



DFID Nepal Rural Access Programme 3 (RAP3)  
Monitoring, Evaluation and Learning (MEL) Component

**INDEPENDENT VERIFICATION OF RAP3  
DISBURSEMENT LINKED INDICATORS (DLI)  
2017 ROUND 2: EMPLOYMENT DAYS**

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Submitted by Itad

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Results in development

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## Abbreviations

DDC	District Development Committee
DFID	UK Department for International Development
DLI	Disbursement Linked Indicator (used for the Payment by Results mechanism)
DPM	RAP3 Deputy Programme Manager
DRCN	District Road Core Network
DTL	District Team Leader
IoE	Institute of Engineering (Tribhuvan University, Nepal)
Km	Kilometre
LF	Logframe
LFI	Logframe Indicator
LNGO	Local Non-Governmental Organisation
GoN	Government of Nepal
LRN	Local Roads Network
M	Metre
MEL	Monitoring, Evaluation and Learning Component of RAP3
PBR	Payment by Results
PM	Programme Manager (of RAP3)
PMV System	Performance Management and Verification System of RAP3
RAP3	Rural Access Programme 3
RBG	Road Building Group
RMG	Road Maintenance Group
SBG	Special Building Group
SC	Supervision Consultant (sub-contracted by RAP3)

## Executive Summary

This report presents findings from the second of two rounds of verification in 2017 of RAP3 reported results. The verification exercise was undertaken by RAP3's independent MEL component. It was conducted between July-August 2017. The objective of the Verification Round 2 assignment was to independently verify RAP3's reported results against one significant Disbursement Linked Indicator (DLI) - employment days. Results were verified over the period of one year: July 2016 to June 2017 in the four construction districts (Bajura, Humla, Kalikot and Mugu) which collectively generate the most employment days outputs across RAP3.

The independent verification team checked the reported employment days recorded on attendance sheets at the district level. These figures were independently tallied and checked with the figures reported by the district level to RAP3 headquarters in Kathmandu, and subsequently to DFID. For these groups and within these districts, the RAP3 central team reported a total of 836,215 employment days to DFID between July 2016 and June 2017. The MEL team double-checked. This is compared to a total of 834,589 employment days calculated by the verification team over the same period. Hence, the overall margin of error in employment days assessed by the MEL team from July 2016 to June 2017 is 0.19% across the four districts.

The verified results should provide DFID with a high level of confidence that reported results are quite accurate. However there are a number of observations, made in this review, previous verification rounds as well as the MEL review of RAP3's M&E system in 2016 (PMV Review). There are a number of resolvable issues which this report provides recommendations at the end of this report. This amounts to low level of effort and can provide DFID and RAP3 Technical Assistance team a higher level of confidence, particularly with regards to data transparency, data retrieval and data risk.

## 1. Introduction

### 1.1 What RAP3 does

The objective of the Rural Access Programme 3 (RAP3) is to reduce poverty in Western Nepal. The programme aims to deliver economic benefits to the poor through improved rural road access and connectivity. The primary output of RAP3 is to construct and maintain rural roads within the District Road Core Network (DRCN) which makes up a strategic part of Nepal's Local Roads Network (LRN) in nine core districts of the Mid and Far West<sup>1</sup>, utilising a pro-poor targeted labour based approach. RAP3 is constructing 97.5km of new roads in four core build (or new construction) districts: Bajura, Humla, Kalikot and Mugu. It is also maintaining existing rural roads in the DRCN of five core maintenance districts: Dadeldhura, Achham, Dailekh, Doti and Jumla.<sup>2</sup>

Poor and vulnerable individuals from communities within these districts are targeted to become part of Road Building Groups (RBGs) and Road Maintenance Groups (RMGs). Members of these groups are paid to construct and maintain RAP roads. Special Building Groups (SBGs) are smaller groups which operate in more difficult to work areas but employ the same approach of targeting the poor for employment in construction. This labour-based approach to road construction is justified through an equity rationale whereby maximum benefits accrue to the local communities as it is local people, and the poorest, who benefit from infrastructure development through waged employment. Hence this approach generates employment, not only to members of the RBGs, RMGs and SBGs but also various other activities, such as portering of tools and equipment. Employment is calculated based on the number of days of employment all of the construction, maintenance and associated activities generate. The majority of employment days are generated by RBGs in the four construction districts of which there are approximately 6,500 members (or beneficiaries).

### 1.2 Disbursement Linked Indicators

The UK Department for International Development (DFID) funds RAP3. Funding of the contract between DFID and the implementing organisation, IMC Worldwide, is mostly based on payment by results (PbR)<sup>3</sup>. Payments are based on disbursement linked indicators (DLIs), which relate to RAP3 results<sup>4</sup>. A unit price is attached to the achievement of each result. For instance, one employment day is worth £1.88. RAP3 counts its results monthly and submits an invoice to DFID based on the results achieved.

The two major DLIs of RAP3 are:

- 1) Road length under construction and road length maintained
- 2) Employment days generated

The rationale for independently verifying these two DLIs originates from the MEL-led Performance Management and Verification (PMV) Review of RAP3<sup>5</sup>.

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<sup>1</sup> Dadeldhura, Doti, Achham, Dailekh, Bajura, Kalikot, Jumla, Mugu and Humla.

<sup>2</sup> RAP has maintained approximately 2,200km of rural roads in the DRCN across 10 districts in Nepal, of which 4 are within the core maintenance districts in the Mid and Far West. The verification is concerned only with the 4 core districts and not the remaining 6 districts.

<sup>3</sup> PbR is a broad term, encompassing any approach where some payments are made only following the delivery of pre-agreed results (outputs or outcomes) - see DFID (2015) - A Smart Guide to payment-by-results contracting including outcome-based, output-based and hybrid contracts. RAP3 was DFID's first PbR contract and while PbR is still a relatively new contracting model for DFID, DFID is increasing its use with the aim to increase development impact and VFM.

<sup>4</sup> Some DLIs are the same as the indicators in the RAP3 logframe. There are however also differences.

<sup>5</sup> The full PMV Review is available at: <http://www.rapnepal.com/content/review-rap-3-performance-management-and-verification-pmv-system>

**NB.** It is acknowledged that some of the DLIs are dynamic and do not fully capture the extent of works undertaken by RAP3. For example, the section of road ‘worked on’ is a function (and a simplification) of the amount of work and activities under this heading that captures the DLI. Hence, for the km of roads under construction, the DLI can be seen as a proxy indicator to capture the ongoing progress, with physical verification serving as an assessment of this. In addition, for build districts the employment days counted and reported are taken from RBG an attendance sheet, which actually reflects the disbursement of cash rather than the amount of work completed by these groups. Again, in this case the DLI is a proxy for work undertaken by RBG since employment days still come from attendance sheets, which themselves indicate that work is being completed by these groups.

### 1.3 Employment days

Employment day data is derived from attendance sheets from the Road Building Groups (RBGs) and Road Maintenance Groups (RMGs) that work on the road sections in the construction and maintenance districts. Employment days are the paid work days of members of RBGs and RMGs who are paid on a monthly basis, where a RAP3 reporting month is defined as the 22<sup>nd</sup> date of one calendar month to the 21<sup>st</sup> date of the following calendar month<sup>6</sup>. Attendance days (recorded in group attendance sheets) are the recorded employment days which is used for the basis of payment in build districts. The District Communication strategy notes: *‘RBGs are paid a variable lump sum, on average once a month, according to the volume of work carried out by the group as a whole since the last payment. From this total, a daily wage rate is calculated by the supervising consultant for each RBG, and members are then paid according to how many days they have worked in the period since the last payment.’* The PMV Review raises a number of issues regarding the understanding of employment days.

In actuality, employment days are a record of attendance by RBG and RMG members. RBGs typically consist of up to 20 members, whilst RMGs are usually smaller and consist of up to 10 members. Supervision Consultants (sub-contracted by RAP3) are charged with calculating the required maintenance work and assessing completion of maintenance work each month. They supervise road works, collect attendance records of each group and measure the amount of work completed. All data is compiled and aggregated at the district level and reported to the RAP3 central office.

### 1.4 Objectives of the assignment

The objective of this assignment is to independently verify RAP3’s reported results against one significant DLI (employment days) over the period of one year: July 2016 to June 2017 in the four construction districts which collectively generate the most employment days outputs across RAP3. The previous verifications have only assessed periods of up to four months (a trimester) on employment days due to the need to focus on physical construction during the working season; the previous verification in March 2017 covered construction work over the period where much of the work is undertaken, in line with the seasonal limitations of when work can be undertaken. Work during the monsoon season is minimal-to-zero. Hence it was proposed, through discussion with DFID and RAP3, that this verification would focus on employment days and examine a longer period of one whole year.

Lessons from the previous rounds of verification have shown that reported employment days have been fairly accurate but there has been significant variation between districts and between months. The MEL team hypothesised that by taking a longer period into examination, certain month-to-month fluctuations would ‘smooth’ out and provide a higher degree of certainty that reported employment days is accurate within a margin of error.

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<sup>6</sup> A calendar month here refers to the Gregorian calendar, unless otherwise stated.

## 2. Methodology and Sampling Framework

### 2.1 Verification Team

The technical verification was conducted by a five-person engineering team with support from MEL. This is the same team that conducted the pilot verification in 2016 and Round 1 verification in March 2017. The verification team consisted of one Senior Rural Roads Engineer and four senior graduate engineers from the Institute of Engineering (IoE), Tribhuvan University.

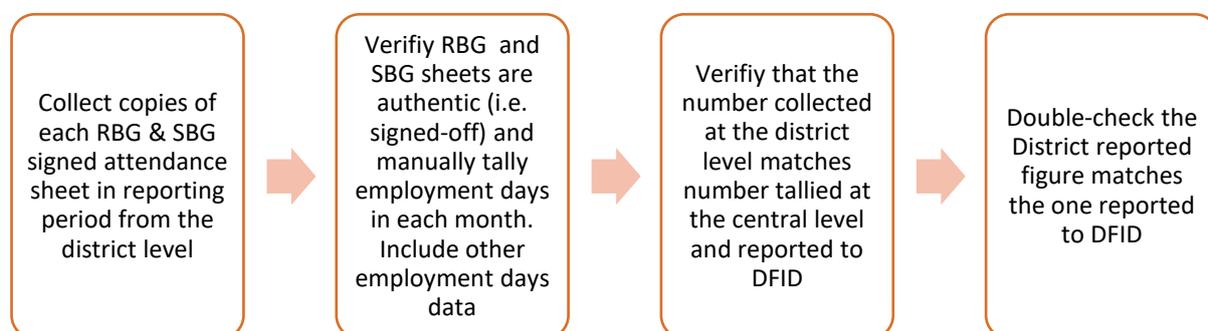
### 2.2 Methodology for Employment Days Verification

The employment data from July 2016 to June 2017 was collected from the four RAP3 construction districts. Previous verifications have either sampled RBGs or verified a smaller period. In this round the verification team assessed all RBGs in each of the four districts, **constituting a census over a one year period**. This is the annual reporting cycle period and is now in-line with the Government of Nepal's financial year.

In the build districts the attendance sheets for each RBG for each month are signed by the '*Sahajkarta*' (group leader) of the RBG, the Senior Technical Supervisor (supervision consultant) and a social mobiliser (LNGO or supervision consultant). A duplicate of the attendance sheets was collected for all RBGs in these four construction districts. The employment days' information on Special Building Groups (SBGs) and others (including all employment days deriving from training, portering and some RMGs) was also collected from the RAP3 district teams to arrive at the total employment days created in the reporting period for each district. This compiled data was tallied with Employment Days record provided by the RAP3 central team.

The verification process was manual whereby the verification team tallied up each of the recorded employment days in every attendance sheet in each month, to verify whether this matched with the recorded employment days at the district level, which is also tallied up in the same manner. As an extra check, we then double-checked both figures to the reported number of employment days from the RAP3 central office to DFID, and finally checked to see if there is a difference between what is reported at the MEL field level and the number reported to DFID. Figure 1 shows the process flow for the verification.

Figure 1: Verifying employment days in the build districts process

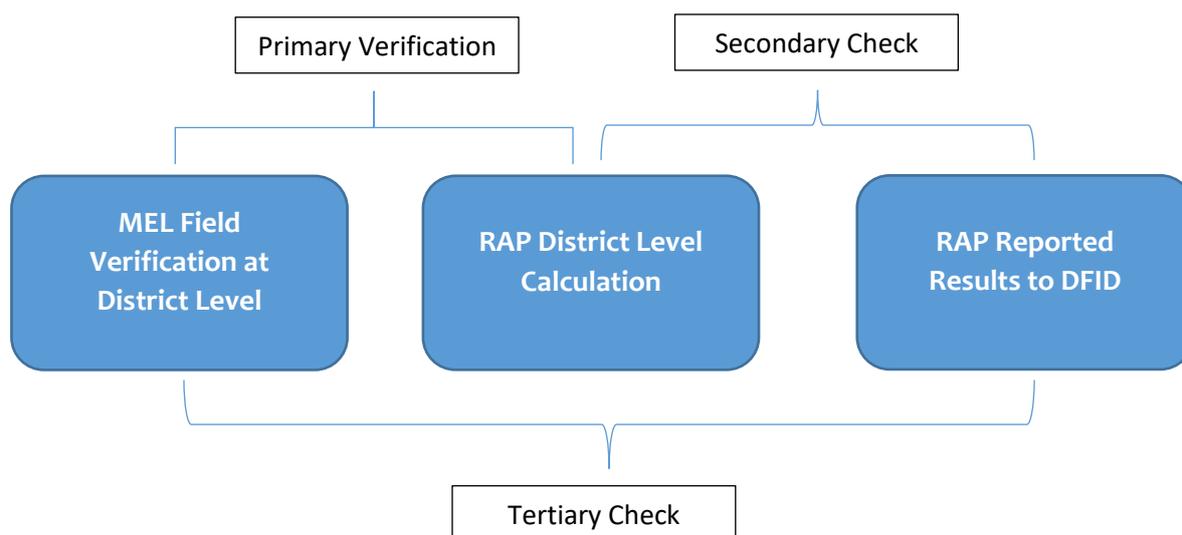


**N.B.** We assume that the employment days results reported by the RAP3 districts teams to the RAP3 central office to be the same results which are then subsequently reported by the RAP3 central team to DFID. This assumption will be double-checked by MEL. **Hence the primary verification (and the basis on which this verification is assessed) is between the MEL field verification and the RAP3**

**district level verification.** This is because the source of all of the data that the RAP3 central office receives originates at the field level. The secondary and tertiary checks provide an additional level of verification, but this is not the primary focus of the verification. Figure 2 shows the levels of verification. The three levels to the verification are:

1. Primary verification: MEL field level verification versus RAP3 district calculated number
2. Secondary check: RAP3 district calculated number versus number reported by RAP3 to DFID
3. Tertiary check: MEL field level verification versus number reported by RAP3 to DFID

Figure 2: Levels of verification



**N.B.** All assessments of work in the field (including photographic evidence) and the verification assignment itself can be found at the following link: [Google Drive](#) . The employment days data from all districts (photos of attendance sheets) are located in this link.

### 3. Verification Results

#### 3.1 Results

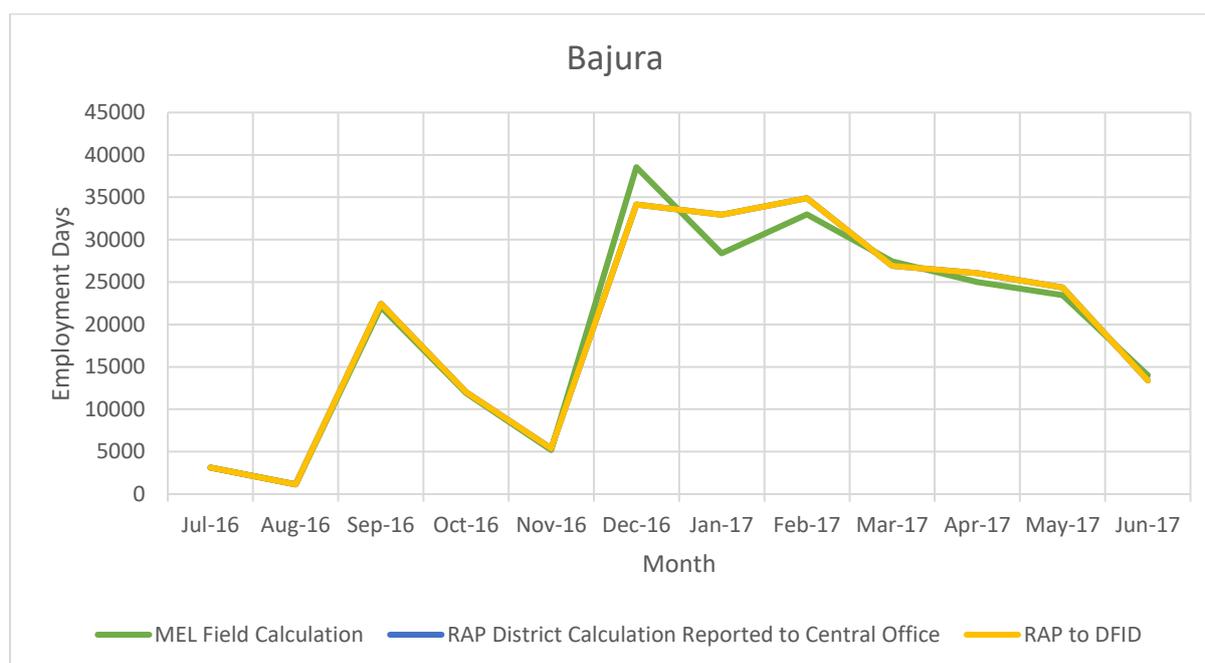
For these groups and within these districts, the RAP3 central team reported a total of 836,215 employment days to DFID between July 2016 and June 2017. The MEL team double-checked that the district-to-central level reported results and the reported results from the central level to DFID were the same, which was the case. This is compared to a total of 834,589 employment days calculated by the verification team over the same period.

There is some minor variation between the districts and between months, where in some months and with some districts there is over-reporting, and other times there is under-reporting. However, the net difference between the MEL verified tally and the total that the RAP3 district offices report the central level, and subsequently to DFID, is 1,626 *over reported* employment days. **Hence, the overall margin of error across the four districts from July 2016 to June 2017 is 0.19%.** Table 1 and Graphs 1-4 show the full results at the aggregate and month-to-month level.

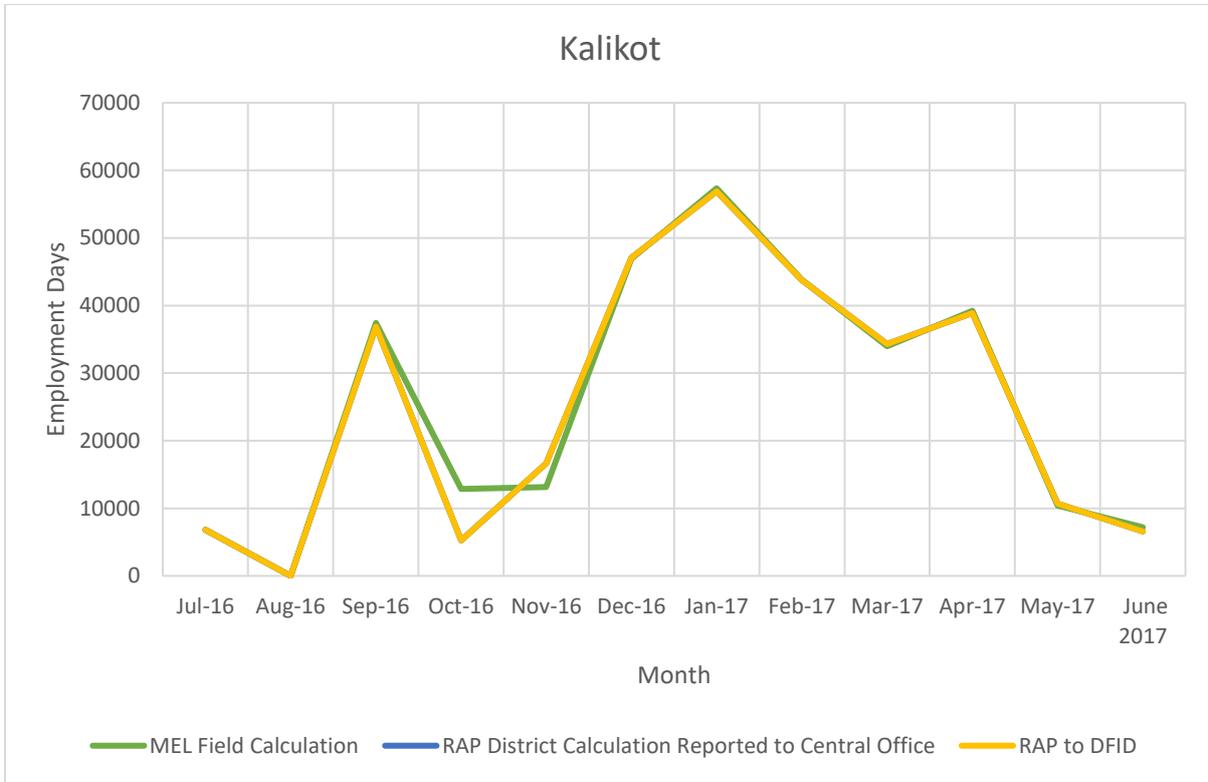
Table 1: Employment Days Results

Primary Verification					
District	MEL Field	RAP3 District Calculation	Difference	Percentage	Under or Over reported
Bajura	234,116	236,804	2,688	1.14	Over-reported
Kalikot	309,119	303,772	-5,347	-1.76	Under-reported
Mugu	135,439	137,859	2,420	1.76	Over-reported
Humla	155,915	157,780	1,865	1.18	Over-reported
<b>TOTAL</b>	<b>834,589</b>	<b>836,215</b>	<b>1,626</b>	<b>0.19</b>	<b>Over-reported</b>
Secondary Check					
District	RAP3 District Calculation	RAP3 Report to DFID	Difference	Percentage	Under or Over reported
Bajura	236,804	236,804	0	0	n/a
Kalikot	303,772	303,772	0	0	n/a
Mugu	137,859	137,859	0	0	n/a
Humla	157,780	157,780	0	0	n/a
<b>TOTAL</b>	<b>836,215</b>	<b>836,215</b>	<b>0</b>	<b>0</b>	<b>n/a</b>
Tertiary Check					
District	MEL Field	RAP3 Report to DFID	Difference	Percentage	Under or Over reported
Bajura	234,116	236,804	2,688	1.14	Over-reported
Kalikot	309,119	303,772	-5,347	-1.76	Under-reported
Mugu	135,439	137,859	2,420	1.76	Over-reported
Humla	155,915	157,780	1,865	1.18	Over-reported
<b>TOTAL</b>	<b>834,589</b>	<b>836,215</b>	<b>1,626</b>	<b>0.19</b>	<b>Over-reported</b>

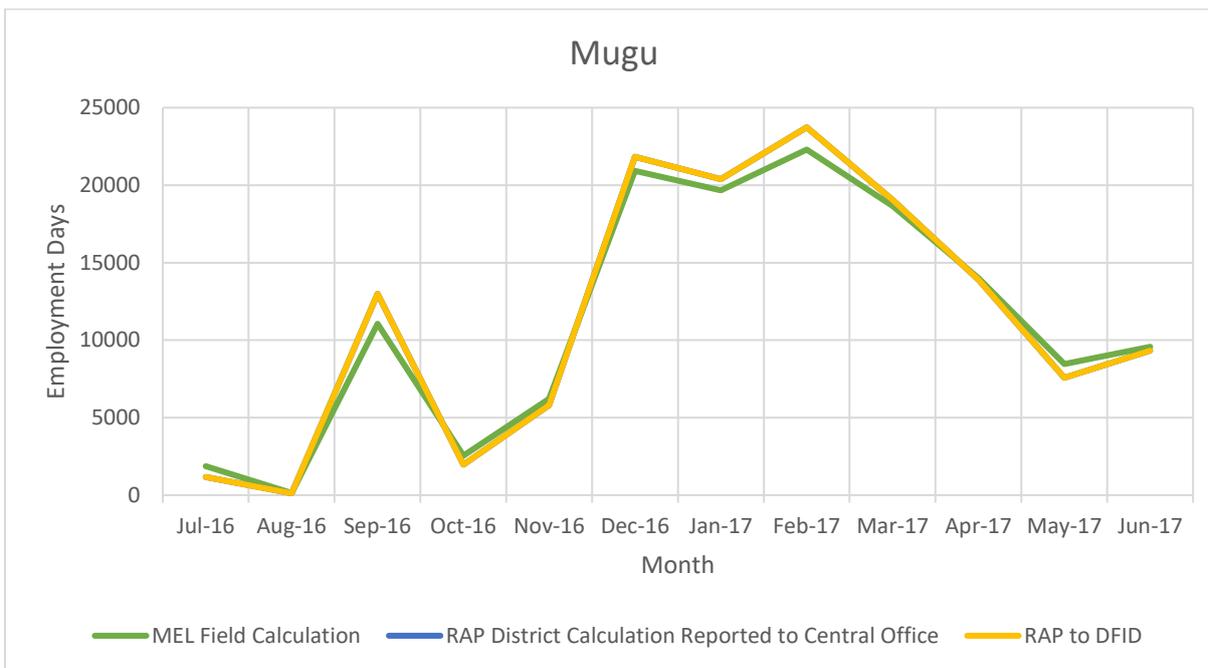
Graph 1: Bajura Employment Days Tally



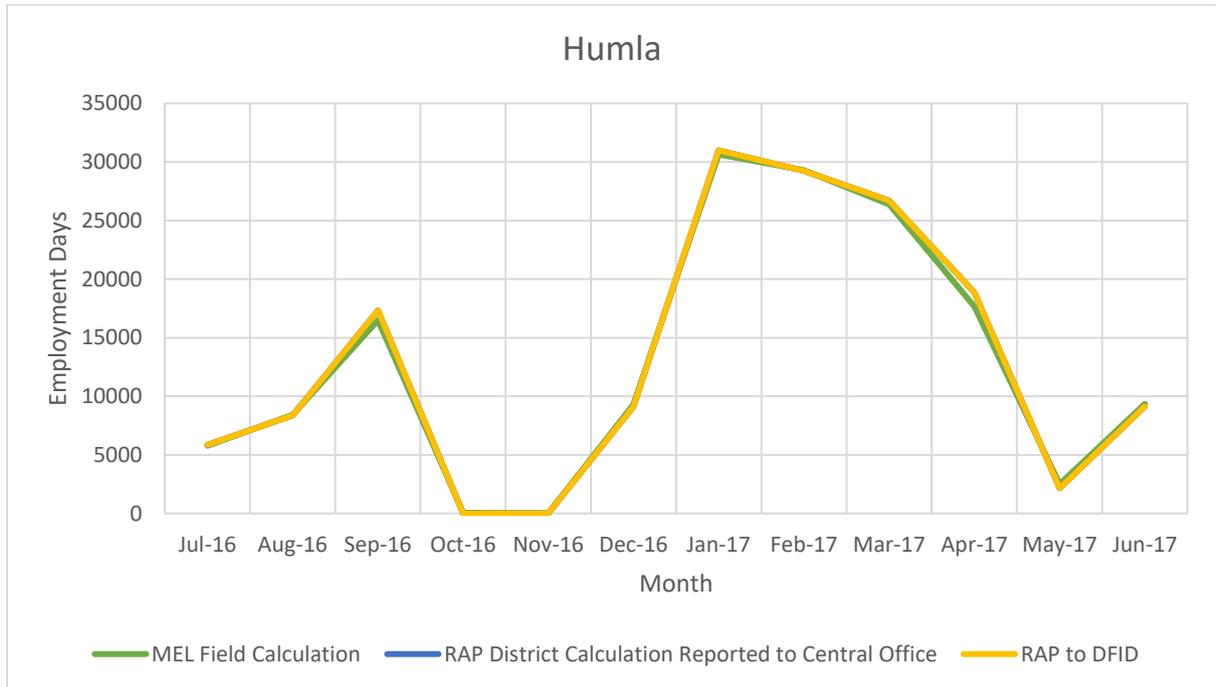
Graph 2: Kalikot Employment Days Tally



Graph 3: Mugu Employment Days Tally



Graph 4: Humla Employment Days Tally



### 3.2 Interpreting the results

On the whole, the above figures indicate that the results, whilst not 100% accurate between the different levels of investigation, **are still within a reasonable level of error** with no significant deviation between the data. This is true at the overall aggregate level, the district level as well as the month-to-month level within each district. However, given that the verification for these four districts was at a census level, then a margin of error need not apply, and any discrepancies in the reported and verified data ought to have an explanation.

The core MEL team investigated the discrepancy between the verification results and the reported results from RAP3 to DFID. The following findings emerge:

- The primary rationale for the discrepancy between the verified data and RAP3's data is likely to be down to human error, given the manual nature of tallying employment days and the non-automated nature of data compilation and retrieval within RAP3. The findings from the MEL 2016 PMV Review still hold true, which is that 'data is aggregated manually which is time and resource intensive and increases the risks of some human errors and potentially 'butterfly effect' data miscalculations. Most data are entered manually, rather than linked to other workbooks'. (Refer to Photo 1 and 2).
- The data discrepancy may also be partly attributed to adjustments in employment days that are carried forward from one month to the next, specifically when it comes to employment days calculated from portering of materials from the headquarters to the worksites.

Photo 1: Example of attendance sheet in Humla

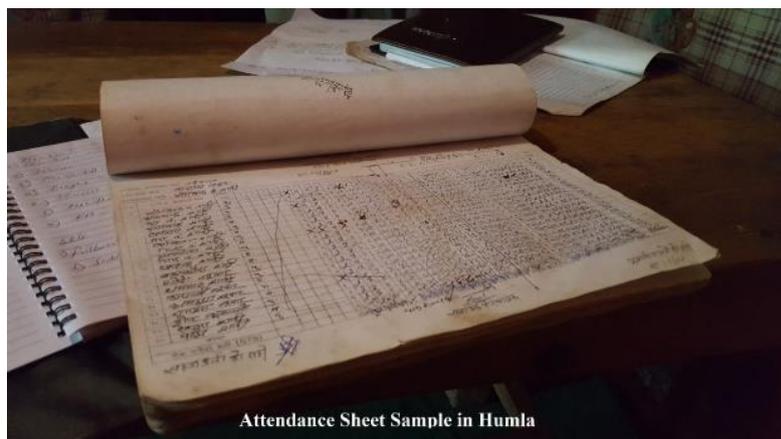


Photo 2: A pile of attendance records in Humla



Another finding from the MEL team is that RAP3 does not disclose the district-wise employment days results every month. Instead the aggregate figure from all 14 districts (including all pilot districts) are aggregated and reported on a monthly basis. This is shown below in Table 2 provided by RAP3. The only data that DFID receives is the *aggregate* sum from all districts. Therefore without the district-wise disaggregated results in each month it is not possible for outside observers to confirm whether all district data adds up to the total monthly reported data. It is also difficult to ascertain which districts are generating the most employment days without a monthly breakdown.

Table 2: RAP3's Reported Results to DFID

RAP3 Employment generation in a year (July 2016 to June 2017)						
SN	Employment days					Remarks
	Kalikot	Mugu	Humla	Bajura	Reported to DFID (Total of 14 districts)	
Date						
Jul-16	6,802	1,159	5,860	3,135	188,249	SED overhang
Aug-16	-	119	8,376	1,139	27,428	
Sep-16	36,915	12,987	17,342	22,425	107,910	
Oct-16	5,235	1,980	-	12,014	35,029	
Nov-16	16,626	5,808	-	5,388	34,492	
Dec-16	47,046	21,830	9,112	34,135	51,650	
Jan-17	56,902	20,393	30,991	32,947	191,671	
Feb-17	43,755	23,731	29,230	34,898	154,443	
Mar-17	34,304	19,052	26,713	26,918	135,912	
Apr-17	38,913	13,891	18,850	26,049	125,585	
May-17	10,679	7,582	2,168	24,361	89,459	
Jun-17	6,595	9,327	9,138	13,395	63,354	
<b>Total</b>	<b>303,772</b>	<b>137,859</b>	<b>157,780</b>	<b>236,804</b>	<b>1,205,182</b>	
<i>Note: The programme (RAP3) reports to DFID (SMT) the total employment days but not districtwise. So, the above district figures are the figures reported from districts.</i>						

## 4. Recommendations

The following specific recommendations are provided based on the findings of this round of verification:

1. **Data transparency:** In the interest of greater transparency, **RAP3 should disclose the district-wise employment days results in their monthly report to DFID.** This is already collected by the RAP3 central office and providing this data would involve minimal additional effort. This will provide a higher degree of confidence of where the majority of employment days are generated and reported to DFID on a month-to-month basis across all districts. It will also enable the MEL team to verify and compare results in any district in any given month.
2. **Data retrieval:** RAP3 has a good and mature system in place for data collection and reporting (as noted in the PMV Review). However, the issue of data retrieval is still an outstanding one. It is a manual and time-consuming process to calculate the employment days in every month and is prone to human error. Whilst the data discrepancy is small, the ability of RAP3 to identify the source of any error at the central level down to the field level is problematic. Therefore **RAP3 should consider a low-cost automated system for inputting field data which can be aggregated instantly at the central level but can also be traced back to the field level more efficiently.** This was also noted by the RAP3 M&E officer stating that this would make his work more efficient and reduce potential data compilation errors.
3. **Risk to data security:** All data reported to DFID originates from the field level and hence should be traceable down to this level. The source of RAP3's data for employment days are the attendance sheets kept in files (see Photo 1 and 2) at the district level. There is a moderate risk that this data could be permanently erased in the event of a hazard, such as a fire. In such an event the data would be lost and untraceable. From the point of view of auditing, **RAP3 should consider digitizing all records kept on file.** This could be done by scanning. For example, the MEL team were able to take photos using smart phones of most of the recorded attendance sheets in the four districts over the last one year and this can be found on [Google Drive](#). This will then provide DFID and RAP3 Technical Assistance Team a higher degree of confidence that data is kept secure and can be audited at any time.