td>80</td></tr>
</table></td></tr>
<tr><td>ii.</td><td>Number of quarterly review meetings of Priority states</td><td>quarterly</td><td>1</td><td>3 (total till date)</td><td>8 meetings in 2 Years</td><td>Meeting with SSOs was organized during JIR in Sept. 2010 and presently in April 2011. In Dec. 2010 also all 35 States were reviewed.</td></tr>
<tr><td>iii.</td><td>Number of on site visit for supportive supervision, for states by CSU</td><td>2/state/year</td><td>8 visits in total</td><td>19 visits in total</td><td>4/state/year</td><td>In last 6 months: TN, AP, Punjab & Uttarakhand – 2 times; and West Bengal & Gujarat – once. Additionally, all 9 states visited by CSU members along with World Bank - Joint mission (prior to April 2011).</td></tr>
<tr><td>iv.</td><td>Number of videoconferences held to give feedback on outbreak response assessed using the tool</td><td>NA</td><td>10</td><td>12</td><td>Once every month</td><td>EDUSAT was not functional since mid-September 2010. Moreover, the Inter-wise application was being upgraded by NIC. So, IDSP was not able to conduct VC sessions.
Since 15 March 2011, after</td></tr>
</table>

						establishing the Inter- wise application over Broadband, VC being done with States. (Since Sept 2010, 38 VC done till date; of which 19 were done after 15.3.2011)
v.	SHOC functional and being used	Nil	Not started	Not started	At least one outbreak investigation review per month in 2012	Procurement process still to be launched. Proposed outlay of SHOC room, technical specification and budget of Video Wall, Audio & Video, and specification of Electrical work received. Budget for civil work awaited.
vi.	Number of referral lab network & district labs established	4 Network negotiated	District labs: 6 Referral lab network: rolled out in Rajasthan and Gujarat	District Priority labs: 13 labs reporting L-forms Referral lab network rolled out in 5 States (Gujarat, Punjab, Uttarakhand, Karnataka, Rajasthan).	One networks & 1 dist lab in each of 9 states.	• Procurement of the equipment completed in 7 states. Microbiologist posted in 10 labs (1-AP, 1-PB, 2-RJ, 2-TN, 2-UK, 2-WB) and by State Govt. in 3 labs (Kar-2; Guj-1). • 13 district labs reporting to CSU by e-mail: (except 2 in WB, 1 in RJ and 1 in MAH) • All 9 states have finalized the referral laboratory network plan and received technical and financial guidelines. Referral lab network functional in 5 states
vii.	Number of referral and district labs who underwent EQAS		- Not due	Not due	1 EQAS/ lab/in 2011-12.	EQAS only planned to start in 2011

viii.	% of districts with IT network for on portal data entry, videoconferencing and inter-voice connection between states & have access to toll free 1075	Portal =40% VCF =50% TFA= 25%	% of districts with Portal data entry = 77 % of districts utilizing VC facility (April to August 2010) = 21 % of districts having Toll free no.1075 connectivity = 95	% of districts with Portal data entry = 91% % of districts utilizing VC facility (since Sept 2010) = 0 * % of districts having Toll free no.1075 connectivity = 95%	80% for all 3 facilities throughout the year	* EDUSAT not functional since mid-September 2010. Moreover, the Inter-wise application was being upgraded by NIC. CSU, IDSP has started conducting VC sessions with States since March 15, 2011. The States would soon be connecting districts via Inter-wise to conduct VC.
2	**Component 2: Improving state/district surveillance and response capacity**					
ix.	% of districts IT linked to the SSU/ CSU	<50%	92%	97%	90%	97% (776) data centre sites are IT linked to the SSU/ CSU 93% (745) training centre sites are IT linked to the SSU/ CSU
x.	No. of states providing feedback monthly to the districts	5/9 states	All states provide feedback to the districts on a regular basis, as well as whenever an issue arises.	9/9	9/9	All states provide feedback to the districts on a monthly basis, as well as whenever an issue arises.
xi.	% of responses to disease specific triggers assessed to be adequate by SSU	5 0-66%	Tool for Adequate assessment not yet used	Tool for Adequate assessment not yet used by SSU	>80%	By CSU using 3 essential criteria of outbreak investigations: Outbreaks assessed in time: 80% Lab facilities accessed: 68 % Complete outbreak reports: 3 %
xii.	% of major hospitals enrolled doing IP , OP & Lab Surveillance , and sharing P & L forms	<20%	44% for P form (hospital) 22% for L form (lab)	Average for P form: 60% Average for L form: 59%	50%	Consistency of P-form reporting from OPD surveillance of major hospitals is 20.5% for the period October 2010- March 2011

xiii.	% of blocks in which at least 1 private provider shares weekly to surveillance reports	<20%	N.A.	Pvt. unit reporting: P form: N/A L form: N/A	60%	Reporting unit and actual reporting by Blocks not readily available.
xiv.	CBS established and % villages reporting to Call Center No **1075** or nearest PHC	Nil	N.A.	CBS established in 2 Blocks of Tapi district, Gujarat	50% villages in Pilot blocks	Output not yet available.
3	**Component 3: Influenza surveillance and response**					
xv.	Number of sentinel hospitals with routine surveillance for human influenza	Nil	4	4	10	Routine surveillance for human influenza presently being done in 4 sentinel hospitals of Delhi. AI lab meeting to finalize plans for routine surveillance of human influenza to be held in the last week of May 2011.
xvi.	Epidemiological survey to detect causes and spread of HPAI outbreak	Nil	Process started	Random samples are regularly taken from both potential risk areas as well as from areas that are not at risks		Over 3500 random samples analyzed in Karnataka and Andhra alone during this year. Survey reports are available with DADF. About 10,000 doubtful samples were also sent to Bhopal BSL-IV referral laboratory at Bhopal for further analysis.
xvii.	National surveillance system with adequate coverage	Not in place	Completed in two Regional laboratory areas	About 600, 000 + sample are analyzed in all 6 BSL -3 lab states	The total number of sample analyzed in BSL-2 and BSL-3 are likely to exceed more than 30,000 samples/year	Progressed as planned. Target has been exceeded in most regional laboratory areas. Given the volume of the samples collected and analyzed, incorporating results into an MIS system is a challenge.
xviii	Lead time for availability of diagnostic results	Nil	Completed in two Regional laboratory areas	Results are share within 2-3 days time depending	Areas nearer to BSL-3 laboratory are getting the result	Progress as per plan.

	significantly reduced			on the distance of the areas where sample are collected	within 24 -30 hours	
xix.	Emergency supplies available at strategic field locations	Limited	Adequate supply available at all 612 districts	Adequate field test kits are available	Adequate supplies of PPE kits and disinfectants	Baring few far areas / pockets most districts get the supplies based on demand of services – State like AP, Karnataka, Kerala have surplus supplies
xx.	Regular meetings between health officials and animal husbandry officials	Regular	Process Already started	Mission is unable to assess this during this mission	Regular (at least one/6 months)	Despite no field visits having been done this mission, it appears that that the coordination mechanism is weak in all states. Coordination efforts are robust only during emergencies.

ANNEX 4

Identified savings under the restructuring project

Of the total credit of SDR 41.7 million (as per section 2.01 of the restated and amended Development Credit Agreement), the amount available for the human health component for 2010-11 and 2011-12 at current exchange rates is USD 27.747 million. This includes the unadjusted advance in the designated special account amounting to USD 4.8 million (out of the total USD 6.8 million) allocated to human health component. The amount available in annual health component is USD 18.567 million.

The restructuring exercise (Annex 6 of the restructuring paper) worked with the estimated expenditures of USD 15.854 million for the period 2004-05 to 2009-10. However, the actual expenditure for the period amounted only to USD 8.419 million. Further, the dollar amount of the credit also increased on account of gains from exchange variations as the SDR strengthened vis-a-vis the dollar over this period. Thus, for instance, at current rates the USD equivalent of the original SDR allocation would be about USD 75 million as against the equivalent of USD 68 million at original allocation.

Based on discussions with the MOHFW, expenditures for April – September 2010 (as per Statement of Expenses) is approximately USD 0.95 (INR 42 million); while the Statement of Expenses for the October-2010-March 2011 is estimated to be USD 2.8 million (INR 124 million). The project estimates an expenditure of INR 410 million in the remaining life of project (April 2011 till March 2012) of which INR 370 million (USD 8.3 million) will be reimbursable. The project team informed the Bank that the EFC concluded recently, after one year of project restructuring, has assigned an amount of INR 680 million for IDA financing. Delays in project implementation have led to a significant reduction in the planned expenditure under the project (details provided in Annex 4). Consequently, the CSU in consultation with the World Bank Task Team has indentified activities which will not be implemented in the remaining life of the project and contributed to the estimation of the unused credit of about USD 15 million.

Further, owing to the implementation delays during the last year and some reduction in agreed scope of the project, the CSU in consultation with the World Bank Task Team has indentified activities which will not be implemented in the remaining life of the project and contributed to the estimation of the unused credit of about USD 3.2 million (based on the budget details of the restructured project):

- Human Resources: Recruitment of the 13 additional human resources at Central Surveillance Unit of the MOHFW was delayed due to long pending approval from the Expenditure Finance Committee approval (obtained on February 28, 2011). CSU expects that the new staff will be on board as of July 2011. Estimated savings on account of unpaid salaries of 13 staff for 15 non-recruited months is USD 295,000.

- Training: The restructuring of 2010, proposed development of e-learning materials for newly inducted professionals, medical officers and the district surveillance officer. During project implementation, this activity was revised to production of updated learning modules on portable media like CDs. Hence savings related to e-learning are estimated at USD 395,000.

- IT, Innovations: The Restructured project (2010) also planned support to an innovative SMS-based reporting system piloted in one priority state and its evaluation. The CSU has taken an informed decision based on the evaluation report of the pilot which was operationalized in Andhra Pradesh, to not scale up this initiative to other states. Therefore, estimated SMS upscaling savings are USD 310,000.

- IT, Portal: At Restructuring (2010), GOI had requested IDA to finance the portal costs. During the review of September 2010, MOHFW communicated to the Bank that the contract agreement with NIC related to the software support and customization of the portal will continue to remain with NIC and be financed by the GOI. This will result in a potential saving of about USD 93,000.

- IT, Maintenance Contracts: As per the agreements reached with the project at Restructuring, the maintenance contracts of IT equipment provided by both NIC and ISRO and previously financed by GOI, would be transferred to private companies and financed by the project. Due to the high level of technological know-how required for the maintenance of this equipment, MOHFW requested in September 2010 that the maintenance contracts should be awarded to the same agencies which have installed the equipment and established the network for NIC and ISRO respectively, on sole source selection (SSS) criteria. Preparing the sole source justification and obtaining the necessary agreements within the MOHFW has taken longer than expected. While it was initially estimated that USD 1.366 million would be attributed to the maintenance of the IT equipment for 24 months, it is currently estimated that the project will only be able to cover 11 months till project end, (provided these contracts are awarded at the earliest), which results in an estimated unused credit of USD 850,000. In case the project is unable to award these contracts, this would result in further unspent Credit balance at project closing.

- IT, Call Center: Financing of the Call Center contract for 24 months by the Credit, agreed to during the Restructuring, was also delayed on account of pending approvals to the procurement process and the contract was awarded only in November 2010. Consequently, the Credit can only finance 16 of the estimated 24 months, which results in an estimated unused credit of USD 130,000

- Laboratory : It was also agreed at the Restructuring to re-orient the focus of the laboratory sub component to support 17 district level priority public health laboratories and supporting a referral network by partnering with 65 existing and functioning laboratories, using output based agreements. There has been considerable delay in the implementation of this component, especially in signing the agreements with the identified 65 labs. Although progress on this sub-component is gathering momentum, the delay in implementation has resulted in an estimated undisbursed credit of USD 500,000.

- Avian Influenza, Human Health: At request of the MOHFW, procurement of a Transmission Electron Microscope is dropped since several civil structures on the project's campus, where the transmission electron microscope was proposed to be housed, are planned be demolished. Proposed new civil structures will not be finalized within the remaining life of the project, hence procurement and installation of the transmission electron microscope cannot be completed before project end. Estimated undisbursed Credit on account of this activity is USD 500,000.

- Avian Influenza, Human Health: The roll out of the collaboration with the Avian Influenza laboratory network was delayed by 11 months. As a consequence, the project will only procure reagents for remaining one year of project instead of the initially planned two years. Estimated savings are USD 525,000.

- Procurement agent: While it was agreed at restructuring that a Procurement Agent (PA) would be used for all procurement to be done under the human health part of the project, and this process was initiated by the CSU, the Bank received a communication from DEA (August 11, 2010) that MOHFW is requesting a change in this arrangement since RITES was unable to commit as the procurement agent. This issue was carefully reviewed during the September 2010 mission, and

based on the fact that the CSU now has a procurement consultant on board; the existing procurement skills at NCDC could also be enlisted, and that total remaining procurement under the project was approximately about USD 4 million (NCB and NS); in-house procurement of pending items by the CSU was agreed to. The SSS contract for engaging RITES as PA was therefore, cancelled. This results in a project saving of USD 97,000.

The Bank team recommends that the project communicate at the earliest a request to the Bank through DEA for partial cancellation of this estimated unused IDA 15 credit at the earliest.

ANNEX 5

DETAILED IMPLEMENTATION REVIEW OF THE IDSP MOHFW COMPONENT

1. Human Resource & Capacity Building

Human Resources

Progress: At the restructuring, 13 new positions were created at the CSU level in order to respond to some additional human resource needs and to allow high level support to the States. However, the recruitment of this additional staff has been substantially delayed due to the pending Expenditure Finance Committee (EFC) approval, which was finally obtained on February 28, 2011. The TORs have now also been finalized and the positions will be advertized over the next weeks, together with the two other existent vacant positions at CSU (one epidemiologist and one microbiologist). IDSP feels confident that these positions can be filled up by July 2011. Contracts with all new staff will be till the end of the project (March 31, 2011). To ensure sustainability, NCDC will simultaneously start the process to include the CSU's HR in the PIP of the 11th plan, thus guaranteeing domestic funding for these positions for the next 5 years.

Since the restructuring, the recruitment process of state and district level epidemiologists, microbiologists and entomologists was decentralized to the states. While communications were shared with the states in May 2010, some states have advanced faster in the initiation of recruiting staff than others. Overall, 47% of the sanctioned positions at state and district level are currently filled in the nine priority states. Of these, 63 % are actually trained. While Uttarakhand has successfully hired all the candidates, states like Tamil Nadu, Karnataka and Gujarat had difficulties filling up the positions. It was agreed during the review meeting that states will have to adapt the requested qualifications in the TOR according the State specific realities.

The recruitment of state and district based data managers (DM) and data entry operators (DEO) was transferred from the National Informatics Center (NIC) to the States after the restructuring. Overall, this recruitment is satisfactory in the priority states with currently 214 out of 233 DM in position and 247 out of 299 DEO. However, the states are confronted with high turnover of DMs and DEO. The CSU will explore together with the States how to motivate DMs and DEO through frequent retraining and the reimbursement of travel expenditures.

Issues: It is expected that both at state and central level suitable candidates might hesitate to join the project as it is closing by end of March 2012. In order to be able to attract qualified staff and ensure sustainability of the program, both CSU and the States need to explore the different options of funding these positions through the domestic budget as of April 2012.

Agreed Actions:

- CSU to provide guidelines to the States related to the State's autonomy in adapting the qualifications in the TOR according to the State's specific needs.
- States will select and position (sanctioned/vacant posts) by end July 2011
- CSU to ensure that the HR at state and central level is included in the PIP of the 11th plan.

Hiring and Training Status of the Epidemiologists, Microbiologists and Entomologists in 9 priority states (April 15, 2011)

Sl.No	Name of State	Epidemiologists		Microbiologists		Entomologists	
		# in position/ # of sanctioned positions	# Trained	# in position/ # of sanctioned positions	# Trained	# in position/ # of sanctioned positions	# Trained
1	Andhra Pradesh	16/24	1	3/3	0	1/1	0
2	Gujarat	2/26	2	0/3	0	1/1	0
3	Karnataka	9/27	5	3/3	1	0/1	0
4	Maharashtra	21/36	8	2/3	0	0/1	0
5	Punjab	13/21	8	2/2	0	1/1	0
6	Rajasthan	24/33	21	3/3	1	1/1	1
7	Tamil Nadu	0/31	0	2/3	0	0/1	0
8	Uttarakhand	6/14	4	2/3	1	1/1	1
9	West Bengal	9/19	0	3/3	0	1/1	0
Total		**100/231**	**49**	**20/26**	**3**	**6/9**	**2**

Status of hiring of Data manager (DM) and Data Entry Operators in the 9 priority states (April 15, 2011)

Priority State	# DM to be recruited	DM In Position	DM: trained	# DEO to be recruited	DEO: In Position	DEO: trained
Andhra Pradesh	24	17	17	37	28	28
Gujarat	26	26	26	34	34	34
Karnataka	27	25	25	34	32	29
Maharashtra	36	28	26	59	44	10
Punjab	21	21	21	24	23	23
Rajasthan	33	33	33	39	39	39
Tamil Nadu	31	29	29	48	35	35
Uttrakhand	14	14	14	15	15	15
West Bengal	19	18	18	31	16	16
Total	231	211	209	321	269	232

Capacity Building (Training):

Progress: The IDA credit supports IDSP's intensive training program in all the 35 states. Progress was clearly made over the last year, but the training program was also delayed due to the delays in the

recruitment process. All trainings are organized with substantial input from CSU and their realization is monitored closely.

In order to support the establishment of surveillance at health care settings at decentralized levels, IDSP is supporting training of medical officers, laboratory technicians, pharmacists, nurses and health workers. Till date, over 1,033 trainers have been trained in the nine priority states and an additional 1,436 trainers in the other 26 states. The training of trainers is now completed for 31 states and in most of the 9 priority states have reached or even bypassed the target of the training of trainers. CSU is now also following up closely the training of the health staff by these trainers, organized at State level. Since the onset of the project, IDSP has now trained nationwide more than 27,078 medical officers, 9,373 district and peripheral laboratory technicians, 9,428 nurses and another 153,657 health workers. In addition to the 522 state surveillance teams trained prior to the restructuring, 89 more teams were formed and trained between April 2010 and March 2011. An initial orientation of Major Hospital superintendents was also been completed in 7 of the 9 priority states over the last 2 months.

Specialized modules are offered such as field epidemiology training for District Surveillance Officers (DSOs), induction training for newly sanctioned epidemiologists, microbiologists and entomologists and State DM from CSU, as well as skill upgrade training for microbiologists. Since April 2010, a two week field epidemiology training program was offered to 128 district surveillance officers country wide. While most of the district surveillance officers of the nine priority states have been reached through this training (206 out of 219 trained), further efforts are needed in the other 26 states (167 on 377 district officers trained). Progress in the provision of the induction training for contractual staff such as epidemiologists, microbiologists and entomologists was delayed due to the delays in recruitment and only 22 epidemiologists and 11 entomologists received the induction training. The manual for the training of data manager was developed by CSU and training already provided to State DMs of 16 states. The trained DM have provided training of the district level data managers and data entry operators, but the quality of that training was not yet assessed.

Instead of the development of the E-learning modules initially planned under the restructuring, the CSU with support from WHO, has preferred to update the existing training modules and upload these gradually on the portal. Up to date, modules for hospital doctors, paramedical staff and data managers are currently available on the portal.

Agreed actions:

- Develop an evaluation tool of the training of medical and paramedical officers as well as the DM and DEO (to be filled out by the participants and analyzed both at local and national level).
- Finalize the training of trainers for UP, J&K, Lakshwadweep and Daman and Diu
- Provide the 2 week FETP training in Orissa, UP, AP and MP.
- Provide data manager training for AP and WB by June 30, 2011.
- Ensure that the newly hired epidemiologists and microbiologists are trained within 3 months after appointment
- Update the lab manual and upload it on the portal.

2. <u>Information and Communication Technology (ICT)</u>

IDSP, supported by the National Informatics Center (NIC) has established a nation-wide Information Communication Technology (ICT) network which enables rapid transmission and analysis of data as well as communications and training related to disease surveillance. The restructured project finances the nationwide maintenance of the IT hardware, broadband connectivity and maintenance of satellite network, as well as the toll-free number call center and the setting up of a Strategic Health Operations

Center (SHOC). Data managers and data entry operators are being hired for the 9 priority states, while those from the other states will be trained with project funds.

Human Resources for ICT

In the nine priority states, the project finance and salaries of Data Managers (DM) and Data Entry Operators (DEO) for each district, SSU and medical colleges to operate satellite/broadband based Video Conferencing (VC); co-ordinate collection of data from reporting units; collate and analyze data for generating early warning signals; record and document outbreaks; generate periodic reports and support ICT systems in District and State Surveillance Units. Their recruitment, previously done by NIC is now being decentralized to the States. Overall, this recruitment is satisfactory with currently 211 out of 231 DM in position and 269 out of 321 DEO (see table above).

Networking for data transmission

Progress: The existing 776 data centers are installed in all State and District Head Quarters, as well as at 133 Government Medical Colleges. They connect to the portal through broadband and are used for weekly data entry and quarterly financial monitoring reporting. Prior to restructuring, the portal's connectivity through broadband was managed by NIC for the whole country but since restructuring this connectivity is financed by the states (IDA funding for the 9 priority states, GOI funding for the other states). While initially this transfer was not always successful leading for example to 12 unconnected sites in September 2010 in the 9 priority states, IDSP was able to restore 10 out of these 12 failing broadband connections in December 2010. Since the last review in September 2010, further progress was done such as the updating of the Master Data in all the nine priority states and entered also by 40 districts in the priority states and another 65 district in the other 26 states. The revision of consistency reports up to the district level is completed and uploaded in March 2011. Since April 2011, the modified formats of surveillance reports are also uploaded while all garbage data entered during the testing phase was identified and removed. Considerable efforts were done to redesign the portal home page in order to make it more user-friendly. Financing of the portal is now settled and NIC has agreed to continue to provide portal software support and customization between July 2010 and June 2011. Portal access has clearly improved since the last review, when CSU had agreed to provide a 3day turnaround time on issues raised by the SSUs related to portal. A track record of issues and their solutions were shared with the Bank on a quarterly basis.

Issues: Field visits have revealed that the functioning of the portal is still not optimal for operators at district and state. Non-functioning is often linked to small issues such as broken batteries or small missing pieces. States do still not feel responsible for financing these small repairs and prefer to rely on the CSU or NIC for complete follow up for product maintenance. Although the new portal home page was indeed a lot more user-friendly, it would further benefit from technical disease-wise notes. District and state data managers cannot access consistency reports by their reporting units, which is hindering the data analysis and follow-up. During the review, the CSU has promised to solve all these issues and allow the access to consistency reports. IDSP's current agreement with NIC related to portal software support and customization is only valid till June 2011. In order to ensure a smooth continuation of services, IDSP should initiate discussions about NIC's support for the following year.

Agreed actions:

- CSU to discuss NIC's role in portal software support and customization beyond June 2011.
- CSU to resend guidelines to SSU related to the decentralized responsibility for minor repair and replacement of consumables, such as batteries, in order to maintain functionality of data centers

Video conferencing

To strengthen the monitoring of program implementation and the training capacities at all levels, IDSP has established VC linkages with State and District Head Quarters and all Government Medical Colleges on a satellite and a broadband network. Video Conferencing should be used for training of IDSP staff, discussions on outbreak investigations and more general discussions related to the monitoring the decentralized implementation of IDSP. In total, 745 IT training centers were set up. Of these, 367 have satellite connectivity provided by the Indian Space Research Organization (ISRO) and 378 sites have broadband connectivity provided by NIC. Additionally, 36 centers, including all SSUs, the CSU and MOHFW have specialized Hi-end VC equipment.

However, all ISRO serviced sites are not functional since September 2010 due to a malfunctioning of the ISRO's EDUSAT. As a consequence, no VC sessions could be organized. Furthermore, the video conferencing with broadband connectivity through inter-wise software which was upgraded by NIC in December 2010 was also not compatible with IDSP's audio hardware. In February 2011, a solution was identified which might allow VC connection between districts, states and the center through inter-wise application over broadband. It implies the purchase of a connecting cable by all connected units. Instructions were provided by the CSU to all the states and during the last two weeks of April 2011, most priority states have started the process of procuring these cables. Seven of the nine priority states have tested and connected successfully with CUS. The CSU and SSUs have committed to use the videoconferencing facility at least twice every month starting from May 2011 particularly for outbreak investigation facilitation and monitoring establishment of surveillance (OPD) in Major Hospitals. It will however be important that CSU actively promotes and monitors the use of the VC facilities.

Agreed actions:
- Reinstall the VC connection in the remainder states and districts.
- CSU to provide the Bank a quarterly report related to the use of VC facilities for training and monitoring of the project implementation at state and district level
- SSUs should also start reporting to the CSU on a quarterly basis on the use of the VC facility and provide reports related to technical problems.

Maintenance contracts for IT equipment (data and training centers and VC facilities)
MOHFW requested that the maintenance contracts should be given through sole source selection (SSS) to the same agencies which have installed the equipment and established the network for respectively NIC and ISRO due to the high level of technological know-how required for the maintenance of the IT equipment. Of these requests, IDSP had received a non objection from the World Bank for the selection of the vendor on sole source basis for the maintenance of the ISRO VSAT network, the vendor has objected to the contract prior to signing. The main issue is related to the fact that there was a 15 months lapse period between the date when the initial AMC contract expired (December 2009) and the current contract is initiated. It was suggested that the contract could be signed for the equipment which is still under AMC till end of April 2011 and that IDSP will launch the process to identify the functionality and possible issues with the remainder of the equipment. Following the results of that review, IDSP can assess the situation and possible costs of repairs. The second request with justification for sole source selection for the AMC of the NIC equipment was shared with the Bank during the review and will be examined. Considering the delay in the finalization of the contracts for AMC, it is currently estimated that the project will only be able to cover 10 months instead of the planned 24 months of AMC.

Agreed action: IDSP to share with the Bank the solution related to the AMC contracts of ISRO equipment by May 15, 2011

The Toll Free 24x7 Call Center
The call center is operational since February 2008. It has Hindi/English language calling and answering capabilities functional with a toll free number 1075 to receive disease alerts from health personnel and

respond to queries from the general public. The call center was operated by NIC until the finalization of the procurement process for the SSS in November 2010.

Between February 2008 and end of March 2011, the call center has received 211,309 calls (42,000 since the restructuring). It would however be important to perform some more further analysis and identify how many of these calls actually helped in identifying outbreaks.

Media Scanning and Verification Cell

The CSU has established, in July 2008, a systematic media-scanning and verification mechanism to support outbreak detection. National and major State electronic, broadcast, and print media are monitored; findings evaluated and referred to SSU and DSU if a disease outbreak appears to be mentioned. Through this facility, the project receives 4 to 5 alerts of unusual health events daily, which are all followed up for verification. Between January and August 2010, the project has received 330 media health alerts but the review team has received no update on the functioning of the media scanning cell for the last six months.

Agreed action: Provide the bank an update on the number of health events that were identified through the media scanning and verification cell since the previous mission.

Innovative SMS-based reporting system

The restructured project included support for an innovative SMS-based reporting system developed in one state and its evaluation However, based on the negative evaluation report of the pilot in Andhra Pradesh, CSU has decided not to extend this pilot to other states.

Strategic Health Operations Center (SHOC)

IDSP plans to set up a SHOC which would function as a resource for ongoing training/knowledge sharing, and as a key communication center for emergency epidemic response. The procurement process of the SHOC is yet to be initiated and technical specifications of the equipment, electrical work and civil works are to be shared with the World Bank for non-objection.

Agreed actions: CSU will have to prepare and share the technical specifications of the SHOC with the Bank for Non objection and evaluate the length of the procurement process in order to assess if there is still enough time to finance the SHOC under the credit.

3. Data Management

Progress: More than 90 % of the districts in 9 priority states have switched over to portal data reporting; the remainder 10% consists mainly of newly created districts and districts with connectivity problems. Weekly data for “S”, “P” forms from PHCs and “L” forms is mostly entered on the portal at district level while “P” and “L” form data from hospitals in both government and private sector is restricted to laboratory confirmed inpatients. All the states (except AP) have been providing regular feedbacks to the districts. While the CSU has sorted out most of the software issues of the portal, a training session was organized during the review to familiarize the SSOs on data management and report generation.

Issues: To achieve the targets for the new indicators, SSU will have to focus more on solving the portal issues at decentralized level (see above) while further efforts are also needed to improve the streamlining of collation and transmission of daily/weekly OPD data from major hospitals and medical colleges. Data managers of Andhra Pradesh and West Bengal were not able to attend the training in November 2010.

Agreed actions:

- SSU to follow up closely on the collection and transmission of out-patients data in Medical colleges and major hospitals (first benchmark should be at least one district/Medical College hospital and one

private hospital in each district by end June 2011). A report on further actions taken to be transmitted to CSU and shared with the Bank on a quarterly basis,

- CSU will ensure training of DM of AP and West Bengal for data analysis by end May 2011.

4. Outbreak Surveillance

Progress: Since the restructuring, clear progress is made in reporting outbreaks in all states and specifically in the nine focus states. As such, regular weekly outbreak reporting (over 95% of weeks) is now ensured in Andhra Pradesh, Tamil Nadu, Rajasthan where as Punjab, Gujarat, West Bengal, Maharashtra, Karnataka, Uttarakhand complied between 50-95% of weeks in 2010.

Table: Number of Outbreaks reported

Year	All 35 States/UTs	9 WB funded States/UTs
2008	553	400
2009	799	488
2010	990	619
2011 **(till March)**	268	193

Comprehensive efforts were made to also confirm outbreaks through laboratory diagnosis: in 70% of reported outbreaks appropriate human samples were collected and submitted for lab confirmation in the priority states during 2010. The increased number in collection of samples does not yet translate in an equal percentage of actual laboratory confirmation of human samples which was 14% for 2010 in the nine priority states. However, there is a clear positive trend in lab confirmation of outbreak: the ethological confirmation was only 9% in April 2010 for the nine states (excluding water samples!). CSU is also monitoring the quality of outbreak investigations systematically by applying the assessment tool. Besides the positive trend in sample collection, 80% of outbreaks also met the criteria of timeliness of investigation (within 48 hours of FIR). The third criteria of final report submission is met in about 3% of the reported outbreaks between October 2010 – March 2011.

Issues: While there is a clear improvement of epidemic reporting, further efforts are needed to ensure that all outbreaks are identified. The proportion of laboratory confirmation of outbreaks has improved but not reached its target. It needs to be noted that the proportion is lower than expected since the denominator used for assessing the proportion also includes outbreaks for which no lab tests is needed (such as chicken pox and measles). Overall follow up and filing of the final report on each of the outbreak is still estimated around 3% and will need active follow up. Field visits have also revealed that IDSP will need to improve communication of the contact numbers of the DSU to clinicians, who are often ignorant of the contact information of DSUs. Visits by DSO/Epidemiologist /Microbiologists to health care facilities are not monitored by SSU and its frequency could be increased through pro-active promotion of these visits by SSU.

Agreed Actions:

- State surveillance units to use the assessment and review tool for all outbreak reports (FIR & final) for first quarter of 2011 and confirm how many of them fit into outbreak criteria and quality of action taken. Report on actions to be shared with CSU by June 2011

- SSU to ensure that all DSU are communicating IDSP contact information to clinicians and hospital outpatients departments.
- SSO to promote and monitor hospital visits by DSO and other technical staff - Report on progress to be shared with CSU every trimester.

5. Laboratory activities

Under the restructuring, the focus of the laboratory sub component is to demonstrate success in the nine selected states by (i) supporting 17 district level priority public health laboratories, and (ii) building up a referral network through partnering with 65 existing and functioning laboratories, using output based agreements. While this has been a lagging component over the lifespan of the project, progress over the last months is well articulated. Further intensive efforts are however needed to reach the end-of-the-project targets.

The success of the lab component can be measured by the etiological confirmation of outbreaks. To promote the use of adequate samples for laboratory confirmations, IDSP only takes into account the laboratory confirmation based on the use of appropriate clinical samples and started thus excluding the testing of water samples since April 2010. As a consequence, the percentage of laboratory confirmation of outbreaks has dropped nationwide from 17% (2009) to 11.8% (April 2010; 9% for the 9 states only). Guidelines related to the collection and transport of samples was shared with all the states in October 2010. This has yielded results as samples are being sent for lab confirmation in 70% of reported outbreaks in the nine states and 14% of outbreaks actually had a lab confirmation in 2010 (see above).

Support district public health laboratories

In the 9 priority states, 17 district priority labs are being strengthened with the objective to provide quality services for laboratory investigation of outbreak prone diseases within the boundaries of their respective district.

Provisions for each of these 17 district priority labs	*Current Status*
Trained microbiologists in place	10 positions filled, but none trained
Small equipment procured and operational	13 labs
Reporting status of labs- to CSU on e mail	14 Labs- Except 1 in WB, 1 in RJ and 1 in MH
Budget available to labs for incremental expenditures	Quarterly funds released released in 5 states-RJ, UK, PB, KN, AP.

Progress: Technical and financial guidelines were shared with the states. Implementation progress is monitored closely by CSU through the submission of weekly “L” forms to CSU by email. Since the last review, 7 more districts labs are reporting. Although delayed, microbiologists have been recruited now for 10 out of 17 labs, but are still awaiting their training (planned for May 2011). Since the last review, CSU has not been able to perform on-site visits to the district labs due to staffing issues within the laboratory cell at CSU. A revised lab manual is currently submitted for approval

Issues: Although there has been certainly progress over the last months, there have been considerable delays in the recruitment of district microbiologists as well as in the procurement process. Two states are yet to procure the equipment while funding for incremental expenditures cannot be released to the labs without a microbiologist. Maharashtra is currently finalizing the procurement of the equipment while the procurement process started only recently in West Bengal and will be finalized by end of June 2011. Due

to delays in the training of the microbiologists, not all district labs are yet performing stool cultures for Cholera Vibrio. Field visits prior the review have revealed that with the exception of the Karnataka district priority labs, most district labs still use the available rapid tests, Widal for Enteric fever and Elisa for dengue and Chikangunya. Microbiologists need more guidance related to the use of Typhidot, which is a difficult and temperature sensitive test. Better guidelines are also needed on the use of routine versus outbreak related testing by the district labs under IDSP's mandate. Performance in weekly reporting by district priority labs is variable from lab to lab but has clearly decreased in most of the states since January 2011 when limited HR capacity at CSU level did not allow following up the performance of all the labs. With the appointment of the new microbiologist at CSU since April 2011, CSU will again strengthen intensive monitoring of laboratory reporting. SSUs have not yet sufficiently engaged in the mobilization of adequate samples and the promotion of a better integration of the IDSP priority laboratory as a part of the main laboratory of the district hospital in order to generate lab based surveillance data.

Agreed actions

- The revised laboratory manual to be uploaded on the portal by May 30, 2011
- CSU and WHO to organize a workshop of experts to develop updated guidelines related to the use of Typhidot, Widal and culture tests. The conclusions of this workshop will be uploaded on the portal and included in the training of microbiologists.
- CSU to provide intensive handholding visits to the district priority labs and provide guidance related to the functionality of labs for diagnosis of epidemic prone diseases including stool culture testing for cholera.

Building a referral laboratory network

While the above mentioned district priority labs will provide laboratory services for outbreak prone diseases within the boundaries of their specific districts, the other 225 districts of the 9 priority states have access to quality laboratory services for outbreak investigations through the establishment of the Laboratory Referral Network, using the services of 65 existing and well functional laboratories.

Progress: All nine states have finalized the referral lab network plan since December 2010 and the implementation of the plans has rolled out in 3 more states since the last review. The process was much delayed in AP, TN, MH and WB. It is expected that the network will roll out in TN, MH and AP over the next month. Medical colleges have refused to sign the current version of the MOUs in West Bengal. Updated expenditure guidelines for referral labs and DSO were shared by CSU in November 2010.

Current status of referral lab network

State	Microbiologist posted at SSU	Referral lab plan finalised and endorsed plan received by CSU	Lab certification and MoU signing complete	Funds disbursed to referral labs	Functionality of referral lab network in state	Quarterly report of referral labs received by CSU
Andhra Pradesh	Yes	Yes	Partial	No	No	No
Gujarat	No	Yes	Yes	Yes	Yes	Yes
Karnataka	Yes	Yes	Yes	Yes	Yes	Yes
Maharashtra	No	Yes	Yes	No	No	NA
Punjab	Yes	Yes	Yes	Yes	Yes	No

Rajasthan	Yes	Yes	Yes	Yes	Yes	Yes
Tamil Nadu	No	Yes	Yes	No	No	NA
West Bengal	Yes	Yes	No	NA	No	NA
Uttarakhand	No*	Yes	Yes	Yes	Yes	No

Issues: While the implementation of the referral laboratory network was delayed, clear improvements have been noticed over the last six months. It will now be crucial that these achievements are sustained over the last year of the project. Currently the communication between DSOs of the linked districts and the nodal officers from the referral labs needs is still lacking behind and needs to be established at earliest. While it might still be early to establish the use of the network for outbreak investigations, field visits prior to the review indicate that this involvement is still limited. State epidemiologist, district surveillance officers and microbiologists need to be more proactively involved in utilizing the referral lab facilities for investigation of outbreaks. Although the quarterly reporting related to the lab network provide important information related to the progress or bottlenecks of the network in each state, only 3 out of the 9 participating states are yet reporting quarterly to CSU (Gujarat, Karnataka and Rajasthan). Field visits have also reflected that the large numbers of confirmed rapid test for Dengue, Malaria, chickengunia, encephalitis and Leptospirosis cases by the Vector Born Disease project are not always reflected in the IDSP reports. In some states, such as Andhra Pradesh and West Bengal, the roll out of the referral laboratory needs to be boosted further and a CSU delegation will visit WB in order to sort out these problems with the medical colleges.

Agreed actions

- Workshop at CSU of microbiologists posted at the state head quarters towards improving collection of lab based surveillance data and lab investigation of outbreaks by August 2011
- Organize a national meeting with nodal microbiologists from all the 65 participating labs in order to motivate participants, share experience and streamline bottle necks.
- Identify EQAS organizers (June 2011)
- EQAS panels to be sent by November 2011 to all 65 labs under the state referral lab networks and well functioning district priority labs.
- SSO's in all nine states to promote the collation of the data from medical college labs and other major labs in each district. CSU to develop a monitoring tool to assess progress of this action.
- The state microbiologist will visit all labs under the lab network to facilitate any operational issues. In particular they will inculcate a culture of "Laboratory Surveillance" and not just laboratory testing and reporting (reviewing the data to identify silent outbreaks and unusual conditions) with immediate effect.

Laboratory assessment

Following agreements prior to the restructuring CSU has launched a survey to assess the equipment provided to the district labs during the first years of the project. The draft report is available to CSU but needs further input. CSU will share a first analysis of the report, focusing on the bigger equipment and providing the plan of action by CSU. The final report of the assessment will be shared by CSU with the Bank by July 1st, 2011.

6. Avian Influenza Human Health

The human health sub component of Highly Pathogenic AI aims to minimize the threat posed to humans by AI infection and other zoonoses and prepare for prevention, control and response to an influenza pandemic in humans. It supports: i) strengthening and networking of 12 reference laboratories for prompt case confirmation: and ii) re-establishing seasonal influenza surveillance system for India.

Progress and issues: The roll out of the collaboration with the Avian Influenza laboratory network was delayed by 11 months due to cash flow problems. As a consequence, the project will only procure reagents for remaining one year of project instead of the initially planned two years (for more details see procurement annex). However, since January 2011, IDSP has signed the MOUs with the 12 Influenza Reference Laboratories and provided each lab an annual contingency of approximately USD 25,000. An EQAS system was established and arrangements for adequate sample collection and transportation were made.

These 12 avian influenza labs will also collaborate in the national surveillance of seasonal influenza were identified. The influenza surveillance will assess the proportion of Influenza Like Illnesses (ILI) cases among ARI patients and monitor trends and changes of human influenza virus strains among ILI patients. Each lab will now have to identify three sentinel sites from neighboring districts each for SARI and ILI surveillance

ANNEX 6

DETAILED IMPLEMENTATION REVIEW OF AVIAN INFLUENZA, ANIMAL HEALTH SUB-COMPONENT, IMPLEMENTED BY DADF

The review team had a detailed discussion on progress made on various agreed actions with DADF and also visited Kolkata and Bangalore BSL-III laboratory sites. The status of BSL laboratories as of April, 2011 is enumerated below:

BSL-III laboratories

Sr.No.	Category	Place	Status
1.	Pre-fabricated	Jalandhar	Completed. Is functional now.
2.	Pre-fabricated	Kolkata	Completed. Is functional now.
3.	Pre-fabricated	Bareilly	The lab. is being procured by UNOPS and installed. But it will operational by August, 2011.
4.	Pre-fabricated	Bangalore	The lab. is being procured by UNOPS and installed during Jan, 2011 and will be operational by May, 2011.
5.	Constructed	Guwahati	Land development and site construction is in process and will be installed by December, 2011.
6.	Constructed	Pune	Land development and site construction is in process and will be installed by December, 2011

BSL-II laboratories:

23 laboratories are being set up in 21 states.

Sr.No.	State	Status
1.	Himachal Pradesh	Completed and functional
2.	Gujarat	Completed and functional
3.	Meghalaya	Completed and likely to be functional by June ,2011
4.	Uttaranchal	Completed and functional.
5.	Chhattisgarh	Completed and functional
6.	Haryana	Completed and functional
7.	J & K	Likely to be functional by May 2011
8.	Rajasthan	Likely to be completed by June 2011
9.	West Bengal	Completed and functional
10.	Madhya Pradesh	There were problems in procuring Bio-safety Cabinet and deep freezer – likely to be functional by June 2011
11.	Maharashtra	Const ruction work in progress
12.	Andhra Pradesh	Expected to be completed by October, 2010.
13.	Karnataka	Expected to be completed by June, 2011.
14.	Kerala	Expected to complete by December, 2011.
15.	Tamil Nadu	Expected to complete by September, 2011.
16.	Orissa	Tender process completed
17.	Manipur	Tender process completed
18.	Tripura	Likely to be functional by June 2011
19.	Jharkhand	Likely to be functional by June 2011
20.	Goa	Tender process complete
21.	Bihar	Tenders process completed and work is yet to stsrt

ANNEX 7

ENVIRONMENTAL ISSUES AND HEALTH CARE WASTE MANAGEMENT

With the support of WHO, NCDC has revised the Laboratory Guidance manual, which includes more comprehensive guidance on infection control and bio-safety measures in laboratories and also waste management practices, as per the national regulations. WHO is also supporting the CSU in providing another round of training to the new microbiologists hired by the states. It is suggested that along with this training, guidance be provided to the laboratories with regard to systematic and regular on-site training and supervision, including managing and reporting of sharps accidents. To ensure sustained behavioral change with regard to good occupational practices, the Bank and WHO recommend that awareness materials be disseminated and posted in all laboratories. There is no need to produce new awareness materials, but existing images, pictorial guidance material from the existing IDSP SOPs and GOI's Infection Management and Environment Plan can be circulated. In addition to the above, the CSU should mandate the regular vaccination of laboratory technicians. The CSU informed that funds are allocated to the states for items such as kits reagents, personal protective equipment and waste management consumables.

ANNEX 8

TRIBAL AND SOCIAL PLAN

Social Safeguards: Among the participating states, Gujarat, Maharashtra, Karnataka, and Andhra Pradesh have piloted community surveillance as part of the Tribal Action Plan (TAP). West Bengal has indicated that it will start the pilot after June 2011. Gujarat has implemented the pilot on promoting community surveillance among the tribal communities in two Taluks of the Nizar block of the Tapi district, where over 90 percent of the population is tribal and live in remote locations. The Gujarat TAP pilot involved training of community volunteers, health workers, and NGOs in the community surveillance process. The Tapi DUSU has evaluated the pilot outcome using the baseline data collected on health service, access, disease incidence and outbreak reporting patterns prior to the implementation of the TAP. The evaluation exercise indicated that there was a distinct improvement in reporting patterns, especially by the community informants and health workers.

The Gujarat experience deserves commendation and calls for further study and replication of the model across other states with a number of tribal blocks and districts. Karnataka, Maharashtra, and Andhra Pradesh have trained a number of community health workers, especially the ASHAs, in order to enhance community surveillance in tribal areas of their states. Maharashtra and Karnataka who are piloting community surveillance as a part of the TAP in Taloda and Akkalkowa blocks of Nandurbar district and in Gundulpet and Kollegal blocks in Chamrajnagar district respectively have indicated that the specific pilots have slowed down due to several factors, which they will accelerate in the coming months. Orissa continues to implement and report regarding its TAP pilot in Koraput district, which seems to be very comprehensive in approach and should be well documented.

<u>The Bank team would like to undertake field visits to Gujarat to record the learning and plan dissemination of the success stories</u>.

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ANNEX 9

PROCUREMENT

The procurement plan revised in September 2010, indicates procurement for an estimated amount of INR 1666.70 lakhs for 2010-11 and 2011-2012 (ending March 31, 2012). The overall progress of the planned procurements was reviewed during the mission. It is estimated that the project will be able to realistically achieve procurement of approximately INR 934 lakhs, which translates to a saving of INR 735 lakhs.

The procurement of Transmission Electron Microscope through ICB is declared cancelled after repeated extension of bid submission dates. For the Computerized Invertoscope, re-invitation of bids through NCB is being proposed, since there was inordinate delay in the extension of the letter of credit (LC) by the bank.

Since the last mission only one service contract for the 24 X 7 Call Centre operations was entered into. Negotiations are on for the three Single Source procurements, namely (i) Country wide AMC of IT Equipment at the Training Centers (INR 58 lakhs/12 months); (ii) Country wide AMC for Data Centers (INR 86 lakhs/12 months); and (iii) AMC for VSAT network at 400 sites (INR 98 lakhs /12 months). Based on the justification provided for procurements of closed systems, procurement of (i) rRT-PCR Rxn Strips & Caps for Step-One Real Time PCR machine, (INR 17.44 lakhs); (ii) RNA Zap, (INR 7.53 Lakhs); (iii) Capillary DNA sequencer ABI 3130x Compatible kits and consumables (INR 13.39 Lakhs); and (iv) Reagents compatible for on line pathogen detection system 7990 HT (INR 9.38 lakhs) through Direct Contracting is cleared. For eight other kits and consumables, the National Shopping process is initiated and quotations are being evaluated.

Procurement of Equipment for 14 items through National Shopping process is initiated and the evaluation of the quotations is completed. The IFB and bid documents for four equipments (NCB) are in the process of preparation.

Procurement of equipment (estimated at INR 44.5 lakhs) in the states of Maharashtra, Tamil Nadu and West Bengal is also expected to be completed by the year end.

The draft revised procurement plan indicating the agreed procurement time frames in attached. The details of post review contracts for 2009-10 for the States and CSU is yet to be made available. While it is observed that there are no post review contracts for 2009-10 at the CSU level, the details of post review contracts for 2009-10 for the States must be made available to the Bank on a priority basis, by the 4th week of April 2011, such that a post review can be conducted for any two selected states in the 1st week of May 2011.

ANNEX 10

DISBURSEMENT AND FINANCIAL MANAGEMENT

Integrated Disease Surveillance Project [P073651] – IDA 3952-IN
Financial Management Input to Aide Memoire – April 2011

Overall Summary

Against the amended allocation of SDR 41.478 million, the disbursement as on 19-Apr-2011 stands at SDR 16.721 million [at 40.31%]. The undisbursed balance of USD 46.315 million includes the unadjusted advance of USD 6.8 million.

With the complete staffing of the financial management function both at NCDC and DADF, a visible improvement in the quality of financial management is noted. The improvements are reflected in the timeliness of submission of audit reports, preparation of interim financial reports etc. and on the overall in the proactive actions taken to resolve the pending FM issues. For these reasons, the FM performance is rated as 'Moderately Satisfactory'. There do remain several opportunities to further strengthen the financial management performance and are discussed in the following paragraphs.

Disbursement and Financial Management of MOHFW/ CSU

Disbursement status

1. As of date, the undisbursed balance in the Credit for Human Health components stands at USD 27.747 million and includes the unadjusted advance in the Special Account of USD 4.8 million.

2. As per the Bank's records, withdrawal applications for approx INR 4.2 crores are presently being processed or reviewed. This represents eligible expenditures reported by NCDC for the six months period from Apr-2010 to Sep-2010.

3. At current rates of exchange, the balance in the Credit (after considering the WAs under process) will allow expenditures of approx. INR 135 crores (@90%) to be claimed from the Credit in the remaining life of the project.

Interim Financial Reports

4. The reimbursement for the project that has been changed from SOE based to IUFR based disbursement (on semi-annual basis) effective from 01-Apr-2010. NCDC has submitted IFRs for the six month period 01-Apr-2010 to 30-Sep-2010 which is presently being reviewed by the Bank. The review indicates that there are significant opportunities to improve the format and presentation of information with the objective of providing complete information on the expenditures reported, transfer of funds to the States and its utilization. The Task team is working with the NCDC to revise the IFR templates,

5. The IFRs for the next six month period ended 31-Mar-2011 is due to be submitted to the Bank by 15-May-2011.

6. The task of reconciliation of the audited expenditures with the expenditures reported and claimed for the year 2009-10 is under progress.

Financial staff:

7. As discussed during the project restructuring, NCDC has now established a FM cell with two qualified financial staff so that active follow up could be taken on the FM issues as well to ensure that the FM staff could travel to the participating states on regular basis to improve the internal controls. This requirement on FM cell was also included as a covenant in the Financing Agreement. The mission was informed that these two FM staff are actively involved in completing the FM work at NCDC on continuous basis; and to improve the financial performance of 9 participating states.

External Audit 2009-10

8. It is noted that (a) the response to the three audit review letters on '2009-10 audits' is still pending; and (b) consolidated audit report for Kashmir state as per the agreed ToR. The mission was informed that the FM cell would follow up on this and the needful would be done by 15-May-2011. During the mission, consolidated audit report for Manipur state has been submitted for the Bank's review.

9. During the mission, a discussion was held with the 9 participating state representatives in order to brief them on the weaknesses highlighted in the respective audit reports. The states were also advised to individually assess the present financial systems in-order to identify the probable areas for strengthening and seek the assistance of the FM cell in CSU on the way forward. The Bank noted states' concerns on (i) very small allocation for operating expenditures, and (ii) low salaries of FM staff in the state. NCDC is requested to follow up on these issues and provide the feedback on actions taken in the next mission.

	Action Points for NCDC	**Timeframe**
1	Submit the replies to the three audit review letters issued by the Bank against the audits for FY 2009-10.	May 15, 2011
2	Submit reconciliation of audited expenditure with the expenditure reimbursed by the Bank for the year 2009-10.	May 10, 2011
3	To follow up with Kashmir state with regard to the submission of the consolidated state's audit report for FY 2009-10.	Immediately
4	Finalization of IUFR for the period of 01-Apr-2010 to 30-Sep-2010 and subsequent submission of reimbursement claim to CAAA.	May 15, 2011

Disbursement and Financial Management of DADF

Disbursement status:

1. As of date, the undisbursed balance in the Credit stands at USD 18.213 million, including the unadjusted advance in the Special Account of USD 2 million.

2. A total of SDR 6.620 million stands disbursed as of date and includes an amount of SDR 2.369 million disbursed to UNOPS for procurement of equipment under Part C of the project.

3. As per the Bank's records, withdrawal applications for approx `25 lakhs are presently being processed or reviewed. This includes eligible expenditures reported by DADF up until 30-Sep-2010.

4. At current rates of exchange, the balance in the Credit (after considering the WAs under process) will allow expenditures of approx. `80 crores (@100%) to be claimed from the Credit.

Financial Reports and Reimbursement Claims:

5. DADF has submitted to the Bank IFRs for 2009-10 and the six months period 01-Apr-2010 to 30-Sep-2010. These have been reviewed by the Bank and clearance for disbursement has been provided vide letter dated 08-Nov-2010. The IFRs for the next six month period ended 31-Mar-2011 is due to be submitted by 15-May-2011.

6. Delay in submission of reimbursement claims: The project has not yet submitted the reimbursement claim applications for the expenditures for FY 2009-10 and FY 2010-2011 (April to September 2010). The mission was informed that these claims shall be submitted to CAAA by 30 April, 2011.

External Audit 2009-10

7. The audit report for 2009-10 have been submitted and reviewed by the Bank. It is however, noted that the responses to the audit review letter have not yet been received. The Mission was informed that the reply shall be sent to the Bank by 30 April, 2011.

Decentralized Expenditure

8. The mission re-iterated that in accordance with the agreement arrived at with DADF in early 2010, the Bank would consider the reimbursement of decentralized expenditures for 2008-09 and 2009-10 pertaining to DADF trainings based on the audit reports, if the audit is done by an auditor selected as per Bank procurement procedures; and the audit is conducted as per the terms of reference agreed between DADF and Bank. The mission was however, informed that the auditors are yet to be appointed. DADF assured that the selection process is in progress and the same shall be finalized at the earliest.

	Action Points for DADF	**Timeframe**
1	Submit the replies to review letter issued by the Bank on November 8, 2010.	April 30, 2011
2	Submit a reimbursement claim for 2009-10 amounting to INR 569,056 based on the review of audit reports for the year.	April 30, 2011
3	Submit a reimbursement claim for 2010-11 (April to May)	April 30, 2011

	INR 1,884,739 based on the review of the IUFRs.	
4	Finalize the appointment of auditors as per Bank procurement procedures, for auditing the decentralized expenditures for 2008-09 and 2009-10 pertaining to DADF trainings as agreed with the Bank on 23 March 2010.	June 30, 2011
5	As per the Financing Agreement, submit the FMR on eligible expenditures incurred by DADF on the project at the central level during October 2010 – March 2011.	May 15, 2011

ANNEX 11

STATE FIELD VISITS TO SSU OF 9 PRIORITY STATES

Prior to the Joint Review, from January to April 2011, teams comprising a World Bank consultant and Central Surveillance Unit (CSU) staff visited 8 of the 9 priority states. The objective of the field visits was to i) assess progress of implementation of the program in states against agreed indicators; ii) identify possible bottlenecks in implementation and propose actions for resolving these; and iii) prepare for the upcoming Joint Implementation Review at the center. District hospital workshops were organized in the states of Karnataka, Punjab, Tamil Nadu, Uttarakhand and Gujarat. Besides discussions with the officials of the staff of the State Surveillance Unit (SSU), the state visits also included visits to health facilities. The findings of these field visits have informed the Joint Implementation Review of the Integrated Disease Surveillance Project scheduled from April 13-21, 2011. The following paragraphs briefly describe the field visit observations from the states of Karnataka, Tamil Nadu, Punjab, Uttarakhand, Gujarat, West Bengal, Rajasthan and Maharashtra:

Karnataka (January 2011)

Review of Progress against indicators:

(i) **Staffing and training:** The State Surveillance Officer and data manager have been recently recruited. Recruitment for sanctioned positions of epidemiologists and microbiologists is in final stages. The trained state data manager has completed training of district managers (all but 5 districts) and data entry operators from all districts.

(ii) **Lab component:** All state districts transmit the weekly reports over the dedicated portal. A preliminary analysis brings out that outbreaks reporting and weekly surveillance reporting is adequate. On an average less than 70% PHCs (P forms) and less than 80% of sub-centers reporting weekly though inconsistently. While 50% of district/ taluka hospitals report on the P forms, less than 30% of the private sector reports on the same.

(iii) **Information technology:** All but three newly created districts of Yadgir (Gulbarga), Ramanagaram (Bangalore Rural) and Doddaballpur (Kolar) are IT enabled. Broadband based videoconferencing is available at all 27 (with the exception of 3 new) districts. Videoconferencing was used sparingly in the second half of 2010. The SSO and state data manager have assured optimal usage of this facility. The medical colleges' videoconferencing connections available through ISRO are not functional.

Field Visit Observations: The team visited the Infectious Diseases hospital; Institute of Child Health, Bangalore; ID hospital; KR hospital, Mysore; district hospitals in Mandya and Channapattana; and sub-district hospital, Ramnagaram. All these facilities are observed to reporting routinely for inpatients and laboratory confirmed cases in the "L" form only. OPD surveillance is not established. It was observed in these hospitals (except KRH, Mysore) that while doctors write the provisional diagnosis both on the OPD slip and register, pharmacists separately maintain an account of drugs dispensed to each patient by OPD numbers. It was recommended OPD surveillance could be initiated in the hospitals by collating and reviewing data from either the OPD or pharmacists drug distribution register. Most major hospitals require support of data entry operators. It is recommended that data operators posted at medical colleges or at district surveillance units (DSUs) provide support to these facilities as and when required. The State Surveillance Officer has confirmed that the District Surveillance Officers will immediately be tasked with providing rotation support for data entry to identified hospitals from this existing pool of resources.

District/Area Hospitals Workshop: The workshop was attended by about 80 sub-district, district and medical college hospitals from across the state. The Commissioner, Department of Health and Family Welfare (DHFW) and Managing Director, NRHM also participated. The workshop stressed the need for

establishing hospital based OPD/IP and laboratory surveillance. The estimated 25 million patients seen in major public sector hospitals annually are a veritable goldmine of data that needs to be accessed and analyzed. The Commissioner DHFW instructed superintendents of participating hospitals to establish surveillance mechanisms by end March 2011. He confirmed commitment to the initiative by emphasizing on the oversight and monitoring support the MD, NRHM and his office would provide. Director HFW, Project Director, IDSP and SSO were exhorted to keep the oversight offices routinely informed of progress on this front. The Commissioner HFW also committed to address the issue of non-functional video conferencing facilities at Medical College Hospitals in consultation with Department of Medical Education. Commitments were also made to proactively fill all vacant sanctioned positions under IDSP in the state and to hasten the process of activating the referral laboratories network.

Andhra Pradesh (January 20-21, 2011)

Review of progress against indicators

(i) **Staffing and training:** Recruitment and contracting in of 13 of 23 sanctioned epidemiologists positions has been completed in December 2010. Of the two sanctioned positions for microbiologists, one microbiologist is in place. The sole entomologist position too is filled. All the new recruits are due for induction training which will be organized by CSU in May 2011. The SSU may request the CSU for a relaxation in recruitment criteria so as to be able to fill all sanctioned specialist positions. 18 districts now have dedicated Data Managers, and all positions for data entry operators in all districts are now filled. Since the State Data Manager is yet to complete training of trainers training at Delhi, the state has not been able to initiate district based training for data managers. In December 2010, the state organized a three day data analysis training for one date entry operator/ manager and a senior health supervisor from each district. Due to sub-optimal quality of training, a request for refresher training has been put in with the CSU.

(ii) **Lab component:** The outbreaks reporting and weekly surveillance reporting is inadequate. On an average less than 50% PHCs (P forms) and less than 70% sub-centers are reporting weekly and that too inconsistently. The district/area hospitals' reporting is less than 25%. Private sector reporting is less than 10%.

(iii) **Information Technology:** All but the districts of West Godavari, Prakasam and Khammam are IT enabled. Broadband based videoconferencing is functional in 19/23 districts. However, this facility has not been used for the entire year of 2010. The SSU team has committed to using the facility twice a month (on the second and fourth Tuesdays). The medical college data center connections provided by ISRO are not functional. The CSU has intervened with ISRO and the issue is expected to be resolved on priority.

District Areas/Hospitals Workshops: 17 of 23 districts participated in the workshop. It is estimated that over 30 million patients are seen every year in 230 district/area hospitals of the state. The Director and Additional Director, IDSP requested all attending hospital superintendents to initiate data collection and monitoring in OPD, IP wards and laboratories by March 2011.

Field visit observations: There has been a change in the senior management of the program at the state level. The review team visited Mandal PHC, Ramanathpuram district; the District Hospital Medak; and Gandhi Medical College. The reporting in PHC (both P & S forms) is acceptable but documentation is poor. Surveillance mechanisms have not been established in the OPDs of the District Hospital or the Gandhi Medical College for lack of a dedicated person to collect and collate necessary information from various OPD clinics. Both facilities do submit the laboratory report to the DSU, though irregularly. It was agreed with the Additional Director that Data Entry Operators attached to DSUs will be deployed to visit the OPDs of these facilities and help in collation of requisite data. Hospital Superintendents have committed to institutionalization of the process of recording of provisional diagnosis in OPD

by doctors, beginning with the Pediatrics and General Medicine Departments with expansion to other OPDs in future, in order to establish a surveillance mechanism for OPD clinics.

Tamil Nadu (February 2011)

Review of Progress against indicators:

(i) **Staffing and training:** Interviews for 5 and 3 vacant epidemiologist and microbiologist positions respectively were recently concluded and orders for joining are expected to be issued in the immediate future. It is expected that the state might not be able to fill up all vacant positions and may seek relaxation in qualification criteria from the Bank. The state data manger has completed training of district managers from all districts, however, feedback from data entry operators indicated poor quality of training.

(ii) **Lab component:** All the districts in the state engage in weekly reporting over the designated portal. The outbreaks reporting and weekly surveillance reporting is good. About 80% PHCs (P forms) and more than 90% of sub-centers in each PHC report weekly thought inconsistently. The medical college, district/ taluka hospitals reporting stands at 50% and mostly in “L” forms. Private sector reporting is less than 25%. The state data manger is yet to analyze the reporting consistency for year 2010 for all districts by facilities. He has committed to complete the exercise (particularly with respect to major hospitals) in two weeks time.

(iii) **Information Technology:** All but two districts are IT enabled. Broadband based videoconferencing facility is installed in all districts. Videoconferencing facility has been sparingly used since second half of 2010. The SSO has agreed to work towards optimal utilization of this resource. As in the state of Karnataka, the videoconferencing facility at medical colleges made available through ISRO is dysfunctional. Despite follow up from CSU team, the issue is yet to be resolved.

Field Visit Observations: The district hospitals at Kanchipuram andVallazapeth (North Arcot dist), and PHC Kaveripakkam were visited. While both district hospitals transmit only confirmed cases in “L” form, OPD surveillance is not established and hence not reported on. In both hospitals doctors are writing provisional diagnosis in OPD slip and Register both. Since OPD diagnosis recording and drug prescription and dispensation follows similar pattern as in Karnataka, it is similarly recommended that these data lists be used for OPD surveillance. Most of the district hospitals may not need any support for data collation. It was also recommended that data entry operators from the DSUs be deployed to Medical Colleges with immediate effect with supportive oversight from DSO’s and SSO’s office. The PHC was observed to send regular weekly reports. However, daily and weekly tallying of data was lacking.

District/Area Hospitals Workshop: About 50 sub-district, district and medical college hospitals participated in the state workshop. Hospital surveillance as described in the report of the last joint review of September 2010 was rediscussed. It was estimated that over 20 million patients attend OPD clinics in the public sector each year and would support a strong surveillance system, if established. The team also reviewed the lab network and encouraged reporting on outputs. A decision was taken to strengthen the laboratory components with a Rs 50 Crores commitment from the state exchequer. The Principle Secretary HFW was briefed on the field visits. He requested the Directors (PH, ME and Medical) and SSO to monitor progress and keep him updated.

Punjab (9-10 March 2011)

Review of Progress against indicators:

(i) **Staffing and training:** Recruitment for 11 epidemiologist and one microbiologist position is in final stages with orders for joining expected to be issued soon. The state data manager has completed training of all district managers and data entry operators from all districts.

(ii) **Lab component:** All the districts send weekly reports over portal. The outbreaks and weekly surveillance reporting is adequate. More than 90% PHCs (P forms) and less than 80% of sub-centers reporting weekly though inconsistently. The district/ taluka hospitals reporting are approximately 80%, while that of the private sector is less than 30%. The state data manger has analyzed the reporting consistency for year 2010 for all districts by facilities (particularly that of major hospitals), but further analysis is called for.

(iii) **Information technology:** All districts in the state are IT enabled. While broadband based videoconferencing is possible at all 20 districts, it is dysfunctional since September 2010. Videoconferencing has been sparingly used since the second half of 2010.

Field Visit Observations: The team visited the Government Medical College, Amritsar. The Department of Community Medicine has taken over coordination responsibility since the last six months and since then “P” and “L” forms are being regularly submitted. The Department of Community Medicine and each unit in the clinical departments has identified a nodal person, who collates the “P” forms and shares with a nominated person in Community Medicine, who is tasked with collation of all P and L forms with the support of the data entry operator and thereafter transmission to the DSO. Since each doctor is expected to write a provisional diagnosis, the nodal person simply totals the cases per unit and transmits this to community medicine department. Documentation of provisional diagnosis by doctors has improved over the last three months. The representative from Microbiology Department highlighted the lack of referrals for laboratory diagnosis. For instance: at the end of the week, 11 suspected encephalitis/meningitis cases were seen of which 4 were from one unit, however no samples had been sent to the lab. Moreover, the Microbiology Department also did not have rapid diagnostic kits. The SSU and DSO were requested to motivate clinicians for referral for appropriate sample collection. The team was also informed of the criticality in alerting the DSO if clustering of cases in OPD was observed. Meetings were also held with the civil surgeon, pediatrician, physician and senior medical officer of the district hospital. The daily OPD is around 50-80 patients and doctors themselves perform daily analysis on data and submit weekly reports. However, tallying of data is absent, which was emphasized on. At the end of the visit, H1N1 outbreak was reported from Ludhiana, with most cases being reported from Dayanand Medical College Hospital. The first case was reported on January 3, 2011 and till March 9, 2011, samples were collected from 22 suspected cases. 15 cases were confirmed, of which 10 resulted in mortality.

Another visit was organized to the District Hospital, Mohali. Since the pediatrician is writing provisional diagnosis, surveillance data can be collated. However, the same is not being done by the Physician. This casts doubts on accuracy of data recorded in the “P” form. Lab diagnosis is also weak and needs improvement. The district public health laboratory is in the process of being established. The microbiologist has joined the facility and is working under the guidance of the senior pathologist of the hospital. The laboratory and diagnostic facility is good. The senior medical officer was requested to motivate the physician for documenting provisional diagnosis which would improve information in the “P” form. Microbiological diagnosis was also emphasized on.

District/Area Hospitals Workshop: 30 sub-district, district and medical college hospitals participated in the workshop with 6 District Health officers and 10 epidemiologists hired under IDSP, National Vector Borne Disease Control Program (NVBDCP) etc. The need for establishing hospital based OPD/IP and laboratory surveillance was stressed. The Director DHFW requested superintendents of participating hospitals to establish a surveillance mechanism by end March 2011. He also directed the SSO to monitor

and support the mechanism and keep him informed of the progress. SSOs were also tasked with providing oversight to recording of provisional diagnosis in major hospitals and initiate disciplinary actions, if needed.

Uttarakhand (17-18 March 2011)

Review of Progress against indicators:

(i) **Staffing and training:** The state has filled up state entomologist and microbiologist positions and 6 district epidemiologist and one district microbiologist position in October 2010. The other positions are expected to be filled up in another 6-8 weeks. The state data manager has completed training of district managers (13) in position and data entry operators (15) in state, districts and medical colleges.

(ii) **Lab component:** All the districts (save two) send weekly reports over portal. The outbreaks reporting and weekly surveillance reporting is adequate. On an average less over 80% PHCs (P forms) and less than 70% of sub-centers report weekly though inconsistently. The district/ taluka and medical college hospitals reporting is pegged at 50%. Private sector reporting for "P" forms is nil but is 60% for "L" forms. Two of the private medical colleges in the state committed to start reporting on OPD surveillance post the field this visit. The state data manger has analyzed the reporting consistency for year 2011 for all districts by facilities (particularly for major hospitals). Detailed analysis of these is expected in a week's time.

(iii) **Information technology:** All thirteen districts are IT enabled but 2of these have been dysfunctional since the last 2 months. Broadband based videoconferencing is possible in all 13 districts but not functional since September 2010 due to problems at NIC. These have been resolved and with use of a cable connection the facility can be made functional. The SSU has agreed to procure the connection cables for 13 districts and establish VC connectivity in the next two weeks

Field Visit Observations: The team visited the District Hospitals; Mela Hospital; district laboratory, Haridwar; Jolly Grant Medical College Hospital (JGMCH), Dehradun; Doon Hospital; and a private Medical College Hospital in Dehradun. The district level hospitals are regularly reporting in "P" forms and the district laboratory in "L" forms. However, the documentation (provisional diagnosis writing and collation of data from all OPD registers by tallying at the end of each week) for OPD surveillance is not fully established. Documentation of provisional diagnosis in OPD slip/ register and collation of data from each doctor needs streamlining. The Jolly Grant Medical College Hospital is sharing good lab surveillance data. It has now started functioning within a Lab network facility. Dehradun Private Medical College Hospital also shares weekly "L" forms. The JGMCH with cash support is conducting tests and sending in "L" forms. However, none of the four districts attached to this laboratory have sent any samples in the last 6 months. None of the Private Medical College Hospitals are submitting "P" forms. Major hospitals in the state may need support of data entry operators. The strategy proposed in other states was also recommended there. Both the Medical colleges have agreed to start reporting on OPD surveillance soon.

District/Area Hospitals Workshop: About 30 sub-district, district and medical college hospitals participated in the workshop. The superintendents of the hospitals were intensely involved in making the OPD lab surveillance more effective. The Director General Health requested superintendents of all hospitals to establish an OPD surveillance mechanism by end March 2011 to which all hospital authorities committed. Field visit observations were shared with Secretary Medical, Health and FW & MD, NRHM. Both officers committed high level attention to the issue of hospital based surveillance and filling up of all vacant positions under IDSP.

Gujarat (April 1st, 2011)

Review of Progress against indicators:

(i) **Staffing and training:** Recruitment of all project posts (epidemiologists/microbiologists and entomologist) is pending. The state data manger has completed the training of district managers and data entry operators from all districts.

(ii) **Lab component:** All the districts send weekly reports over portal. The outbreaks reporting and weekly surveillance reporting is adequate. On an average of more than 80% PHCs (P forms) and more than 90% of sub-centers are reporting weekly and consistently. 70% of district/ taluka hospitals report, while data from major hospitals is limited to inpatients and labs only. Private sector reporting is estimated to from less than 50% of the blocks in the states.

(iii) **Information technology:** All districts are IT enabled. Broadband based videoconferencing is functional in all districts. However, this facility is being used sparingly since the second half of 2010.

Field Visit Observations: The mission team visited the BJ Government Medical College Hospital and observed the functioning of pediatric and general medicine OPD's. It was observed that surveillance of OPD cases had not been initiated. Only data from inpatients and laboratory (microbiology) is collated, as had been previously agreed with the heads of both departments. The heavy rush in these OPDs was cited as reason for not institutionalizing OPD surveillance. This despite the hospital having one of the best centralized registration and OPD documentation systems with each OPD managed by 4-6 faculty and residents, and two-three nurses assigned for streamlining the patients.

A meeting with the heads of the Departments of Medicine, Microbiology, PSM and Pediatrics was convened in the presence of the Hospital Superintendent. It was agreed to assign responsibilities for documentation of IDSP conditions to the duty nurses after patient is assessed and provided prescription for treatment at OPD. Post investigations details were agreed for collation in the Department of Microbiology. The SSO was tasked with organizing an orientation for clinicians on April 4, 2011. The Department of Community Medicine was poorly involved in hospital surveillance, while they were involved in FETP and other trainings. Data from the daily OPD of 600-700 patients in Pediatrics and Medicine departments alone is of high value to the state.

A visit was also made to the District Hospital, Gandhinagar. Here too, the surveillance data was limited to inpatients and laboratory investigations. IP data is collated by a pharmacist visiting the wards and a good line listing by conditions is maintained. The daily OPD of 200-250 could also be a good source of data. It was observed that data details are seldom analyzed or used for tracking clustering of the cases. For instance: in early January 2011, the hospital encountered 3-5 infective hepatitis cases. The number increased by 5, 14, 26, 42, 27 etc each day till mid January. The DSO initiated investigations only in early March. In the event of hospital data being analyzed routinely, the infective hepatitis case outbreak could have been identified at least 2 months before it was actually recognized. Again, on March 21, 2011, three cases of enteric fever were observed from village Kolada followed by another case on March 24, 2011. No investigation was initiated. Interactions with the SSU indicate that major hospital data in Gujarat is limited to IP and lab. The SSO and DSO have agreed to now concentrate on establishing hospital surveillance mechanism for OPD in all major hospitals of the state. Feedback from the field trip was provided to the Additional Directors, Epidemics and Public Health. The mission team was assured that the weakness in hospitals surveillance would be proactively addressed over the next two months.

West Bengal (April 4, 2011)

Review of Progress against indicators:

(i) **Staffing and training** A new team comprising the Additional Director, Joint Director and IDSP coordinators are managing the project. Recruitment of half of the project posts (epidemiologists/ microbiologists and entomologist) is pending. The data manager is yet to avail training. While a public health specialist has been trained as a trainer, he has not organized any further trainings for data managers.

(ii) **Lab component:** All the districts send weekly reports over portal. The outbreaks reporting and weekly surveillance reporting is adequate. More than 80% PHCs (P forms) and more than 70% of sub-centers are reporting weekly and consistently. The district/taluka a hospital reporting is maintained at 30% with major hospitals only reporting on inpatients and labs. Private sector reporting is estimated to be from less than 50% of the state blocks.

(iii) **Information technology:** All districts are IT enabled. Broadband based videoconferencing is functional in all districts.

Field Visit Observations: The team visited District Hospital, Barasat in 24 North Parganas district. The team observed functioning of general, pediatrics and general medicine OPDs as well as the laboratory. As of now, only data from inpatients and laboratory is being reported. Surveillance of OPD cases is yet to be institutionalized. With an average new outpatient load of 200 in each clinic, and only one doctor to manage the clinic with complete lack of staff for patient management, initiating OPD surveillance seems difficult. Understandably, documentation of provisional diagnosis by doctors is not rigorously followed. The hospital has good registration and OPD documentation systems. It was recommended that since almost all patients visit the pharmacy to collect drugs and there is adequate number of pharmacists in the pharmacy, data for OPD surveillance could be captured at that level. The well functioning laboratory is manned by a pathologist and 3-4 technicians trained to diagnose malaria, enteric fever, dengue, viral hepatitis (A&E) and kala azar. However, data from the lab is not being analyzed and hence early identification and warning of outbreaks is difficult. The team recommended that the DSO and district data manager must support and coordinate establishing of an OPD surveillance system in the public facilities. The Additional Director (PH), Joint Director and SSO have committed to organizing an orientation of Hospital Superintendents in late April, 2011. Following which, the Superintendents of hospitals with DSOs will organize orientations for clinicians. The goal is to set up an OPD surveillance system in the next two months.

The team also visited the Rural Hospital, Madhyamgram. Interactions with staff brought out that the institute is not consistent in reporting on the "P" forms. The hospital also requested for greater handholding support from the DSO.

Interactions with the SSU bring out that data from major hospitals data in West Bengal is limited to IP and lab data. Limited efforts have been made for establishing OPD and laboratory surveillance in the major hospitals of the state. The SSU will need to concentrate on establishing hospital surveillance mechanism for OPD in all major hospitals in the state. Feedback from the field visits was shared with the Additional Director and Joint Director who have committed to strengthening hospital surveillance in the next two months.

Rajasthan (April 6 &7, 2011)

Review of progress against indicators

(i) **Staffing and training:** Candidates for vacant positions of epidemiologists and microbiologists have been interviewed and orders for posting are likely to be issued soon. The state data manager has completed training of district managers and data entry operators from all districts.

(ii) **Lab component:** Outbreaks reporting and weekly surveillance reporting is adequate. On an average 40% of districts are consistent in reporting on "P" form from PHCs. 50% of the district/ taluka hospitals report on the form while the private sector reporting is less than 30%. The state data manger has analyzed the reporting consistency for year 2010 for all districts by facilities (particularly that of major hospitals).

(iii) **Information technology:** All districts are IT enabled. Broadband based videoconferencing is available in all districts. The newly recruited staff at SSU have not used the videoconferencing facility extensively.

District/Area Hospitals Workshop: Representatives from only three Government Hospitals and 5-6 private hospital attended the workshop in Jaipur. It is estimated that over 30 million patients are seen every year in the major public sector hospitals of the state and another 5 million in private sector. It is important that this data be proactively be used for surveillance. The private sector delegates agreed to initiate weekly electronic reports on surveillance.

Field Visit Observations: The review team visited CHC Dudu in Ajmer district. Approximately 60-70 daily OPD is managed by a team of six doctors. An ANM was tasked with filling out and submitting "P" forms. She only filled out fever cases based on the blood smears collected. The team also visited the Satellite hospital in Ajmer which boasts a daily OPD of 200 patients. Doctors here recorded the provisional diagnosis in their registers with a nurse purported to collate the number by conditions at the end of the week. The facility also housed a district Public Health lab which had recently begun functioning and was submitting weekly "L" forms. The recently recruited microbiologist was actively involved in collecting outbreak samples from Pushkar. A review of functioning at the Government Medical College, Ajmer brought out that doctors in the pediatric and general medicine department maintained personal registers detailing OP numbers and provisional diagnosis. However, weekly collation of numbers was absent. The "P" form submitted by the Community Medicine Department of the hospital only included cases from the IP department and the laboratory. The Principal assured deploying a data entry operator to collate data from all clinics. Additionally, it was agreed to capture contact numbers and addresses of patients diagnosed with communicable diseases in the OPD clinics. A visit to CHC Pushkar was disappointing with very little work being done on recording, collation and submission of necessary information for IDSP. At the SMS Hospital, Jaipur, while majority of doctors document provisional diagnosis, the senior nursing staff tasked with collating all this data in a departmental register seldom does so. The Hospital Superintendent was informed of these gaps and has assured to work on mitigating them. J. K. Lawn Pediatric Hospital was a very encouraging example in recording keeping and sharing of surveillance data to the DSU. The effective team of medical record technician, microbiologist and the IDSP coordinator agreed to also review collated data and follow up on laboratory surveillance processes. It is evident that most major hospitals require support of data entry operators, who it was agreed, would be deployed from Medical Colleges or DSU.

A briefing meeting was held with Principle Secretary (Health); MD, NRHM; and Director Public Health. It was agreed that data recording, collation and submission would be strengthened in the state.

<u>Maharashtra (April 8 & 9, 2011)</u>

Review of progress against indicators

(i) **Staffing and training:** The State has completed the process of recruiting project staff recently. Twelve out of 26 epidemiologists have already joined. The state data manger has completed training of district managers and data entry operators in all districts as of last week.

(ii) **Lab component:** The outbreaks reporting and weekly surveillance reporting is good. The state data manager has analyzed the reporting consistency for year 2010 for all districts

by facilities (particularly of major hospitals). Though overall 28% of PHCs and 18% hospitals fulfill the criteria of consistency, only two districts meet the same. Both the district/ taluka hospital reporting and that of the private sector is low at 20%.

(iii) **Information technology:** All districts are IT enabled. With the SSO shifting from Mumbai to Pune, Broadband videoconferencing is yet to be established at the new site.

District Areas/Hospitals workshop: The turn out at the workshop was encouraging with nearly 45 Government hospitals and 5-6 private hospital representatives participating from across over the state. It was estimated that over 40 million patients are attended to annually in major public sector hospitals of the state and another 10 million in private sector. This pool of data must be used for better surveillance. Representatives from the private sector hospitals committed to submitting weekly electronic surveillance reports.

Field visit observations: The team visited the Rural Hospital, Yavat in Pune district. A team of three doctors (1 Orthopedician, 1 Gynecologist and a GDMO) attend to an average of 60-70 new patients daily. However, the hospital does not submit any “P” or “L” forms. Since the clinicians do not document provisional diagnosis, it was agreed that record of drugs dispensed for each OPD case number as maintained by the pharmacist could be used for OPD surveillance. Both the SSO and Civil surgeon agreed to undertake an orientation of the doctors and encourage them to record provisional diagnosis which could be validated with data from the pharmacist. The team also committed to initiate surveillance in Pune district with immediate effect.

It is estimated that the district has about 12-15 Rural Hospitals which cater to nearly 70-80 new patients per day and these in tandem with the district hospitals (daily OPD 200 patients) are a good source of data for district surveillance. These facilities also have laboratories where in malaria, enteric fever and TB diagnostic facilities exist and can begin report on “L” form. The team also visited KEM hospital, a major private sector institute. The facility is sharing indoor and laboratory reports with the Pune Municipal Corporation on a routine basis. The hospital was encouraged to initiate OPD surveillance. A visit was also made to PHC Khanapur where documentation was well maintained and from where “P” form was submitted regularly. The PHC was encouraged to tallying data for each week end for improved quality of information.