# Monthly Monitoring Strengthening

## VR16

Report on Visit 4- Validation and Manual Progression

November 2013

Cambridge Education

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November 2013

Punjab Education Sector Project
School Education Department
Program Monitoring and Implementation Unit
Government of Punjab
Lahore

# Issue and revision record

| Revision | Date | Originator | Checker | Approver | Description | Standard |
|---|---|---|---|---|---|---|
| Version 0 | 24/11/2013 | A Findlay | S Tarar | W Hu | Draft for discussion | |
| Version 1 | 26/11/2013 | A Findlay | S Tarar | W Hu | Revised | |

# Contents

# Glossary

| | |
|---|---|
| **CE** | Cambridge Education |
| **CMMF** | Chief Minister's Monitoring Force |
| **DBA** | Data Base Administrator |
| **DCO** | District Coordination Officer |
| **DfiD** | Dept. for International Development |
| **DMO** | District Monitoring Officer |
| **DPO** | Data Processing Officer |
| **DQAF** | Data Quality Assessment Framework |
| **EDO(E)** | Executive District Officer (Education) |
| **IDP** | International Development Partner |
| **IRM** | Institute of Rural Management |
| **MEA** | Monitoring and Evaluation Assistant |
| **PMIU** | Program Monitoring and Implementation Unit |
| **WB** | World Bank |

# 1  Background and Overview of Consultancy

This consultancy followed on from three previous consultancies visits which defined and initiated the validation strategy for evidence gathering to support the strengthening recommendations for the Monthly Monitoring. The aim of the consultancy was to complete validation 3 the data entry quality review, monitor Validation 2 the field validation, and agree on the structure of the "Handbook for Monthly Monitoring in Punjab". Participation in the World Bank review meetings was also planned.

At the start of this consultancy validations 1 and 4 were complete, validation 3 had discovered significant data issues to be investigated and validation 2 was just commencing having been delayed by approx 3 weeks while approvals to visit schools was granted. A draft outline had been prepared for the manual designs/Handbook design.

The detailed activities of the consultancy are set out in ToRs for the mission in <Annex A>. This piece of work ties into the overall work plan <Annex B> that reviews the entire Monthly Monitoring process with the aim of making evidence based recommendations for strengthening the process by Jan 2014.

The consultancy was timed to coincide with a World Bank review mission where updates were provided on the progress to date. As a result of these discussions and the fact three of the validation exercises were basically complete and the fourth (Val 2) was underway a final plan for completing the recommendations for strengthening were made. This is shown in the revised work plan <Annex B>

The day to day activities carried out during the consultancy are set out in <Annex C>.

The status of the exercise at the end of this consultancy is as follows

| Field Visits | Complete |
|---|---|
| Validation 1 – Historic Data | Complete and Final Report given to PMIU and the World Bank |
| Validation 2 – Field Activities | Contractor appointed, training complete, field exercise commenced from 18th Nov and due to be concluded approx on 14th Dec. Data entry and provision of data for analysis by 27th Dec. Final report 15th Jan 2014 |
| Validation 3 –Data Entry Quality | Complete and Final Report being reviewed and prepared for publication |
| Validation 4 –Data Analysis and reporting | Complete and Final Report given to PMIU and the World Bank |
| Technical Report | To be updated after Val 2 complete to summarise all findings and to be presented for Strengthening recommendations for PMIU. Work to continue in parallel to other activities using findings from visits, Val 1, Val 3 and Val 4. |
| Manual/Handbook | Structure agreed and shared with PMIU. Initial draft of manual to be prepared |

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# 2      Validation 2 - Field Work Progress

## 2.1      Overview of Validation 2 Sampling Approach and Progress

The purpose of Validation 2 is to review the field activities carried out by the MEAs, the quality and accuracy of the data captured and the quality of the inspection process itself. This includes the views of the head teachers regarding the process.

Validation 2 involves a reasonably large field study of 1,800 schools across Punjab using a new survey instrument to re-capture some of the key data captured in the Monthly Monitoring for comparison as well as additional data on the process based on the views of the Head Teachers. It has now been agreed to extend this exercise to capturing the views of MEAs and DMO/EDOs of the Monthly Monitoring process.

The sampling strategy and survey instruments have been agreed after protracted discussions with PMIU and WB.

## 2.2      Survey Instrument Design

All three survey instruments have been agreed with both PMIU and WB. They cover:
- Main Survey Form administered in 1,800 schools (with 400 spares in sample)
- Survey of 8 MEAs per District – 288 in total (approx 30% of MEA workforce)
- Survey of all EDO/DMO's in 36 Districts.

## 2.3      Selection of Contractor

The contractor has been selected and 50 enumerators and 10 supervisors appointed. The supervisors and enumerators have been trained and a pilot exercise has been carried out.

The main survey commenced on 18th Nov and by 26th Nov 331 schools have been visited.

A sophisticated monitoring system has been put in place involving the use of smart phones to capture coordinates of schools, photos of schools and to confirm survey visits took place.

A phase 1 enumeration exercise has been completed in 72 schools across all 36 Districts (2 per District) and the results returned to Lahore for checking of quality. Any specific issues found were fed back as appropriate to the enumeration team.

## 2.4      Next Steps

The contractor shared the data entered after the receipt of phase 1 forms. The data was checked and identified problems with the software have been resolved. Arrangements have been made with PMIU to extract the official DMO data from inspections of the 1800 sample schools and 400 replacement schools for both the Oct and Nov official MEA inspections. This will be forwarded to the consultant as soon as it is available and used as comparison data for some of the data collected.

When the field exercise is concluded and data entered the analysis of the findings and comparisons will commence. The international consultant with the support of CE Punjab will analyse the data. This is expected to be in early Jan 2014.

# 3 Handbook Progress

## 3.1 Purpose

The purpose of the handbook is to provide consistent advice to all players on the processes involved in the Monthly Monitoring exercise.

## 3.2 Structure Discussions

During the last consultancy visit the plans to have three distinct technical manuals covering the separate audiences was reviewed. The original plan was to produce three distinct manuals;

- **Field Operations and Teacher Guidance Manual**: It is planned to prepare an outline draft of this manual for discussion
- **Data Entry Manual**: It is planned to prepare an outline draft of this manual based on the findings of Validation 3 for discussion
- **Data Checking, Cleaning Analysis and Reporting Manual**: It is planned to prepare an outline draft of this manual based on the findings of Validation 4 for discussion

## 3.3 Single Manual Proposal

The revised plan is to consolidate these into one comprehensive manual – "A Handbook for Monthly Monitoring in Punjab" for all players in the monthly monitoring process. The approach to the manual design has also been given further thought and the layout redesigned to be clear and simple to understand. The entire process will be covered in different sections of the manual with a diagram clearly showing which section is being described. This will allow all users of the Handbook to get an understanding of the whole process.
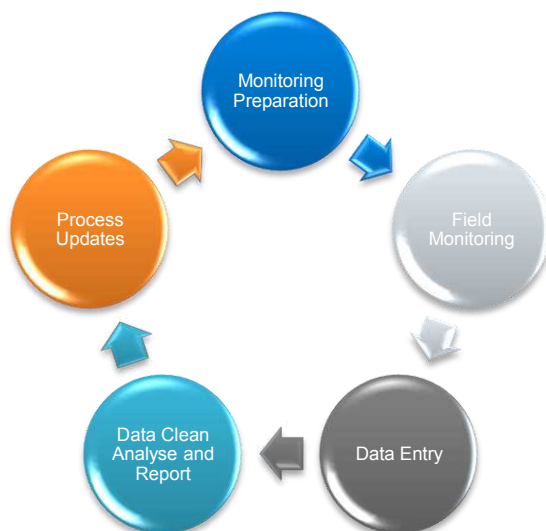


Different icons will also be used to show the intended audience of each section

Also symbols will be used to identify sections requiring times to be monitored or vitally important areas where special attention is required or where advanced preparation is required.

### 3.4 Development of Draft Handbook Structure

The outline and proposed chapter headings was reviewed and agreed during this consultancy. It will now be possible to finalise the Handbook. Work will progress and run in parallel to the work on Validation 2. The findings from the field visits, Validatios 1, 3 and 4 will be included in the draft Handbook and specific findings added from Validation 2 when available.

The structure of the Handbook will be field tested on Head Teachers, MEAs DMOs etc to ensure it covers all their needs

Once the final draft of the Handbook is prepared it will be field tested in a number of Districts to ensure it fully meets its objectives before the final plans for publication, distribution and training are agreed upon.

# 4 Proposed Remote Activities

## 4.1 Overview

As described in the three chapters above, three of the validation exercises are complete and the fourth (validation 2) is fully up and running. An initial data sample from the data entry of the main questionnaire has been provided by the Val 2 contractor but data entry software has still to be prepared for the other two survey instruments.

The findings from all field visit reports and validation exercises needs to be summarised into an overall strengthening plan. It is proposed that the recommendations are categorised into three categories

- Quick Wins – Activities that can be enacted at little or no cost but would be beneficial to strengthening. Examples would include improved MEA ID coding, version numbers on questionnaires and software, production and distribution of the Handbook.
- Medium Term Goals – Activities that can be enacted without significant policy discussions. Examples would include improved support to MEA transport and costs, development of monthly operational reports etc.
- Long Term Goals – Activities that require policy discussions between multiple parties. This would include level of inspections, management reporting lines for MEAs etc.

The work remaining for the external consultant to do is limited to the following activities.

## 4.2 Validation 2

Validation 2 field work will be monitored by CE National Consultant. He will also overview the data entry of all three instruments. Test files will be sent to the external consultant in Nov. for review prior to the final files being sent in mid Dec.

The local CE office will liaise with the PMIU research unit to provide extract files for Oct and Nov for the MEA inspections of the 1,800+400 spare sample schools.

The National Consultant will start the preparation of the Val 2 report covering all reporting regarding Design, methodology, selection of contractors, training, piloting monitoring etc.

The external consultant will be sent the final data entry files and will carry out analysis of the findings and submit detailed analysis of each and every aspect of the survey.

The international consultant will provide the chapters on analysis comparisons and conclusions. Work here will include Validation 2 Data cleaning and results analysis including data comparisons and preparation of the Validation 2 report chapters.

## 4.3 Handbook for Monthly Monitoring in Punjab

Based on the agreed outline for the manual the National consultant will develop the monitoring handbook.

All other work on the handbook including workshops and consultations with the main parties. This work will include a degree of investigative work to understand issues such as what officially constitutes teacher absence.

Some remote support is envisaged as to the content and in reviewing the proposed text.

## 4.4     Preparation of the Consolidated Report

The consolidated report and recommendations for strengthening will evolve out of the current Technical Report. The work to prepare for the preparation of the final consolidated report will draw on the findings and recommendations of all field visit reports, visit reports and validation exercises.

It is proposed that this work can progress in parallel to Validation 2 so as not to delay the final report. All findings from all exercises other than Val 2 can be consolidated now.

In addition to the findings from the technical exercises there also needs to be input into the strategic elements of the Monthly Monitoring including
- Frequency of Inspections/Future resource levels
- Management and reporting lines for DMOs and MEAs
- Changes to new technologies for data collection.

These elements will need to be studied in parallel by National Consultants and input into the consolidated plan.

Once the main elements of the plan are established they will need to be tested in a series of workshops with the key players before the final plan goes live.

# Annexes

# Annex A.　　　Terms of Reference for Visit 4

**Terms of Reference**

**Package D: Improving Quality, Access and Governance in Education**

**Data Validation of Monthly Monitoring System (CMMF/PMIU)**

Post title:　　　　　　　Data Validation Expert

Responsible to:　　　　Team Leader

Department:　　　　　　MESA

Created/updated:　　　06/11/2013

**Background:**

The international consultant has visited Lahore three times in the past 6 months to; (a) design and implement validation exercises to assess the level of completeness, consistency, accuracy, and reliability of the existing data collection systems;  (b) ensure that the results from the validation exercise will be relevant and helpful in improving the data quality through a strengthened monitoring system. One technical report and three visit reports were prepared after the visit with the main designs of the validations and a complete work plan to finish the whole exercise around the end of this year. The consultant also submitted reports on validation 1, 3 and 4.  The coming fourth visit is planned to carry out the following activities.

**Objectives:**
- To promote implementation of the validations
- To complete the monthly monitoring handbook.

**Scope of the work:**
1. Present the progress of the stream to WB/PMIU and make changes if necessary.
2. **Work with the National Consultant on writing the 'Monthly Monitoring Handbook' for all the stakeholders like MEAs/DMOs/PMIU etc.**
3. **Complete the first draft of 'Monthly Monitoring Handbook' with the NC on the basis of findings/conclusion and recommendations in all the reports (visit, validation and technical) on an agreed upon outline.**
4. Work with the NC and V2 contractor on monitoring the on-going Validation 2 exercise.
5. Prepare and complete the outline of validation 2 report
6. Prepare and complete the outline of the consolidated report on 'Strengthening of Monthly Monitoring in Punjab'.

**Inputs/Duration**

16 days input in total starting 12th -27th of November 2013

**Deliverables and deadlines**
1. Complete the first draft of the Monthly Monitoring Handbook for discussions with the PMIU;
2. Outline of the validation 2 report;
3. Outline of the consolidated report (V1, 2, 3, and 4).

**Institutional arrangements**

The consultant will report directly to the CE Lead Specialist and regularly coordinate with TA office

# Annex B.     Proposed Work Plan

| | High Level Work plan for strengthening of monthly monitoring of schools in Punjab | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Key IC1 - In country visit 1 (23/5/13 - 8/6/13) IC2 - In country visit 2 (14/7/13 - 3/8/13)   XX Out of Country/Remote   IC3 In Country 3 Dates TBA (Sep/Oct 13)  IC4 In Country 4 Dates TBA (Nov/Dec 13) | | | | | | | | | | | |
| **Sr. No.** | **Activity** | | | | | | | | | | | |
| **1** | **Work plan/Roadmap** | **May** | **June** | **July** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** | **Jan 14** | **Feb 14** | **Responsible** |
| 1.1 | Field Monitoring Visit | IC1 | IC1 | | | | | | | | | CE |
| 1.2 | Visit report on the field visits to the districts and provincial headquarters (PMIU & CMMF) | | XX | | | | | | | | | CE |
| 1.3 | Data validations 1-4 methodology/design – approach, strata, sample size etc. | | XX | XX | | | | | | | | CE |
| **2** | **Technical Review Report on CMMF monthly monitoring process** | **May** | **June** | **July** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** | **Jan 14** | **Feb 14** | **Responsible** |
| 2.1 | Draft Report | | IC1 | XX | | | | | | | | CE |
| 2.2 | Final Report | | | | | IC3 | | | | | | CE |
| **3** | **Data validation survey** | **May** | **June** | **July** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** | **Jan 14** | **Feb 14** | **Responsible** |
| | | | | | | | | | | | | |
| **3.1** | **Validation 1 – Forensic analysis of past 3 years data (By PMIU** | **May** | **June** | **July** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** | **Jan 14** | **Feb 14** | **Responsible** |
| 3.1.1 | Gather 3 Years Data | | | IC2 | | | | | | | | CE |
| 3.1.2 | Develop Test Plan | | | IC2 | | | | | | | | CE |
| 3.1.3 | Analysis of Data | | | | xx | xx | xx | | | | | CE |
| 3.1.4 | Recommendations on findings from forensic analysis of past 3 years data | | | | | | xx | | | | | CE |
| **3.2** | **Validation 2 – Field data collection** | **May** | **June** | **July** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** | **Jan** | **Feb** | **Responsible** |
| 3.2.1 | Bid pack, notes to contractors, invitation to contractors, selection of contractors | | | XX, IC2 | IC2 | IC3 | | | | | | CE |

| | | May | June | July | Aug | Sept | Oct | Nov | Dec | Jan 14 | Feb 14 | Responsible |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.2.2 | Selected company carry out survey of field data collection | | | | | IC3 | xx | | | | | CE |
| 3.2.3 | Training of enumerators for field validation survey | | | | | | xx | | | | | CE |
| 3.2.4 | Field Activities by Survey Company (Plus data collection for Validation Survey 3) | | | | | | | xx | xx | | | Contractor A |
| 3.2.5 | Monitoring of field activities | | | | | | | IC4 | xx | | | CE |
| 3.2.6 | Data entry, cleaning, analysis and reporting | | | | | | | | | | | Contractor B |
| 3.2.7 | Review, analysis and recommendations on findings from field validation survey | | | | | | | | | xx | | CE |
| 3.2.8 | Return all field survey forms to data entry, check and receipt delivery | | | | | | | | | | | CE Nat |
| 3.2.9 | Monitoring of Data Entry | | | | | | | | | | | CE Nat |
| 3.2.10 | Analyse Data and prep draft report | | | | | | | | | XX | | CE |
| 3.2.11 | Review findings, final report and present | | | | | | | | | XX | | CE |
| **3.3** | **Validation 3 – Data entry** | **May** | **June** | **July** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** | **Jan 14** | **Feb 14** | **Responsible** |
| 3.3.1 | Validation 3 Sampling Design | | | IC2 | | | | | | | | CE |
| 3.3.2 | Data Entry Planning, Design and selection of DE Contractor for Val 2 Data | | | IC2 | IC2 | | | | | | | CE |
| 3.3.3 | Selected company carry out survey of data entry | | | | IC2 | | | | | | | CE |
| 3.3.4 | Data Entry work for Val 3 Data | | | | | | | | | | | Contractor B |
| 3.3.5 | Analysis of validation data and report/recommendations on findings from data entry validation survey | | | | | | | IC4 | | | | CE |
| **3.4** | **Validation 4 – Data analysis and reporting** | **May** | **June** | **July** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** | **Jan 14** | **Feb 14** | **Responsible** |
| 3.4.1 | Validation 4 Test Data and Process Design | | | IC2 | | | | | | | | CE |
| 3.4.2 | Collection of Test Months Data (? 2 months x 2 district - 4 checks) | | | IC2 | | | | | | | | CE |
| 3.4.3 | Collection of existing cleaning, checking, analysis and reporting software code | | | IC2 | | | | | | | | CE |
| 3.4.4 | Investigation of code and effects on data | | | | IC2 | | | | | | | CE |
| 3.4.5 | Analyse of Data by alternate approach and compare results | | | | | XX | | | | | | CE |
| 3.4.6 | Analysis of findings and analysis compare and report/recommendations on findings from data analysis and reporting validation survey | | | | | XX IC3 | xx | | | | | CE |
| **4** | **Operational Manuals** | **May** | **June** | **July** | **Aug** | **Sept** | **Oct** | **Nov** | **Dec** | **Jan** | **Feb** | **Responsible** |

| | | | | | | | | | | 14 | 14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| **4.1** | **Handbook** | May | June | July | Aug | Sept | Oct | Nov | Dec | Jan 14 | Feb 14 | **Responsible** |
| 4.1.1 | Develop/draft document structure and content for Handbook | | | | | XX IC3 | XX | IC4 | | | | CE |
| 4.1.2 | Second draft and peer review of Handbook | | | | | | | | | | | CE |
| 4.1.3 | Field testing of Handbook | | | | | | | | | | | CE Nat |
| 4.1.4 | Final document of Handbook | | | | | | | | | | xx | CE |
| 4.1.5 | Publication and distribution of Handbook | | | | | | | | | | | PMIU |
| **5** | **Consolidated report with CMMF strengthening plan** | May | June | July | Aug | Sept | Oct | Nov | Dec | Jan 14 | Feb 14 | **Responsible** |
| 5.1 | Draft Report | | | | | | | | | | | CE |
| 5.2 | Final Report | | | | | | | | | | xx | CE |

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# Annex C. Day to Day Activities of Visit 4

| Work Carried out in prep for and during Visit 3 | | | | |
|---|---|---|---|---|
| Re f | Val1-4 Man 2-4 | Day | Date | Work |
| | | Fri 01 | 01/11/2013 | Nil |
| | | Sat 02 | 02/11/2013 | Data extractions for Val 3. |
| | | Sun 03 | 03/11/2013 | Nil |
| | | Mon 04 | 04/11/2013 | Review V1 and V4 reports. Val 1 conclusions |
| | | Tue 05 | 05/11/2013 | Review V4 reports Rewrite with data scripts to Annex. Val 4 sent |
| | | Wed 06 | 06/11/2013 | Nil |
| | | Thu 07 | 07/11/2013 | Reorganise travel plans. Skype Pakistan on Val 3 and reschedule. Val 3 comparison work and matching issues. |
| | | Fri 08 | 08/11/2013 | PAKISTAN: Val 3 Comparison Analysis Work |
| | | Sat 09 | 09/11/2013 | |
| | | Sun 10 | 10/11/2013 | |
| | | Mon 11 | 11/11/2013 | Val 3 Matching using new information Analysis and Draft Report start. |
| | | Tue 12 | 12/11/2013 | Travel to Pakistan |
| | | Wed 13 | 13/11/2013 | Meeting Sumair on current issues, visit work plan, Val 2 progress and pilot and Val 3. Meeting with Val 3 and 2 contractor and software developer. |
| | | Thu 14 | 14/11/2013 | Val 3 progress. Data matching cleaning and issue flagging |
| | | Fri 15 | 15/11/2013 | Val 3 progress. Main report draft. Run analysis tables on all main issues and identify forms for physical checking |
| | | Sat 16 | 16/11/2013 | Val 3 progress. Work with Contractor on issues. Physically check forms, and identify causes of issues. Assign Contractor to address issues |
| | | Sun 17 | 17/11/2013 | |
| | | Mon 18 | 18/11/2013 | High level issues PMIU. Extract May 13 and different date data. Preparations for Val 2 |
| | | Tue 19 | 19/11/2013 | Complete high level Val 3 work and report outline. Extract all strengthening measures from all validation, technical and visit reports to date and prioritise. |
| | | Wed 20 | 20/11/2013 | WB Meeting Prep – Val 2 one pager. Progress Manual – Outline meeting. Low level Val 3 checking, linking and Analysis. |
| | | Thu 21 | 21/11/2013 | Main Val 2 Commences – Monitoring. W Bank meeting. Progress Val 3 low level. |
| | | Fri 22 | 22/11/2013 | Progress meeting and future work plan discussion. Meeting on Manual structure. Complete low level analysis Val3. First draft of report |
| | | Sat 23 | 23/11/2013 | Complete Val 3 report and submit. Rework exec summary. Visit 3 report and revise work plan |
| | | Sun 24 | 24/11/2013 | Nil |
| | | Mon 25 | 25/11/2013 | Meeting with Val 2 contractor. Meeting McKinsey on validation exercises and results. |
| | | Tue 26 | 26/11/2013 | Finalize the handbook and strengthening plan outline |
| | | Wed 27 | 27/11/2013 | Fly out |
| | | Thu 28 | 28/11/2013 | |
| | | Fri 29 | 29/11/2013 | |
| | | Sat 30 | 30/11/2013 | |