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

A VALUE FOR MONEY (VFM) ANALYSIS FOR RAP 3

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Submitted by Itad

Results in development

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Abbreviations

CBA	Cost Benefit Analysis
CIAP	Continuous Improvement Action Plan, part of the RAP3 internal audit processes
CIM	Continuous Improvement Matrix, an assessment of District Development Committee performance
DC	RAP3 District Coordination
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
DTL	RAP3 District Team Leader
GoN	Government of Nepal
IRR	Internal Rate of Return
LRN	RAP3 Local Roads Network Component
MEL	Monitoring, Evaluation and Learning component
NPV	Net Present Value
PBR	Payment by Results
PM	RAP3 Programme Manager
PMV	Performance Management and Verification
RAP3	Rural Access Programme 3
RBG	Road Building Group
RMG	Road Maintenance Group
SED	RAP3 Social and Economic Development Component

1. Introduction

Value for Money (VfM) analysis and reporting is part of the 2015/16 work plan for the MEL Component of the third phase of the Rural Access Programme (RAP3). The purpose of VfM reporting is to develop a better understanding and articulation of programme costs and results to drive continuous improvement by making more informed evidence-based choices. MEL's approach to programme VfM reporting and analysis for RAP3 builds on previous work undertaken by MEL to conduct a preliminary comparative analysis based on RAP results and those of other road infrastructure programmes in Nepal, and a consultative process to identify a VfM framework for RAP.

It was agreed by DFID Nepal that MEL would lead a formal RAP3 VfM analysis and reporting process in order for stakeholders to better understand what is driving costs and to ensure that the programme is providing the desired quality at the lowest price – allowing management to make informed choices to improve value for money throughout implementation. The analysis also aims to enable a variety of stakeholders, including DoLIDAR and donors supporting road development programmes in Nepal, to compare the VfM of different approaches to road development and thereby facilitate dialogue and learning about which approaches are most cost effective.

This report is structured on the following:

- DFID's approach to VfM involving '4Es' of Economy, Efficiency, Effectiveness and Equity.
- A set of VfM indicators as part of the VfM framework for RAP 3. This framework was developed based on consultations with DFID Nepal and RAP 3 Management and staff based in RAP 3 Kathmandu head office.
- Selected VfM good practices from RAP 3 implementation and other qualitative reporting as proposed by RAP 3.

2. Methodology and Background to the VfM Analysis

An initial cost comparison of LRN projects in Nepal, including RAP 3 was carried out by the MEL team based in Nepal. This exercise was conducted to help DFID Nepal during the Annual Review of RAP 3 in October 2015. The findings of the exercise revealed that there was a wide range between various unit costs, due mainly to the difficulties in collating comparable data. Although working on the same rural infrastructure issues, the projects that were examined varied significantly in their approaches, the regions they operated in, the project cycles they were in, and the approaches used in procurement, all of which contributed to the emerging different costs. DOLIDAR ask the projects to submit project information in a detailed manner, however, each project reports back in different formats, which then DOLIDAR do not aggregate in a way that will be helpful for straightforward and meaningful VfM benchmarking.

During the VfM mission in Nepal in November 2015, extensive consultations were held. During the consultations, a number of key principles for the VfM framework was agreed:

- **The framework should be manageable and practical**, recognising the heavy reporting burdens and time constraints for RAP 3 and DFID programme management.
- **Reporting against the proposed indicators should be done periodically, most likely annually for the DFID Annual Reviews.** This may require some adjustments on RAP's side, including aggregating some of the financial information to be reported annually (currently it is monthly and quarterly) and integrating the VfM indicators into the existing M&E systems for data collection. On the former point, as of late 2014, on DFID's request, RAP management have been reporting against Disbursement Linked Indicators (DLIs)[1], which trigger payment, on a monthly basis. However, as explained during the mission, RAP will still have to report annually on the breakdown of spend on outputs, even though the financial information is currently available on monthly and quarterly basis. This is because comparative information on VfM from external sources is often only available annually or (if the programme has ended) covering the whole programme. RAP could also opt to report quarterly on the VfM indicators and present trend information. However, this is likely to bring more reporting burden.
- **The VfM framework should consider qualitative reporting** aspects in addition to the quantitative indicators. This was emphasised by DFID Nepal advisors and the IMC team. IMC team made further proposals on qualitative indicators which were considered in this report.
- **The framework sought to achieve a balance in reporting of the 3 Es, which is essential in VfM analyses.** If some indicators are reporting downwards or upwards trends, this does not automatically mean value is not being delivered. We look at the 3Es overall and the balance among them, and make a judgement, using the evidence available.

A wider list of indicators was compiled which can apply to programmes like RAP 3. The following sources were reviewed to inform the development of the framework:

- DFID Guidance on Value for Money, 2010.

[1] Using of DLIs is becoming more common practice by DFID, and it is considered a good VfM practice.

- Smart Guide: DFID's Approach to Value for Money, Beckett M., March 2015.
- DFID How to Note on Economic Appraisals, 2011.
- DFID Annual Review of RAP 3[2], October 2015.
- Draft proposed Extension Logframe for RAP 3[3].
- Preliminary Scoping Study: Value for Money, MEL, October 2015.
- 'Measuring and Maximising Value for Money in Social Protection Systems', White et al., 2013 version and Nov. 2015 update.
- 'Measuring and Maximising Value for Money in Infrastructure Programmes', Adam Smith International, August 2012.
- 'Better Value for Money: An Organising Framework for Management and Measurement of VfM Indicators', Barr and Christie, ITAD, 2014.

Following review of the proposed VfM framework by DFID and RAP 3, the analysis below was compiled, based on that framework.

[2] Particularly the recommendations on indicators and measures for future reviews.

[3] Draft provided by DFID Nepal.

3. Considerations Underpinning the VfM Analysis

A quantified economic assessment of value for money was carried out for RAP 3 at the design stage (2013) as well as for the cost extension (2015). These are fairly recent assessments and the positive results were used as the main VfM proposition for RAP 3. The summary results of those will be discussed under Effectiveness, below. It was agreed with DFID Nepal programme management that there was no need to repeat a programme-wide Cost Benefit Analysis. Instead, we use some cost Effectiveness comparisons. In addition, further studies are proposed as a means to verify the CBA results towards the end of the programme. These are also discussed under Effectiveness. **It should be emphasised at the beginning that RAP 3 operates in an 'equity' context.** The remote Karnali region comprises the poorest districts in Nepal, with significant infrastructure gaps. RAP 3's costs should be presented and understood in this background where RAP 3 being more costly than comparators in some instances does not automatically mean it does not represent value for money.

A comparative preliminary analysis was conducted by MEL comparing some of RAP 3 costs with other LRN projects in Nepal. The information for the analysis came from DOLIDAR which periodically receives cost information from most LRN projects. Although methodologically correct, some of the information was potentially inaccurate, as different programmes report differently, and the way they aggregate their results is not harmonised. Those programmes do not report on VfM, or necessarily apportion all costs of delivery on results, as stakeholder feedback confirmed. Going forward, if comparisons are required, by DOLIDAR or by others, a harmonisation in reporting (periods, contents, costs) will be necessary. We have not used other current LRN programmes as comparatives in this analysis, as was agreed with DFID Nepal.

At the time of writing, RAP 3 had secured a cost extension on their existing contract, doubling the size of the programme. However, the calculations for this study are based on the original RAP 3 budget, and expenditure until the end of year 2. RAP 3 figures are available as of then.

For many of the VfM indicators discussed here, RAP 3 team provided data. In some instances, like cost per km built, etc we have not been able to see all the steps in coming up with the figures. Moreover, costs of outputs inclusive of all costs of delivery had to be compiled by this review, based on budget shares and logframe weightings.

For VfM calculations to be made, costs need to be apportioned on key results. Key financial assumptions need to be made by the programme management and finance teams in order to assign costs, at least at output levels. The assumptions will be regarding staff use of time, particularly if they cut across several outputs and/ or functions. This also includes defining what goes under TA costs and PMV costs to allow clearer understanding of finance data. An example from another programme for apportioning of costs was provided in Annex 1.

Finally, VfM analyses require that we take into account all costs of delivery, including those incurred by beneficiaries of a programme, in the form of private costs. However in reality most often we do not have adequate information about this type of costs. Although we know that, for instance from the Baseline Report of RAP 3 that RAP beneficiaries do incur costs themselves (such as time travelled to get to work, opportunity loss from engaging in RAP work, or less time for household chores especially for women), we do not know the magnitude of those costs. Therefore we have only used RAP 3 programme costs for calculations here.

4. Findings

4.1 Economy

Economy analysis reviews the cost of inputs going into the programme and reviews the procurement procedures to identify if there are opportunities to increase the value for money being achieved in procurement. Value for money is not achieved by the lowest possible price for a given input; it is a function of price, appropriateness, quality, and timeliness of sourcing the input. According to the proposed VfM Framework for RAP 3, the below indicators and good practices are presented.

4.1.1 Average daily consultant fee rate (international and local)

RAP 3 fee rates were provided on monthly rates, as invoiced to DFID. Based on a 22-day working month, they were translated into the below daily rates in GBP:

Table 1: RAP 3 daily fee rates

	International	National
Long-term	**Highest**: £695 **Lowest:** £655	**Highest:** £104 **Lowest:** £74
Short-term	**Highest:** £704 **Lowest:** £430	**Highest:** £300 **Lowest:** £74

Long-term national rates are understood to be those of the RAP 3 programme staff. There was a salary benchmarking exercise conducted by the RAP's Human Resources (HR) team in September 2015. The team consulted 8 organisations/ projects working in rural infrastructure. This demonstrated that RAP 3 rates of remuneration were in most cases lower than the benchmarks. This was used as a basis of 15% salary increase, agreed by DFID Nepal, to be reflected in costs as of October 2015. The evidence for this exercise and results were provided also to the reviewer. This is also a good VfM practice to highlight, because local fee rates make most sense when compared locally.

In terms of international rates, these are within the ceilings agreed with DFID at the contract stage, as reported by RAP 3. Externally we looked at DFID's PEAKS framework fee band rates, as well as some other DFID programmes, implemented by service providers, across other country offices[4]. RAP 3's rates compared favourably against those comparisons.

4.1.2 Technical assistance (TA) costs as percentage of total spend.

There is a 14.3% ceiling set for the TA costs category by IMC's contract with DFID, as reported by RAP 3. However, the reviews of spending and consultations during the mission have shown that this is sometimes exceeded. This is because TA costs are also incurred under other categories of spend, such as PMV. The recent PMV Review exercise undertaken by MEL also confirmed this.

[4] Bangladesh, Nigeria, and Kenya.

The VfM framework for RAP 3 proposed that RAP 3 keep track of all TA costs and report them in both monetary figures and percentage share of spend formats. According to this, year 1, year 2 and cumulative results are below.

Table 2: TA share of total spend

	Year 1	Year 2	Cumulative at end year 2
TA share of spend	14.1%	11%	13.2%

The downward trend in the table is an indication of improved economy performance. However, it is recommended that RAP 3 team itemise categories of spend under both TA and PMV costs. Going forward, percentage of TA costs will make most sense by looking at the trends of RAP 3 over the years in this category of spend. This is because the definition of what goes under TA or management costs often varies across programmes, and benchmarking externally is unlikely to give accurate results.

4.1.3 Unit costs for main recurrent programme inputs.

Economy analysis is concerned with costs of routinely procured items and how a project performs in controlling those costs. A discussion was held on main procurement items with the LRN team and the finance team. It was proposed that **gabion baskets** and **health and safety equipment** were monitored for this purpose, tracking the costs incurred during the last two times that those items were procured. The following was reported by RAP 3 team.

Table 3: Cost of frequently procured inputs

Item	Cost (NPR)
Gabions (per Km, excluding VAT)	2.125m
Construction tools and health & safety equipment (excl VAT and excl. cost of first aid kits)	1.096m

Clarification is sought from RAP 3 whether these are unit costs that have become standard or any changes are expected the next time they are procured. We do not have any other cost information from other projects to compare these. These costs could, in theory, be compared to the other LRN projects in Nepal, as they likely procure the same items periodically. However, there are difficulties in obtaining this information directly from those projects or DOLIDAR, as experienced recently in the VfM Scoping Exercise by MEL. Most usefully, RAP 3 can provide their own information and track the trends, with narratives provided to explain significant variations, if applicable. In the near future, as DOLIDAR's capacity improves, it is possible that such information exchange will be urged and facilitated by DOLIDAR.

Earlier during the VfM framework discussions, RAP 3 team cautioned against this type of calculation. '*The prices of these will not indicate to what extent value is being achieved. In case of gabions the price paid is heavily linked to material costs on international market (steel and zinc) and to relative*

transportation difficulties (RAP3 contract on the basis of 'supplied to DTA store'). E.g. in last gabion procurement we benefitted from a substantial drop in raw material costs whereby our costs dropped about 20%; such fluctuation is itself impossible to predict. In the case of H&S (and tools / equipment) much of the price has to do with quality (e.g. gloves come in a multitude of qualities). The real drivers for value for money are:

- *Bulk packaging to take advantage of 'bulk discounting'*
- *Appropriate packaging to target specialist suppliers (e.g. don't mix wheel barrow supply with gabion supply)*
- *Maximise free-Market competition (open bidding)*
- *National / targeted advertisement (increase breadth of competition)*
- *Accurate, unambiguous specifications*
- *Scrutiny of potential supplier's likely ability to perform ahead of contract award*
- *Sample pre-approvals*
- *Use of liquidated damage (and sometimes bonus) to drive timely deliveries*'.

These are valid points. Going forward, RAP 3 and DFID Nepal should decide whether to report on this indicator or not. This study considered them under Economy analysis as they are among the main inputs of the programme.

Finally, RAP 3 team proposed considering the following questions as part of **qualitative reporting under Economy.**

- Were costs reduced? What measures were taken to achieve this?
- What were the benefits from that approach/ action?
- How was financial risk mitigated?
- What alternative options were there?

These can be answered with regard to a certain procurement method or choice that was made. The above discussion for gabions and H&S equipment provides a good example. Another example is the technical study[5] prepared by RAP 3 on the decision to use of machine manufactured gabion baskets over hand made ones. That was highlighted as a VfM good practice, particularly from the point of using VfM lens in decision making, as that paper detailed the costs and expected benefits of two methods and an analysis of their risks. RAP 3 are encouraged to document more of these decisions in a similar manner, which will strengthen their VfM narrative.

Following VfM good practices, mostly in the form of cost economy savings were presented by RAP 3 team:

- **Land vs. Helicopter as mode of transport**: Breaking the trend of helicoptering supplies into upper Karnali districts, RAP 3 are using mule trains and porters to transport all manner of materials from wellington boots, wheelbarrows and gabion wires (which will be hand woven in the District into gabion baskets used for retaining wall construction). Although there were some minor damages to the products during this form of transportation, the approach generates its own labour and also high level of savings, which would otherwise be spent on

[5] Comparative Study of Machine vs. Hand-Woven Gabions, RAP 3, January 2014.

jet-fuel. A recent gabion procurement saved £240,000 on this basis alone. RAP3 has used helicopter lift for minor start-up deliveries only (less than 15% of the total consignment).

- **Seasonal Access**: Where seasonal road access exists (Mugu, Bajura and parts of Kalikot) RAP3 is timing its procurements around known periods of likely access, again to avoid helicopter lifts. Typically there is a short window between clearing the monsoon landslides and early snow which blocks the roads for the majority of the year. RAP applies liquidated damages but also a 'bonus payment' clause to encourage suppliers to take advantage of road openings.
- **Avoidance of Seasonal Price Hikes:** RAP3 has been rescheduling bulk procurements to avoid critical times of the year and price hikes. For example by postponing bulk gabion procurement from June / July when there was heavy Government demand this year, to September / October around 30% of costs were saved by shifting to a low-demand time of the year.
- **DDF Centralised procurement**: RAP3 is working extensively through DDFs in 10 Districts. Traditionally DDCs let User Committees make their own materials and equipment purchases with the result that these small-scale purchases are at high cost and low quality and that the User Committees end up poorly equipped. RAP3 has changed this approach to one where the DDC makes bulk purchase (construction materials, safety equipment, worker insurance etc.) the result is lower costs and more transparent procurement, higher quality and enhanced safety amongst workers.

4.2 Efficiency

Efficiency analysis reviews the cost per output generated by the programme. A selection of 'efficiency' metrics was defined based on the available information from the programme teams and some of the key aspects of the programme. These metrics focus on beneficiary and output numbers rather than outcomes for beneficiaries. However, it is important to note that value for money is not necessarily guaranteed by achieving the lowest possible cost per output. The quality of delivery of outputs is also a concern for efficiency.

One key aspect related to efficiency is **Payment by Results and DLIs.** The contract between DFID and the implementing organisation, IMC Worldwide, is based on 100% payment by results (PbR). PbR includes any approach where some payments are made only following the delivery of pre-agreed results (outputs and/or outcomes). This is increasingly being rolled across DFID programmes, as part of the drive to ensure and enhance VfM, even including governance programmes where results are harder to determine and quantify. RAP3 was DFID's first PbR contract and while PbR is still a relatively new contracting model for DFID. In RAP 3's case, DLIs are mainly similar to the logframe indicators at output level, and in this sense meeting those targets can be classified under efficiency.

4.2.1 Output Costs:

The table 4 was provided by RAP 3. RAP 3 noted that cumulative programme spend up to the end of Implementation Year 2 (IY2) was £ 23,585,502.00, including the inception period.

Table 4: RAP 3 expenditure to date and budget for years 3 and 4

	Inception	IY1	IY2	IY3	IY4	Total Contract	
Time (months)	**6**	**16**	**12**	**12**	**2**	**48**	
Output 1 LRN	-	7,470,017	5,591,218	5,477,771	186,644	**18,725,651**	**59.4%**
Output 2 SED	-	2,931,316	2,552,919	423,551	-	**5,907,786**	**18.7%**
Output 3 CBID	-	855,631	660,411	221,880	-	**1,737,921**	**5.5%**
PMV	-	-	194,713	265,986	-	**460,699**	**1.5%**
Other	206,022	-	-	-	-	**206,022**	**0.7%**
Managed Fund	**206,022**	**11,256,964**	**8,999,261**	**6,389,188**	**186,644**	**27,038,079**	**85.7%**
Technical Assistance	**161,628**	**1,856,833**	**1,104,795**	**1,104,792**	**283,874**	**4,511,921**	**14.3%**
Total	**367,650**	**13,113,797**	**10,104,055**	**7,493,980**	**470,518**	**31,550,000**	**100.0%**
% by Budget	**1%**	**42%**	**32%**	**24%**	**1%**	**100%**	
% by time	**13%**	**33%**	**25%**	**25%**	**4%**	**100%**	
Cummulative total	**367,650**	**13,481,447**	**23,585,502**	**31,079,482**	**31,550,000**		
Cummulative % by Budget	**1%**	**43%**	**75%**	**99%**	**100%**		
Cummulative % by time	**0%**	**46%**	**71%**	**96%**	**100%**		

In terms of costs of delivery, VfM calculations and comparisons are made possible when we can assign all costs of delivery (direct and indirect) to outputs, often as described in project logframes. The table above still shows PMV costs and TA costs separately from the outputs. We reflected those to the best of our understanding, and based on their share in the budget, and re-calculated output costs which are below in table 5. They show output costs for year 1 and year 2, a portion of inception costs, and a portion of total PMV and TA costs for years 1 and 2. We used these output costs as the basis of our calculations in this report.

Table 5: Output costs (with PMV and TA costs assigned)

Output	Total cost at end Y2
Output 1	£15,175,629
Output 2	£6,153,793
Output 3	£1,700,891

4.2.2 Cost per km of road built and Cost per km of road maintained

These indicators are commonly used in road infrastructure programmes, and so it was recommended by MEL that RAP 3 also track them. The results can be benchmarked with other programmes using similar approaches in Nepal, or more likely, as trend information on RAP 3's own performance over programme years. RAP 3's M&E system already collects the length of roads built and maintained (as it is part of the logframe). This needs to be matched with the relevant costs under output 1 (including an allocation of PMV and TA costs apportioned).

RAP 3 provided the following costs on 2.5, 3.5 and 4.5m track extensions (road construction as per output 1), as well as an overall cost for km of road maintenance. However, it is unclear whether all costs of output 1 were considered in the calculations, including a proportion of TA and PMV costs. Also, information on cost per km of road constructed was not available at the time of writing. Total km of roads that will be constructed stands at 97.5km at the time of writing.

Table 6: Costs of road maintenance

Item	Cost (NPR)
2.5m track opening	1.167m
3.5m widening	6.615m
4.5m (full width & structure)	11.674m
Km of road maintained (reported by RAP 3)	60,000
Km of road maintained (review calculation)	347,000

RAP 3 team explained where the cost of km of road maintained figure of NPR 60,000 originates from: *The cost of maintenance per km is based on RMG guideline issued by the government (informed by RTI pilot), which sets out 100 days of labour input/per km for regular and routine maintenance of rural roads. The labour days is multiplied by district wage rates (which vary by districts). The figure of NPR 60,000 for maintenance of a km of road is the average cost of regular and routine maintenance of 2,000 Km of roads funded by RAP3.*

The output 1 budget is dominated by new construction (around 68 percent of total budget) and maintenance (around 32 %). RAP follows four step maintenance process with a priority on regular and recurrent in order to make room to complete 92 km of planned new road construction in this phase, RAP3 has been cutting down its allocation to maintenance. The maintenance activities are dominated by less capital-intensive regular and routine maintenance. The budget split between maintenance and new construction is likely to stay within the ratio of 32:68 during the contract period'.

RAP team indicated that: *'Cost of road construction cannot be tracked as it only becomes known once construction is completed and final measurement is made'*. Similarly in maintenance, '*Cost per km maintained' would be difficult to meaningfully track because the degree and nature of maintenance is highly variable*'. *The price paid for maintenance is a function of the following:*

- *Performance Standards (if specified, which define how good the road condition should be)*
- *Level of traffic intensity*
- *Severity of weather (was it a good or bad monsoon this year?)*
- *Type of road (earthen, gravel or blacktop)*
- *Quality of original design*
- *Availability of budget*.

Using the above 68:32 mark provided on the output 1 budget, using the 32% of output 1 spend to date, and corresponding km of road maintained (2,087 km) we find the cost as £2,327 which is around **NPR 347k.** Further, the preliminary VfM exercise undertaken by MEL in October 2015 as part of preparation for RAP 3's Annual Review calculated that these costs (in July 2014- June 2015 fiscal year)

were **NPR 314,185** for cost per km maintained, and NPR 7.2m per km of road constructed[6]. These were based on DOLIDAR figures (which were based on reporting by LRN projects). We were unable to reconcile where the difference between the reported NPR 60k and over NPR 300k emerges from.

In summary, analysis on this indicator is inconclusive and there is need for a clarification as to how the presented costs were calculated by RAP 3. The quality aspects of roads built and maintained were addressed in the LRN Review, which was carried out by MEL in late 2015.

4.2.3 Cost per beneficiary household (SED initiatives)

This would include both recipients of SED livelihoods assistance (market linkages, training, etc) and beneficiaries of SED-linked investment (household energy, irrigation, trail bridges, etc) as per the current logframe output 2. Total SED beneficiary numbers, as collected by RAP 3 and the total cost of output 2 (with PMV and TA costs apportioned) were used for the calculation. The challenge here is that recipients of SED livelihood assistance is tracked in terms of individual beneficiaries (16,883) whereas those who benefit from SED linked investment (22,240) are tracked in household figures. We therefore converted the former figure (16,883) to households, assuming that there normally would be one beneficiary from each household. Finally, as the reported cost figures are from October 2015, beneficiary figures were taken to match that period, from the last Annual Review of DFID for RAP 3 (October 2015). This translates to **£156 per household** based on 39,323 beneficiary households and total output 2 costs (£6,153,793 including a portion of PMV and TA costs)[7]. It is also possible to convert the household figures to beneficiaries using the average household size in Nepal. Based on the availability of comparators, either method could be used. If RAP 3 chooses to do trend comparison, they can track this based on either method.

We tried to use trends of year 1, 2 and cumulative result. However, the logframe change after the Annual Review of 2014 (Y1) led to differences on what was being tracked and counted under the SED related output (then output no.4). Beneficiary numbers for year 1 and 2 possibly need re-configuration.

Table 7: Costs per beneficiary households

	Year 1	Year 2	Cumulative at end Y2
Output 2 total costs	£3,284,115	£2,799,825	£6,153,793[8]
Beneficiary numbers	7,000	32,323	39,323
Cost per beneficiary hh	£469	£86	£156

[6] Following the same calculation, based on 68% of total spend on output 1 at end of year 2, and around 100km track extensions as reported in the Annual Review of 2015, cost per km constructed was over NPR 14m.

[7] Output 2 costs year 1 and year 2 total: £5,484,235. Output 2 constitutes around 19% of RAP 3 budget, therefore: plus 19% of inception costs: £39,144 and 19% of PMV and TA total costs: 630,414 were added.

[8] Includes also a share of inception costs.

More changes are proposed under the output, which may still present a challenge in terms of comparing like-with-like. Depending on how SED will look like in year 3, the indicator should be reviewed with a view to its usefulness. It is likely that RAP 3 will still be asked to report on beneficiary household numbers, so it might be relatively easy to track. This could also enable further comparisons with other similar project working in the same districts.

Besides the unit costs incurred under SED, RAP 3 is recommended to look at the benefits from SED interventions more closely, particularly after start of the new interventions under this component. This might be addressed partly under the mid-line exercise to be carried out by MEL. Deep-dives in proposed new interventions such as the agrovets, etc can also be considered.

The recent PMV Review undertaken by MEL pointed out to potential double counting for the SED beneficiary household numbers. It was recommended that RAP 3 team address this issue.

4.2.4 Timely completion of road works

This was an indicator recommended by the latest Annual Review of RAP 3. RAP 3 team reported that in terms of RMG work-routine maintenance, 100% of the works were completed on time. If we expand this to include all types of maintenance (routine, specific, periodic) then actual achieved vs planned[9] ratio was 66%. The figures for new road construction were not available at the time of writing.

RAP 3 team explained that delays were the norm in the area they operated in and that what they aim to do is to offer solutions to those delays as efficiently as possible. What mattered more was how the difficulties were managed rather than whether the contract finalised on time.

RAP 3 team proposed the following **qualitative questions** as part of efficiency reporting:

- How was quality assured and monitored (with respect to a certain output)?
- Did any innovation take place in the reporting period?
- What processes were in place to identify inefficiencies?

Some of these were answered above, particularly under Economy good practice examples. For example, centralised bulk procurement by the DDC on behalf of user committees can be a good example for the third question.

In terms of **innovation**, this review highlights the Graduate/ Intern Engineer Scheme. 45 such personnel are currently working for RAP 3 under the scheme. The programme aims to save on costs of hiring experienced consultants engineers who do not always deliver according to RAP experience. The scheme also provides an entry point for subsequent employment as well as enhancing the quality of technicians and engineers in the field, thereby building local capacity. A case study focusing on quantifying costs and benefits of this scheme should be considered.

4.3 Effectiveness and Cost Effectiveness

As mentioned in the introduction, two Cost Benefit Analyses (CBAs) were produced to investigate potential benefits from investing in RAP 3. The first one was in 2013 at programme design, and the

[9] ARAMP 2 plans.

latter for the cost extension, in 2015. They both found positive results, using similar assumptions, which indicated that RAP 3 provided good value for money compared to other delivery options[10]. To give an example on this, a Benefit to Cost Ratio (BCR) of 4.47 indicates that for every £ invested in RAP 3, a benefit of £4.47 was expected to be generated in return. It was agreed with DFID Nepal that there is no need to conduct another CBA at this stage, for the VfM analysis.

The following results were found in the CBAs[11]. They are the headline results from the central scenarios in each analysis. The 2013 analysis used 3.5% as the discount rate, and 2015 used both 3.5% and 12% scenarios.

Table 8: Results of Economic Appraisals on RAP 3

Category	2013 Analysis	2015 Analysis
Total programme costs (£ m)	36	72.5
Net Present Value (NPV) (£ m) at 3.5% discount rate	16.26	222.19
NPV at 12% discount rate	9.98	177.3
BCR at 3.5% discount rate	1.49	n/a
BCR at 12% discount rate	n/a	4.47
Internal Rate of Return (IRR)	52%	n/a

Programme reviews (annual or completion) provide an opportunity to re-visit the assumptions of the analysis, to determine whether the programme is on track to deliver value for money, as estimated originally. Therefore the following studies can be conducted, during cost extension implementation, to verify the assumptions used in CBAs for RAP 3. The scope and timing of the studies can be agreed on by DFID and RAP, in collaboration with MEL. The assumptions that were used in the above analyses were regarding:

- Maintenance of the roads allowing them to stay open for additional days throughout the year (or reducing the number of days that roads are closed);
- Reduction in transport costs by 50% arising from roads that are maintained;
- Additional income generation from SED and direct wage labour benefits.

On the first point of days of roads closure, the recent LRN Review also recommended this be a logframe indicator, and RAP programme management has agreed to monitor this. This will allow tracking of the indicator closely which will help with verification of the earlier assumption. Secondly, a controlled study on transport costs on selected road stretches (that RAP have worked on) can be

[10] As explained in the earlier note for the VfM mission in late 2015, quantified and monetised results (often expressed in Internal Rate of Return (IRR), Net present value (NPV) or Benefit to Cost Ratios (BCR) of a CBA provide sound proxies for value for money.

[11] Summary of Economic Appraisals of RAP 3 2013 and 2015, provided by DFID Nepal.

designed which will help verify the design assumptions on reductions on transport costs. For example, a study covering three roads that were built under the SDC-supported Districts Road Support Programme (DRSP) Phase IV (2010-2014) in Nepal found that benefits arising from cost and time reductions (thanks to better road access) gave an IRR of 17 to 29%[12] on the investment, which signified good value for money. Finally, the extent of wage labour benefits and SED income-generation benefits can be verified from the MEL household survey (mid-line) scheduled for May 2016.

It is recommended that the feasibility and scope of the studies be looked into, through discussions with DFID and MEL, in the coming months. Once we have more recent evidence related to the main assumptions, such as transport costs reduction, the CBA can be re-constructed and updated.

Cost Effectiveness and Other Effectiveness Indicators:

4.3.1 Cost per employment day created

RAP 3 tracks the number of employment days generated, as part of the logframe. As this is an outcome related target, it should use the cumulative expenditure on the programme to date, to be divided by total number of employment days to date. At the time of compiling the report, we have the total expenditure to date which is £23.5m and number of days created is 1.9m, which means cost per short-term employment day generated is **£12**[13]. Based only on output 1 costs it will mean around **£8** per employment day.

It is difficult to identify comparators for this, as RAP 3 operational districts are cost drivers, as explained at the outset. LRIP programme of Swiss Development Cooperation which operates in 'Karnali of the East' aims to reach 2.4m days in 4 years. In terms of the days created, RAP 3 appears to be more efficient as they have generated close to this target in a shorter time span. However, cost and spend information on LRIP was not available at the time of writing. Another comparison could be with the successor programme RAP 2, which generated 7.9m employment days for around £40m spend, which comes to **£5** per employment day.

We argue that total expenditure of the programme should be used for this calculation because SED component (output 2) also generates employment days, though majority of days come from LRN component (output 1). Further, RAP 3 systems currently do not enable tracking exact costs assigned at output and sub-output levels.

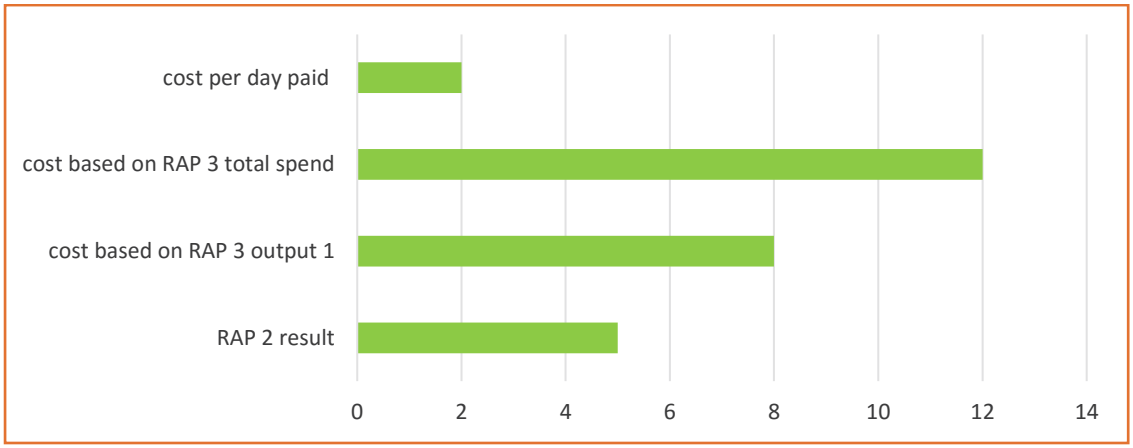
One further complication related to this indicator is the DLI indicator on employment days. According to the recent PMV Review carried out by MEL, three indicators drive most of the PBR payments. These are: employment days (DLI Outcome 2b); ongoing new construction (DLI Output 1.1b) and SED supported households (DLI Output 2.1). The greatest number of employment days generated (data as at end of January 2016) were in Kalikot, Humla, Bajura and Parbat. Three of these are core construction districts. Overtime, road construction is expected to generate more employment days than maintenance works (although, currently a greater proportion of employment days are generated

[12] DRSP Phase IV, End of Phase Report, Nepal, August 2014, p.3.

[13] 1,929,623 employment days, as reported in RAP 3 Quarterly Progress Report May- October 2015. £23,585,502 spend as at end of year 2.

through maintenance)[14]. Based on the agreed DLIs arrangement, DFID pays RAP **£1.88** for one employment day generated. RAP3 counts its results monthly and submits an invoice to DFID based on the result achieved. The related VfM metric result is indicating that generating one employment day is costing more than what DFID directly pays for. In a way, VfM related calculation might be showing the true cost of generating short-term employment.

Chart 1: Summary of comparison on cost per employment day



4.3.2 Cost per female employment day created (equity)

Using the same calculation method, we use the number of employment days utilised by women, as tracked by RAP 3. About one-third of employment days were used by women, which means cost per employment day for each woman was higher at an estimated **£23**. This demonstrates the higher cost of equity reach. As a comparison, the percentage of employment days utilization by women was at a similar level in District Roads Support Programme (DRSP) phase 4 in Nepal, at 35%[15]. RAP 2 also reported that around 33% of employment days were for women[16].

Further on this point of women's involvement in public works, the VfM exercise carried out by MEL in October 2015 showed that in the majority of RAP 3 operation districts men benefit more than women. Whilst women are adequately represented in both RBGs and RMGs, the average number of days employed shows that in 6 out of 14 districts women work fewer number of days per year than men[17]. Hence the average annual income for women in these districts was significantly lower, despite equal wages. '*An ODI study on gender disparities in public works programmes suggest that heavily embedded ideas of the 'appropriate/acceptable' type of work and gendered division of labour may mean that in reality women receive fewer working days, even where women's representation is high*'.[18]

14 Draft PMV Review by MEL, April 2016, Nepal, p.8.

15 DRSP Project Completion Report, SDC Nepal, p.4, 2014.

16 RAP 2 Project Completion Review, DFID, November 2013, p.3. Available on Devtracker.

17 Preliminary Scoping Study for VfM in RAP 3, MEL (ITAD), October 2015, p.6-7.

18 R. Holmes and N. Jones (2011), 'Public Works Programmes in developing countries: reducing gendered disparities in economic opportunities?' quoted in Preliminary Scoping Study for VfM in RAP 3, MEL (ITAD), October 2015, p.7.

4.3.3 Cost per wider beneficiary (roads)

This is related to the current RAP 3 logframe outcome indicator 1.1, which stays the same under the proposed new logframe. Outcome indicator 1.1 reads: 'Number of people benefiting from new roads and maintenance preserving the length of trafficable DRCN over the baseline'. The beneficiary data is compiled by the MIS team of RAP by adding up the population of each Village Development Committee (VDC) that a RAP road (in the DRCN) passes through. It includes direct beneficiaries (RMGs, user committees, etc.) as well as indirect beneficiaries (usage of the road). Therefore, the cumulative expenditure at reporting date should be divided by the number of those total beneficiaries for the result, which is **£8.42** for RAP 3 currently[19]. RAP 2 did not use this indicator. A suitable comparator project could not be identified in the review period.

The RAP team indicated that in many of their operational areas, 'least cost per population served' is the main criterion to use, as per the DTMP. However in some instances, 'least cost per vehicle' is the main criterion, thus creating differences from one district to another. These differences were shown in the VfM Scoping Exercise where cost per beneficiary in districts varied from less than £1 to about £39[20]. The proposed framework indicator deals with overall costs and beneficiary figures, and not district-wise beneficiary figures.

One way to utilize this metric would be to compare, ideally towards the end of the programme, the cost per wider beneficiary to benefit per wider beneficiary. The latter can be calculated by using the net present value calculated by the 2015 economic appraisal (£177.5m) and the total number of beneficiaries (direct and indirect) then. This would however be a high-level and indicative calculation.

4.3.4 Wage costs as % of total costs (labour intensity)

This indicator will be most useful for calculation at the end of the programme, however it can also be reported annually on the total cumulative expenditure. As labour intensity is an objective, wages paid to workers are actually direct benefit transfers. This was also one of the benefit assumptions in the economic appraisals of the programme. Total wage costs of RAP 3 can be compared to other programmes which use LEP (labour-based, environmental and participatory) in Nepal.

The Preliminary VfM Exercise conducted by MEL found that a guidance report by DFID which looks at the specifics of VfM in labour intensive public works indicates a wealth of established research. Concerning labour intensive infrastructure programmes, it looks at cost-effectiveness using labour intensity as one indicator – the labour cost as a proportion of the overall public works budget, which in the case of RAP3 refers to the LRN budget. Research by The World Bank found that a majority of PWPs worldwide have a wage share of more than 60%[21]. This is the 'labour intensity' of the works, referring to the direct wages as a proportion of capital expenditure.

[19] Based on total spend of £ 23,585,502.00 as at end of year 2, and 2.8m beneficiaries. We took the latter to be 2,800,000 (as RAP 3 gave the figure of 2.8m).

[20] Preliminary Scoping Study for VfM in RAP 3, MEL (ITAD), October 2015, p.8.

[21] Del Ninno et al (2009) How to Make Public Works Work: A Review of Experiences.

Wages as a proportion of the total spend on the LRN component (including wages for employment) in the fiscal year July 2014 – June 2015 was approximately **30%**[22]. RAP 3 team told the review that **70%** of total budget allocated to new construction is wages, against **90%** for maintenance. Clarification is sought from RAP 3 as to the differences. As a comparator, the predecessor programme RAP 2's wages as a proportion on total spend on roads was **77%**.[23]

The focus of this analysis is purely on the transfer to direct beneficiaries, and excludes the value of the assets built or maintained through the works. Further research would be needed to establish an appropriate level of labour intensity in the context of Nepal.

As the previous VfM exercise noted, "However, '…f*or broader cost-effectiveness one also needs to explore the length of employment (in addition to labour intensity), the value of the assets created and the longer-term social and economic benefits of the assets*" (DFID, 2013). It has not been possible in this review period to examine the value of assets created or the larger benefits of these assets (which itself will draw heavily from the Impact Evaluation – midline to be conducted by MEL in 2016)'.

Qualitative reporting:

4.3.5 Evidence for synergies between programme components (RAP, KEPTA, MEL)

This was intended mainly as a qualitative indicator, however it can also be quantitative where costs and/ or benefits can be monetised. Synergies on cross-programme linkages in specific outputs such as design works, thematic and analytical works or guidelines can be explored and reported on. One example from a recent such collaboration was KEPTA and RAP 3 team meetings on the job card initiative of KEPTA, and how this can be used by RAP.

4.3.6 Evidence on improved climate change resilience and adoption of environmentally friendly practices

This can also be qualitative reporting, with examples that demonstrate improved uptake and use of environmentally friendly practices by staff, workers, contractors and GoN, use of climate resilient design and implementation of physical works. Recent examples on this aspect are not available at the time of writing.

RAP 3 team proposed that the following also be considered under Effectiveness:

- Were there any unintended impacts from programme outputs? (Positive and negative)
- How were vulnerable groups considered in planning, implementation and monitoring?
- What measures were taken to promote sustainability?
- How is attribution addressed by the programme in reporting of outcomes?

In terms of unintended impacts; some of the examples provided by RAP 3 are below. However, these do not constitute unintended, but intended impacts, such as reduction of transport costs, better access to health and education as a result of better road access. Other examples of such unexpected consequences were not identified in the review period.

[22] VfM Scoping Exercise, MEL, October, 2015.

[23] RAP 2 Project Completion Report, by IMC, September 2013, p. 21.

- 'A typical RAP region will see incomes increase by 220%, expenditure by 130% and agricultural yield by 200%. Transport costs plummet by an average of a third while school enrolment increases by around 80%[24].
- RAP is also focused on boosting local governments' capacity to maintain those roads already built – ensuring the long-term sustainability of Nepal's infrastructure and thus safeguarding access to market, health and education for rural communities. Through the Rural Transport Infrastructure Maintenance Programme, RAP has successfully introduced a culture of road maintenance in Nepal where 'build and forget' has become normal practice in all national district road programmes'.

Inclusion of vulnerable groups is **Equity**. Some of the equity discussion was above, under female employment days issue. Further, 40% of SED support recipients are women and 20% are DAGs. As is common practice across LRN projects, the results are provided with a disaggregation based on caste status (dalits) and being highly food insecure. RAP 3 is operating in some of the poorest districts of the country, and is focused on the 'road influence area' (4 hours walk from the road). This does not in itself suffice to ensure that benefits only go to the poorest or most needy, however such targeting presents its own challenges. Nevertheless, RAP 3 team are encouraged to collect more testimonials from such beneficiaries (LRN and SED) as part of routine public and social audits. We simply do not know enough about this aspect of VfM, beyond what was discussed in the Baseline Report.

On **sustainability**; the following was provided to the review by RAP 3: 'RAP3 is taking a leading role in a sector-wide approach to LRN asset management and is able to influence the approach adopted by other donors and GON operating in the 61 non-RAP districts in the country. The World Bank's new LRN flagship SNRTP has adopted a 'maintenance first' approach in line with GoN policy and set aside 25% of its budget for maintenance, a first for the World Bank in Nepal. RMGs being piloted by RAP will be adopted by all other LRN projects as will the DTMP, ARAMP planned approach to LRN investment planning'. It is widely agreed by key stakeholders in LRN that RAP can be credited with effective influencing on prioritization of maintenance of road assets. It could be argued that sustainability efforts under RAP 3 have so far cost, at least, £1.7m based on expenditure on output 3, as this output is about institutional capacity building and RTI Swap related work. It is not possible to monetise at this stage whether sustainability results achieved are worth around and above that expenditure.

On **attribution**, most of the reporting by RAP 3 is focused on counting and tracking of outputs delivered directly by RAP 3 and partners (road mileage, RMGs and RBGs, SED initiatives, etc). In addition, to the best of our understanding, it is often the case that most of the districts they operate in, RAP 3 is the only road infrastructure programme. In terms of wider outcomes and RAP 3's contribution in those, it is expected that the mid-line and end-line evaluations by MEL can shed more light.

[24] No specific reference was provided as to where these figures come from.

5. Conclusions and Recommendations

The following conclusions are provided as well as relevant recommendations:

- Two economic appraisals carried out for RAP 3 showed positive VfM results. This means that at the end of RAP 3 delivery, it is estimated that there will be value generated exceeding the levels invested by DFID. **In order to verify those results, a number of studies need to be carried out, such as transport costs before and after on RAP 3 roads**. Such studies will help test the assumptions used in the appraisals, and will provide more robust evidence for future VfM analyses and other programme designs. These studies should be carried out once the cost extension is fully under way and the new logframe adopted.
- Further, **RAP 3 contract modality of Payment by Results is a VfM 'safeguard' to ensure efficiency and effectiveness**.
- On the 4Es, based on indicators that were proposed in the VfM framework:
  - Wherever there was an opportunity to benchmark, RAP 3 performed well against some of the benchmarks.
  - **Economy:** there is good performance compared to external benchmarks where applicable, and trends as shown on RAP 3. Some good practices and associated cost savings were documented. To the extent possible RAP 3 should aim to monetise them, as this will enhance their visibility.
  - **Efficiency**: Trend information was not always available or meaningful, which meant comparisons were not possible. At times, there were differences between reported costs by RAP 3 and the review calculations. Unit costs of maintenance and construction (on actuals, not planned costs) should be gathered annually in order for trend calculations to be made. On some other aspects of quality of delivery (which is an efficiency issue), MEL have carried out reviews such as the LRN Review and the recent PMV Review, as part of their verification mandate. The recommendations in those studies should be implemented going forward.
  - **Effectiveness and cost-effectiveness:** positive trends on indicators where comparisons were available. There will be more evidence overall on this aspect after the studies related to design assumptions and the mid-line evaluation exercise scheduled for mid-2016.
  - **Equity:** RAP 3's operational context is equity. Based on that, we chose references and comparators on previous RAP programme, or RAP 3 itself. Equity is a cost driver and some of the results such as cost per employment day for women as an example.

- RAP 3 team proposed that more qualitative aspects be integrated into the VfM framework. This concern is also shared by this review, however RAP 3 teams, particularly M&E team (or the wider PMV function) will need to collect more qualitative information, by way of systematic case studies, or beneficiary feedback, in order to cater for the needs of a qualitative framework.
- Costs particularly at output level need to reflect all costs of delivery incurred, to the best of our knowledge. For VfM calculations, at least once annually this will need to be done by RAP 3. The method used for this study was to apportion a share of PMV and TA costs on the reported output costs, based on the share of the particular output in the overall budget.

- **Overall it can be concluded that RAP 3 is on track to deliver VfM. When more results are available in the coming years that can allow year-on-year trend comparisons, better assessments and more definitive judgments can be made.** RAP 3 team can generate more evidence in support of a stronger VfM narrative.
- All VfM indicators can be reviewed further during implementation with a view to their utility and the burden on the programme teams. Despite the effort to choose indicators for which information is already collected, it is recognized that RAP 3 has to respond to many reporting requirements and reviews, and this might increase that burden.

Annex 1 Apportioning of Costs: Example

An example from a DFID programme in Nigeria is shown below. It includes the underlying workings and assumptions to assign costs at various programme levels, including to sub-output (indicator) level. The programme has been working through central- federal and state level offices.

1. Essentially, all finance data is divided into two main categories: programme management and administration; and technical management and support.

2. All full-time staff (with the exceptions of National Programme Manager (NPM) and National Administration and Finance Manager- NAFM) spend 20% of their time involved with Programme Management and Administration and 80% of their time involved with Technical Management and Support. Therefore related costs (Accommodation, Administration and Technical Staff Costs, International Travel, Long-Term andSubsistence) should be allocated using these percentages also.

3. The inputs of the NPM and NAFM are allocated differently with 50% and 100% of the NPM's and NAFM's inputs respectively being used for Programme Management and Administration.

4. Project offices (with the exception of Abuja) and vehicles primarily exist in order to provide Technical Management and Support, though are also used for Programme Management and Administration. Therefore related costs (Office Running Costs and Vehicle Running Costs) should be split in the same way as for full-time staff with 20% of costs allocated to Programme Management and Administration.

5. In Abuja, 100% of Admin and Tech Staff time is dedicated to Programme Management and Administration.

6. The technical management and support finance data is then analysed to be allocated to logframe outputs and indicators. The main division is the state level work outputs, and the federal level work output. It follows this logic: Allocate Federal Technical Management and Support finance data to all logframe indicators under the output related to the federal level work:

   a) Determine the % of the Federal State and Technical finance data allocated to each Federal logframe indicator;

   b) Apply the percentages calculated under (a) to the Federal Technical Management and Support finance data and allocate to the relevant logframe indicators.

Annex 2: Proposed Framework for Value for Money Analysis

This Annex is the proposed framework for VFM analysis for RAP3 that was a product of a number of consultations with RAP and DFID. This framework document was the guiding point for the main analytical report. This document is presented here in full.

1. Introduction

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 rural road access and increased connectivity. Sustainable access to markets is expected to stimulate the local economy along the road network, whilst direct employment of poor and vulnerable groups in road construction and maintenance will reduce also reduce poverty. Evidence from previous phases of RAP and other labour-intensive infrastructure projects highlight positive impacts on poverty reduction. RAP 3 is implemented by IMC Worldwide.

DFID Nepal asked MEL to conduct a Value for Money assessment of RAP, including the Karnali Employment Programme Technical Assistance (KEPTA) component. KEPTA comes under the same umbrella of the RAP 3 programme, and it aims to pilot innovative approaches in cash for work programmes, with a view to providing learning for KEP in particular, and influence Government's social protection policy agenda in general. KEPTA has been implemented by OPM since 2013.

Although RAP and KEPTA (and also MEL) are components of the same programme from a DFID programme management perspective, a VfM exercise covering that entire programme is not feasible. This is because RAP and KEPTA are two different projects. Although there are some synergies and potential areas of collaboration, one focuses on direct delivery of rural infrastructure construction and maintenance and the other mainly a TA programme whose objective is to influence national policies. Therefore the VfM assignment will aim to deliver two assessments: one on RAP and the other on KEPTA.

This assignment has two main stages:

- **Stage 1:** Propose a framework for each of the programmes for VfM analyses. Although the frameworks may feature some similar indicators, overall they are different due to the difference in modalities.
- **Stage 2:** Once the framework has been finalised, undertake VfM analysis using this framework.
- **Stage 3:** Discuss with RAP and DFID the findings from the initial analysis and discuss revisions in indicators if necessary. Discuss and work together on the VFM reporting template that RAP will use for annual reporting.

The remainder of this document provides a proposed framework for RAP 3, which includes indicators (that are identified as a set of feasible metrics covering most areas of the programme), examples of good practices and responsibilities to lead on the analyses in the coming reviews.

2. About the Framework

During the VfM mission in November 2015, extensive consultations were held. During this consultations, a number of key principles for the VfM framework were agreed:

- **It should be manageable and practical**, recognising the heavy reporting burdens and time constraints for both programmes and DFID programme management.
- **Reporting against the proposed indicators will be done periodically, most likely annually for the DFID Annual Reviews.** This may require some adjustments on RAP's side, including aggregating some of the financial information to be reported annually (currently it is monthly and quarterly) and integrating the VfM indicators into the existing M&E systems for data collection. On the former point, as of late 2014, on DFID's request, RAP management have been reporting against Disbursement Linked Indicators (DLIs)[25], which trigger payment, on a monthly basis. However, as explained during the mission, RAP will still have to report annually on the breakdown of spend on outputs, even though the financial information is currently available on monthly and quarterly basis. This is because comparative information on VfM from external sources is often only available annually or (if the programme has ended) covering the whole programme. RAP could also opt to report quarterly on the VfM indicators and present trend information. However, this is likely to bring more reporting burden.
- **Before being finalised, a revised VfM framework should take account of the extension to RAP 3.** In proposing the indicators, we considered the cost extension that RAP 3 has received, which doubled the programme size to £72m. At the time of writing, the exact cost breakdown of the extension among programme components is not known.
- **The VfM framework should consider qualitative reporting** aspects in addition to the quantitative indicators. This was emphasised by DFID Nepal advisors and the IMC team.
- **We sought to achieve a balance in reporting of the 3 Es, which is essential in VfM analyses.** If some indicators are reporting downwards or upwards trends, this does not automatically mean value is not being delivered. We look at the 3Es overall and the balance among them, and make a judgement, using the evidence available.

3. Sources Used for the VfM Indicators

The following sources were reviewed to inform the development of the framework:

- DFID Guidance on Value for Money, 2010.
- Smart Guide: DFID's Approach to Value for Money, Beckett M., March 2015.
- VfM in DFID 'Poster', December 2015.
- DFID How to Note on Economic Appraisals, 2011.
- DFID Annual Review of RAP 3[26], October 2015.
- Draft proposed Extension Logframe for RAP 3[27].

[25] Using of DLIs is becoming more common practice by DFID, and it is considered a good VfM practice.

[26] Particularly the recommendations on indicators and measures for future reviews.

[27] Draft provided by DFID Nepal.

- Preliminary Scoping Study: Value for Money, MEL, October 2015.
- 'Measuring and Maximising Value for Money in Social Protection Systems', White et al., Nov 2015 update and 2013 version.
- 'Measuring and Maximising Value for Money in Infrastructure Programmes', Adam Smith International, August 2012.
- 'Better Value for Money: An Organising Framework for Management and Measurement of VfM Indicators', Barr and Christie, ITAD, 2014.

4. Proposed Indicators for VfM Analysis and Monitoring

A long list of potential indicators considered is provided at the end of this annex. The potential indicators proposed at this stage are below. They are based on 3Es, and Equity (4th E) is handled under Effectiveness. It should be noted that reporting against some of these indicators will be qualitative in nature, such as timely completion of works. In addition, upon RAP team's suggestion, a set of qualitative questions was integrated under each E.

Economy

Economy analysis reviews the cost per input going into the programme and reviews the procurement procedures to identify if there are opportunities to increase the value for money being achieved in procurement. Value for money is not achieved by the lowest possible price for a given input; it is a function of price, appropriateness, quality, and timeliness of sourcing the input. Given this, the following indicators are deemed appropriate for assessing Economy of RAP 3 on a periodic basis.

- **Average daily consultant fee rate (international and local).**

This is different from programme staff. The consultants, in RAP's case can be short or long term[28]. For both categories, the highest and lowest rates paid should be reported, along with an average calculated. This can be compared to the agreed rates that IMC have in their contract with DFID[29].

We propose that staff remuneration need not be tracked the same way periodically, because these do not change frequently (in fact have been revised upwards once recently). There was a salary benchmarking exercise conducted by the RAP's Human Resources (HR) team in September 2015, which was used as a basis for this. This is also mentioned below, under VfM good practices.

- **Technical assistance (TA) costs as percentage of total spend**.

There is a 14.3% ceiling negotiated for the TA costs category by IMC's contract with DFID, however, the reviews of spending and consultations during the consultations have shown that this is sometimes

[28] In terms of who is Long Term and who is Short Term, DFID Kenya were proposing to use a 4 months cut-off. According to this, a consultant who is engaged longer than 4 months will be considered long term.

[29] If new rates are agreed as part of the cost extension agreement, these should be used for future comparisons.

exceeded. This is because there are also TA costs incurred under other categories of spend[30]. RAP finance team estimated the actual total to be around 22% for the past year. This framework proposes that RAP 3 team keep track of all TA costs and report them in both monetary and share of spend formats.

The percentage of TA costs will make most sense benchmarked to previous years of RAP 3 itself. This is because the definition of what goes under TA or management costs often varies across programmes, and benchmarking externally may not give accurate results.

- **Unit costs for main recurrent programme inputs**.

Economy is concerned with costs of routinely procured items and how a project performs in controlling those costs. A discussion was held on main procurement items with the LRN team and the finance team. We propose that **gabion baskets** and **health and safety equipment** are monitored for this purpose. The costs incurred during the last two times that those items were procured can be looked at.

These costs could, in theory, be compared to the other LRN projects in Nepal, as they are likely procuring the same items. However, there are difficulties in getting this information directly from those projects or DOLIDAR, as experienced recently in the VfM scoping exercise. RAP 3 can provide their own information and track the trends over the years, with narratives provided to explain significant variations, if applicable. In the near future, as DOLIDAR's capacity improves, it is possible that such information exchange will be urged and facilitated by DOLIDAR.

RAP team indicated that in the case of gabion baskets, the price is very much affected by market conditions and transport difficulties, and for health and safety equipment, by the quality.

For qualitative aspects of the framework, the following will be considered under Economy, mainly with regard to procurement methods and choices.

- Were costs reduced? What measures were taken to achieve this?
- What were the benefits from that approach/ action?
- How was financial risk mitigated?
- What alternative options were there?

Efficiency

Efficiency analysis reviews the cost per output generated by the programme. A selection of 'efficiency' metrics were defined based on the available information from the programme teams and some of the key aspects of the programme.

These metrics focus on beneficiary and output numbers rather than outcomes for beneficiaries. However, it is important to note that value for money is not necessarily guaranteed by achieving the lowest possible cost per output. The quality of delivery of outputs is also a concern for efficiency.

[30] For instance, under Project Management and Verification (PMV) or under the implementation budget.

Under this category, a routinely used indicator across programmes is **budget utilisation ratio**. However, this will not work under the monthly DLI-based system, because it is based on payment against results, allocated against monthly targets.

- **Cost per km of road built** and **Cost per km of road maintained.**

These indicators are very commonly used in road infrastructure programmes, and so it is recommended that RAP 3 also track them. The results can be benchmarked with other programmes using similar approaches in Nepal, or as trend information on RAP 3's own performance over programme years. RAP 3's M&E system already collects the length of roads built and maintained (as it is part of the logframe). This needs to be matched with the total cost of output 1 in the current logframe (including an allocation of PMV and TA costs apportioned), which will give the calculation.

Under output 1, RAP 3 collects information on 2.5, 3.5 and 4.5m extensions. For the purposes of this VfM indicator, we propose that this should be calculated for all together, and not separately for each dimension. We should also note that averaging or aggregation may be required in the calculations, due to for example difference among districts.

For external benchmarking when applicable, road surface differences should be considered.

The quality aspects of roads built and maintained were addressed in the LRN Review, one of which was carried out by MEL in late 2015.

Finally it should be noted that the indicators regarding cost per km built/maintained are sometimes classified under cost effectiveness.

RAP tem indicated that: *'Cost of road construction cannot be tracked as it only becomes known once construction is completed and final measurement is made'*. Similarly in maintenance, '*Cost per km maintained' would be difficult to meaningfully track because the degree and nature of maintenance is highly variable*'. The details of these specific comments are available, as written feedback was received from RAP team. MEL proposes to use these indicators because they are regularly used in road infrastructure programmes in Nepal and elsewhere.

- **Cost per beneficiary (SED initiatives).**

This would include both recipients of SED livelihoods assistance (market linkages, training, etc) and beneficiaries of SED-linked investment (household energy, irrigation, trail bridges, etc). Total SED beneficiary numbers, as collected by RAP 3 and the total cost of output 2 (with PMV and TA costs apportioned) would be used for the calculation.

- **Timely completion of road works**.

This can be reported as a percentage of awarded contracts that were completed on time. This information is expected to be available through the recently adopted RAPID financial module.

RAP team argues that there are often delays in majority of contracts due mainly to factors outside of RAP's direct control. MEL proposed that an expected delay period could be defined, and percentage of contracts which are incomplete beyond that could be reported on.

In addition to the indicators, tracked and monetised **efficiency savings** such as simplification in the process of DTMPs should be reported. Also, savings that will be achieved through re-design of SED and re-organising delivery under SED by cutting down management fees paid to some international NGOs can be calculated and reported against.

As above, the following questions will be considered under Efficiency.

- How was quality assured and monitored (with respect to a certain output)?
- Did any innovation take place in the reporting period?
- What processes were in place to identify inefficiencies?

Effectiveness and Cost Effectiveness

We propose using a mixture of quantitative and qualitative methods for analysis at this level. As explained below, two Cost-Benefit studies have already been carried out on RAP 3. Therefore the periodic analysis should focus on cost effectiveness analysis based on the following indicators.

- **Cost per employment day created**.

RAP 3 tracks the number of employment days generated, as part of the logframe. As this is an outcome related target, it should use the cumulative expenditure on the programme to date, to be divided by total number of employment days to date.

- **Cost per female employment day created (equity)**

Using the same calculation method, we use the number of employment days utilised by women, as tracked by RAP 3.

- **Cost per wider beneficiary (roads).**

This is related to the current logframe outcome indicator 1.1, which is also proposed under the draft new logframe. Outcome indicator 1.1 reads: 'Number of people benefiting from new roads and maintenance preserving the length of trafficable DRCN over the baseline'. The beneficiary data is compiled by the MIS team of RAP by adding up the population of each Village Development Committee (VDC) that a RAP road (in the DRCN) passes through. It includes direct beneficiaries (RMGs, user committees, etc.) as well as indirect beneficiaries (usage of the road). The cumulative expenditure at reporting date to be divided by the number of those total beneficiaries will give the result. This indicator is used commonly by similar programmes in Nepal and beyond, and the information required is already being collected, and therefore can easily be reported on.

RAP team indicated that in many of their operational areas, 'least cost per population served' is the main criterium to use, as per DTMP. However in some instances, 'least cost per vehicle' is the main criterium, thus creating differences from one district to another. The proposed framework indicator deals with overall costs and beneficiary figures, and not district-wise beneficiary figures.

- **Wage costs as % of total costs (labour intensity)**

This indicator will be most useful for calculation at the end of the programme, however it can also be reported annually on the total cumulative expenditure. As labour intensity is an objective, wages paid to workers are actually direct benefit transfers. This was also one of the benefit assumptions in the

economic appraisals of the programme. Total wage costs of RAP 3 can be compared to other programmes which use LEP (labour-based, environmental, participatory) in Nepal. For example, LRIP implemented by SDC uses similar modalities and approaches to RAP 3, and is implemented in four relatively poorer districts of Eastern Nepal (which are referred to as 'Karnali of the East').

- **Evidence for synergies between programme components (RAP, KEPTA, MEL)**

This can be reported against by all components, and not only by RAP. It is intended mainly as a qualitative indicator, however it can also be quantitative. Synergies on cross-programme linkages in specific outputs such as design works, thematic and analytical works or guidelines could be explored and reported on.

- **Evidence on improved climate change resilience and adoption of environmentally friendly practices**

This can also be qualitative reporting, with examples that demonstrate improved uptake and use of environmentally friendly practices by staff, workers, contractors and GoN, use of climate resilient design and implementation of physical works.

Also to be considered under Effectiveness are the following aspects:

- Were there any unintended impacts from programme outputs? (Positive and negative)
- How were vulnerable groups considered in planning, implementation and monitoring?
- What measures were taken to promote sustainability?
- How is attribution addressed by the programme in reporting of outcomes?

Cost Benefit Analyses (CBAs):

Two Cost Benefit Analyses (CBAs) were produced to investigate potential benefits from investing in RAP 3. The first one was in 2013 at programme design, and the latter for the cost extension, in 2015. They both found positive results, using similar assumptions, which indicated that RAP 3 provided good value for money compared to other delivery options[31]. To give an example on this, a Benefit to Cost Ratio (BCR) of 4.47 means that for every £ invested in RAP 3, a benefit of £4.47 was expected to be generated in return. It was agreed with DFID Nepal that there is no need to conduct another CBA at this stage, for the VfM analysis.

The following results were found in the CBAs[32]. They are the headline results from the central scenarios in each analysis. The 2013 analysis used 3.5% as the discount rate, and 2015 used both 3.5% and 12% scenarios.

Table 1: Results of Economic Appraisals on RAP 3

[31] As explained in the earlier note for the VfM mission in late 2015, quantified and monetised results (often expressed in Internal Rate of Return (IRR), Net present value (NPV) or Benefit to Cost Ratios (BCR) of a CBA provide sound proxies for value for money.

[32] Summary of Economic Appraisals of RAP 3 2013 and 2015, provided by DFID Nepal.

Category	2013 Analysis	2015 Analysis
Total programme costs (£ m)	36	72.5
Net Present Value (NPV) (£ m) at 3.5% discount rate	16.26	222.19
NPV at 12% discount rate	9.98	177.3
Benefit to Cost Ratio (BCR) at 3.5% discount rate	1.49	n/a
BCR at 12% discount rate	n/a	4.47
Internal Rate of Return (IRR)	52%	n/a

Programme reviews provide an opportunity to re-visit the assumptions of the analysis, to determine whether the programme is on track to deliver value for money, as estimated originally. Therefore the following studies can be conducted, during cost extension implementation, to verify the assumptions used in CBAs for RAP 3. The scope and timing of the studies can be agreed on by DFID and RAP, in collaboration with MEL. The assumptions that were used in the above analyses were regarding:

- maintenance of the roads allowing them to stay open for additional days throughout the year (or reducing the number of days that roads are closed);
- reduction in transport costs by 50% thanks to maintained roads;
- additional income generation from SED and direct wage labour benefits.

On the first point of days of roads closure, the recent LRN Review also recommended this be a logframe indicator, and RAP programme management has agreed to monitor this. This will allow tracking of the indicator closely which will help with verification of the earlier assumption. Also, a controlled study on transport costs on selected road stretches (that RAP have worked on) can be designed which will aim to verify the design assumptions on reductions on transport costs. For example, a study covering three roads that were built under the SDC-supported Districts Road Support Programme (DRSP) Phase IV (2010-2014) found that benefits arising from cost and time reductions (thanks to road access) gave an IRR of 17-29%[33] on the investment, which signified good value for money. Finally, wage labour benefits can be derived from RAP data, and SED income generation benefits can be verified from the MEL household survey (mid-line) scheduled for May 2016.

It is recommended that the feasibility and scope of the studies be looked into, through discussions with DFID and MEL, in the coming months.

5. VfM Good Practices at RAP 3

[33] DRSP Phase IV, End of Phase Report, August 2014, p.3.

The following examples are provided, along with which aspect of VfM they relate to (in brackets), in order to demonstrate what constitutes good practices from a VfM standpoint. In periodic reporting, these can be addressed under the qualitative reporting of 3Es.

- Gabion baskets purchase decision-making: The decision by RAP 3 to buy pre-fabricated gabion baskets (as opposed to hand-made ones) was made following a VfM analysis of both options. In other words, costs and benefits of both options were examined and documented in detail. This was an excellent example of a VfM lens used in decision making (*efficiency)*.
- The Graduate Engineer Scheme. This helps RAP 3 source fresh talent, and builds local capacity and skills at the same time (*effectiveness*).
- Putting a 'whistle blower' mechanism in place and operationalizing a programme-specific anti-corruption strategy (*economy*).
- Benchmarking of salaries against market conditions. A recent salary benchmarking exercise covering various positions of engineers was conducted. Feedback was received from relevant organisations, and adjustment to salaries was proposed on this basis[34] (*economy*).
- Operationalizing an internal audit function and team (*economy/ efficiency*).

6. Responsibilities for preparing the VfM Information

An initial analysis will be provided by MEL, based on the agreed VfM framework. From then on, RAP 3 should report on the agreed indicators and compile good practices for Annual Reviews and the Project Completion Review. For larger programmes, the current practice is to engage a VfM lead/ Programme Economist tasked with compiling VfM data and presenting it in periodic reports and reviews. In the absence of this (such as in RAP 3), the M&E and finance leads, in collaboration with Team Leader/ Programme Director should be involved in gathering the VfM related information, as VfM is a function which brings finance, M&E and management aspects together. The final decision of who should be involved or have the chief responsibility will be decided by RAP 3 themselves.

7. The Way Forward:

Agreement will be sought on this draft framework from RAP and DFID Nepal which will form the basis of VfM analyses.

The MEL component will conduct a preliminary analysis based on available data (quantitative and qualitative). This will also lead towards a finalisation of a VFM reporting template for RAP to take forward. MEL will closely work with RAP to develop and finalise the VFM reporting template in this phase.

In summary, the framework will be comprised of the following:

Indicators and qualitative questions:

Economy

1. Average daily consultant fee rate (international and local).
2. Technical assistance (TA) costs as percentage of total spend.

[34] The evidence for this exercise was provided to the VfM Consultant and to DFID Nepal.

3. Unit costs for main recurrent programme inputs.
4. Qualitative questions.

Were costs reduced? What measures were taken to achieve this?
What were the benefits from that approach/ action?
How was financial risk mitigated?
What alternative options were there?

Efficiency

5. Cost per km of road built/ Cost per km of road maintained.
6. Cost per beneficiary (SED initiatives).
7. Timely completion of road works (qualitative).
8. Qualitative questions.

How was quality assured and monitored (with respect to a certain output)?
Did any innovation take place in the reporting period?
What processes were in place to identify inefficiencies?

Effectiveness and Cost-Effectiveness (**including Equity**):

9. Cost per employment day created.
10. Cost per (female) employment day created.
11. Cost per wider beneficiary (roads).
12. Wage costs as % of total costs (labour intensity).
13. Evidence for synergies between programme components (RAP, KEPTA, MEL).
14. Evidence on improved climate change resilience and adoption of environmentally friendly practices.
15. More qualitative questions including:

Were there any unintended impacts from programme outputs? (Positive and negative)
How were vulnerable groups considered in planning, implementation and monitoring?
What measures were taken to promote sustainability?
How is attribution addressed by the programme in reporting of outcomes?

Cost savings tracked:

Narratives on how they were achieved and how much they add up to.

VfM good practices observed (during the reporting period):

Examples provided above.

In addition, **studies regarding verification of economic analysis assumptions** are recommended. These do not have to be periodic and can be one-off. It is understood that an indicator that monitors the number of days that roads are closed will soon be adopted, and reporting on this is expected to be periodic.

A long list of potential indicators considered for the framework is below. They are grouped on 3Es framework, with Equity handled under Effectiveness.

Economy

- Average daily consultant fee rate
- Management costs as percentage of total costs
- Fees or technical assistance costs as percentage of total spend
- Unit costs for main project inputs.
- Technical Assistance by IMC as % of total costs.
- The administrative fees for the management of SED (excluding IMC's costs) as a % of investment.
- Consultants' fees benchmarking.
- TA costs per year.
- Cost of oversight / accountability across RAP and KEPTA.

Efficiency

- Budget utilisation ratio; expenditure against forecast ratio
- Cost per direct beneficiary (SED, road works)
- Cost per wider beneficiary (roads)
- Admin cost per overall beneficiary (direct plus wider)
- Cost per km of road built
- Cost per km of road maintained.
- % of payments linked to outputs and outcomes.
- Timely completion of works –re DLIs.
- Unit costs (road maintenance, labour wage, SED activities, KEPTA, and MEL outputs
- Appropriateness of number of workers mobilised.

Effectiveness and Cost-Effectiveness

- Cost per employment day created.
- Cost per female employment day created.
- Cost per £ of additional income generated.
- Cost per £ of public/ private funding leveraged.
- Evidence for generating broader political support for social protection.
- Evidence for strengthened LRN asset management by DOLIDAR and policy harmonization (attributable to RAP efforts).
- Net wage gain (wage paid, minus the opportunity cost of the beneficiary).
- Labour costs as % of total costs (labour intensity).
- LRN-capacity to add GoN fund.
- Total beneficiaries/£1
- Use of MEL for performance standard.
- Women's participation in job-days.
- Cost per green job created.
- Cost per household accessed.
- Cost per business accessed.
- Cost per supplementary infrastructure (e.g. bridge, footpath).