



Nepal Health  
Sector Support  
Programme

# Nepal Health Sector Support Programme

**Assessing the Value for Money of Technical  
Assistance provided by NHSSP to the Nepal Health  
Sector**

**Three Case Studies**

**October 2012**

**Rachel Phillipson**

**Sumanta Neupane**

# Acknowledgements

Sincere thanks are extended to all those who kindly gave time to contribute towards this review by taking part in interviews and providing necessary data.

# Executive Summary

The Nepal Health Sector Support Programme (NHSSP) is a Department for International Development (DFID) funded programme of technical assistance (TA) to the Nepal Ministry of Health and Population (MoHP) and Department of Health Services (DoHS). It began in September 2010 and is managed by a consortium led by Options Consultancy Services Ltd (Options). Its purpose is to support a strengthened health system to increase access to sustainable, quality, essential health care services (EHCS) for women, the poor, and excluded populations.

At inception, Options undertook to gather evidence of efficiencies and cost savings emerging in the programme. In August 2012, four programme areas were selected for a value for money (VfM) assessment looking not just at whether NHSSP is maximising VfM in how it delivers TA, but also whether the TA itself is improving VfM in the use of the Nepal health budget. Of these four case studies, three are presented in this report. The final case study will be presented in 2013. The three case studies presented here are:

Case Study 1: Electronic annual work-planning and budgeting (e-AWPB);

Case Study 2: Electronic bidding (E-bidding) for health facility contracts;

Case Study 3: Integrated designs for health facility construction.

Data were collected and interviews and field visits conducted in Nepal during July and August 2012. DFID's Four Es (economy, efficiency, effectiveness and equity) value for money framework was used for the assessment. Since the programme is just over 18 months into implementation, the assessments focused on evidence of the first two Es: economy and efficiency. Sound evidence of effectiveness (in terms of contribution to wider health system improvements and health outcomes) is still to emerge. Measurement of effectiveness will become possible when the programmes are more fully implemented and the impacts have had time to feed through the system.

On the basis of the data currently available and using only identified costs and benefits, we conclude that the TA in all three case studies is demonstrating value for money. Identified expenditure by NHSSP on e-AWPB is £60,000. Measurable results to date indicate that the implementation of e-AWPB has halved the time spent by staff on the planning cycle. The present value (PV)<sup>1</sup> of these savings, if sustained over the next 15 years, amounts to £113,700: double the cost of introducing the system and generating an overall rate of return of 13.5%. Users believe that there are additional impacts on accuracy, avoidance of duplication and improved management decisions but these have not been measured.

---

<sup>1</sup> Using a discount rate of 3.5%. The rate of return is the breakeven point at which the net present value of the project falls to zero.

The introduction of e-bidding in 2011/12 has cost £54,000 to date and has reduced the average price of new contracts by 12%. This is in line with international experience. It has saved MoHP NPR 456 million (£3.4 million) in the first year alone. If annual savings were to remain at the same real level for 15 years, their present value (PV) would amount to £32.7 million.<sup>2</sup> Under these assumptions, the estimated rate of return would be 560%.<sup>3</sup>

The introduction of integrated designs for new health facilities since 2010/11 has cost £30,500 in long-term technical assistance and, where used, has reduced the average construction cost per square metre by an estimated 16%. Applied to all new build in 2011/12, this could amount to a saving to MOHP's construction budget of NPR 400 million (£2.97 million). If annual savings were to remain at the same real level for 15 years, their present value (PV)<sup>4</sup> would amount to £26.5 million. Under these assumptions, the estimated rate of return on the investment would be 1,300%. Land costs are not included but the land area used in our examples was reduced by one-third.

E-bidding and integrated designs were introduced around the same time and it is likely that they have jointly contributed to the savings in construction costs we found. However, this does not alter our overall conclusion: the £3 million saving generated in the first year alone is high enough to exceed the combined £85,000 cost of the two programmes. Combining the costs of the two programmes and averaging the savings generated would still yield an estimated rate of return of 900%.

Cost data are based on a range of different sources. NHSSP TA costs are recorded on an activity basis by NHSSP for planning and monitoring purposes. Since all the case study programmes were begun under previous phases of DFID funded support we have made efforts to locate the records of relevant expenditures under these previous programmes. These have often been estimates recalled by those involved at the time, as have Government of Nepal (GoN) costs, which are not usually recorded on a programme basis. A clear picture of costs and results in the future will facilitate a more complete and robust view of VfM.

One of the reasons for the lack of consolidated cost information may be that sector-wide support implies wide-ranging, long-term, capacity development in activities that are continuously on-going. This presents a problem for a VfM assessment which requires costs and benefits to be isolated and attributed. In order to more easily access data that would facilitate a VfM assessment, it would be beneficial for a more projectised approach to be developed under the umbrella of the programme. For example, for specifically defined areas (that would act as VfM 'tracer' elements of the programme) a VfM framework could be established. This would include an up-front definition of the activity specific objectives, budgets (both TA and GoN), timeline and targets of each key component of support.

As a VfM assessment undertaken by economists, the case studies have focussed on what can be measured and quantified in terms of costs and monetisable benefits. This is not a substitute for a technically expert review. Indeed, they should be undertaken together: a truly robust VfM

---

<sup>2</sup> Using a discount rate of 3.5% and assuming annual recurrent costs of 10%.

<sup>3</sup> The estimates of internal rates of return should be regarded and used with caution, since in each case study not all costs or benefits have been identified.

<sup>4</sup> Using a discount rate of 3.5%.

assessment requires specialist technical knowledge in order to best integrate financial and economic information into judgements about feasible options and outcomes.

DFID's Four Es framework is based on an audit approach and is most useful for reviewing the *implementation process* of an intervention that has already been selected and is under way. It is less helpful in guiding the selection and design of an intervention from scratch. Identifying and designing interventions in the health sector is a multi-staged *decision process*. Ensuring VfM is captured in this decision process requires a different starting point and a somewhat different framework. Such a framework is outlined at Annex 2. DFID and NHSSP should consider how this could be developed and used to complement the 4Es framework to introduce the concept of value for money into MoHP's decision-making more broadly.

# Contents

<b>Acknowledgements</b> .....	<b>1</b>
<b>Executive Summary</b> .....	<b>2</b>
<b>List of Tables</b> .....	<b>6</b>
<b>Acronyms and Abbreviations</b> .....	<b>7</b>
<b>1. Introduction</b> .....	<b>8</b>
<b>2. Assessing Value for Money of Technical Assistance</b> .....	<b>10</b>
2.1 A VfM Framework: the Four E's (Economy, Efficiency, Effectiveness and Equity).....	10
2.2 The Case Studies and Data Limitations .....	11
2.3 A VfM Framework for the Decision Process: the Five Efficiencies .....	12
<b>3. Case Study One: Electronic Work Plan and Budget (e-AWPB)</b> .....	<b>13</b>
3.1 Background to e-AWPB .....	13
3.2 Case Study Methodology.....	14
3.3 Costs .....	15
3.4 Results .....	16
3.5 Value for Money Assessment.....	16
3.6 Conclusions and Recommendations .....	18
<b>4. Case Study Two: e-bidding for Health Facility Construction Contracts</b> .....	<b>19</b>
4.1 Background to e-bidding .....	19
4.2 Case Study Methodology.....	20
4.3 Costs .....	21
4.4 Results .....	22
4.5 Value for Money Assessment .....	22
4.6 Conclusions and Recommendations .....	23
<b>5. Case Study 3: Integrated designs for health facility construction</b> .....	<b>25</b>
5.1 Background to integrated designs.....	25
5.2 Case Study Methodology .....	26
5.3 Costs .....	27
5.4 Results .....	27
5.5 Value for Money Assessment.....	28
5.6 Conclusions and Recommendations .....	29
<b>6. Conclusions and Recommendations</b> .....	<b>30</b>
<b>Annex 1: E-Planning in the Private Sector</b> .....	<b>32</b>
<b>Annex 2: The Five Efficiencies</b> .....	<b>34</b>
<b>Annex 3: Terms of Reference</b> .....	<b>39</b>
<b>Annex 4: People Consulted</b> .....	<b>43</b>
<b>Annex 5: References</b> .....	<b>45</b>

# List of Tables

Table 1: Total NHSSP Technical Assistance Costs for e-AWPB since August 2010 (£) .....	15
Table 2. Estimated Government of Nepal Costs for e-AWPB by Financial Year (NPR '000s) .....	15
Table 3: Total NHSSP, SSMP and GoN Technical Assistance Costs since August 2010 (£) .....	21
Table 4: Selected Health Facility Estimated and Actual Contract Prices 2004/05 - 2011/12.....	22
Table 5: Location of health facilities selected for Case Study .....	26
Table 6: Quarterly Price Index of Construction Materials and Labour up to 1st Quarter of 2011/12 .....	27
Table 7: Total NHSSP Technical Assistance Costs since August 2010 (£ sterling) .....	27
Table 8: Total and square metre costs of six integrated and non-integrated health facilities in Nepal. ....	28

# Acronyms and Abbreviations

BEOC	Basic emergency obstetric care
BoD	Burden of disease
BoQ	Bills of quantity
CEOC	Comprehensive emergency obstetric care
DFID	Department for International Development
DoHS	Department of Health Services
DUDBC	Department of Urban Development and Buildings Construction
E-AWPB	Electronic annual work plan and budget
E-Bidding	Electronic bidding
EHCS	Essential health care services
ERP	Enterprise resource planning
GoN	Government of Nepal
HP	Health Post
MoHP	Ministry of Health and Population
NHSP-2	National Health Sector Programme – Phase 2
NHSSP	Nepal Health Sector Support Programme
NPR	Nepali Rupee
NPV	Net present value
PEFA	Public Expenditure and Financial Accountability
PHCC	Primary Health Care Centre
PV	Present value
RTI	Research Triangle International
SSMP	Support to Safe Motherhood Programme
TA	Technical assistance
TABUCS	Transactional Accounting and Budgeting Control System
VfM	Value for Money

# 1. Introduction

The Nepal Health Sector Support Programme (NHSSP) is a Department for International Development (DFID) funded programme of technical assistance (TA) to the Nepal Ministry of Health and Population (MoHP) and Department of Health Services (DoHS). Along with a pooled health sector financial aid fund of US\$220m from DFID<sup>5</sup>, the GAVI Alliance, the Australian Government Overseas Aid Program and the World Bank, its aim is to support delivery of the second phase of the Nepal National Health Sector Programme (NHSP-2) over the five-year period 2010-15. The first phase, NHSP-1, was the first health sector-wide approach in Nepal. It began in July 2004 and ended in July 2010, achieving significant improvements in basic health outcomes. NHSP-2 continues many of the programmes begun under NHSP-1. Its aim is to improve the utilisation of essential health care and other services, especially by women, the poor and excluded.

NHSSP began with an inception phase in September 2010 during which capacity assessments were undertaken. Full implementation began in January 2011. There are seven outputs for NHSSP:

- DoHS / regions have capacity to deliver quality and integrated essential health care services (EHCS), especially to women, the poor and under-served, with a focus on maternal health services (specifically, improving the functionality of comprehensive emergency obstetric and neonatal care services);
- MoHP has capacity to develop and implement an effective human resources for health strategy for the health sector;
- MoHP and DoHS have systems, structures and capacity to implement the gender equality and social inclusion strategy;
- MoHP and DoHS have capacity to develop and implement a transparent and sustainable supply and demand-side financing framework;
- MoHP and DoHS have capacity to strengthen and effectively use an information system to support planning and delivery of quality EHCS;

---

<sup>5</sup> DFID's contribution is £38 million (US\$60 million) of financial assistance, excluding technical assistance costs.

- MoHP and Ministry of Planning and Public Works have capacity to develop and implement procurement in accordance with the procurement arrangements for the health sector;
- Policy Planning and International Cooperation Department has a clearly defined and functional role as the focal point of the planning and policy process for the whole health sector.

The NHSSP Inception Report<sup>6</sup> undertook to “gather case studies on value for money, cost savings and cost-effectiveness”. In July 2012, four programme case studies were selected and independent reviewers appointed to undertake a value for money (VfM) assessment. Data were collected and interviews and field visits were conducted in Nepal during July and August 2012 and will continue until 2013. Three case studies are presented in this report, a fourth will be presented in 2013.

---

<sup>6</sup> January 2011

# 2. Assessing Value for Money of Technical Assistance

## 2.1 A VfM Framework: the Four E's (Economy, Efficiency, Effectiveness and Equity)

DFID and other external development partners are putting increasing emphasis on achieving and demonstrating VfM in aid spending. The aim, according to DFID, is *“to develop a better understanding - and better articulation - of costs and results so that we can make more informed, evidence-based choices...and maximize the impact of each pound spent to improve poor people's lives.”*<sup>7</sup>

A common definition of VfM is ‘the optimal use of resources to achieve intended outcomes’<sup>8</sup>. This definition highlights how demonstrating VfM involves being clear about both costs *and* results as well as the economic implications of those results. Being clear about costs entails knowing what costs are involved; knowing what is driving them and knowing how they compare with other similar examples. Being clear about results is, in principle, more challenging. Results in development arise through an often long and complex linked series of processes. They are also often not evident until well into the future of a programme.

The solution is to be clear about *how results are expected to emerge*: how aid inputs are linked to programme outputs; how programme outputs are linked (in this case) to health systems outcomes and how these result in improved health outcomes. This is the familiar DFID ‘results chain’ which also forms the conceptual framework for assessing VfM in something as difficult as development; by breaking the results chain down in this way, it becomes easier to attribute costs and results to each ‘link’. This is the basis for DFID’s ‘Four Es VfM framework (see box 1).

### Box 1: DFID's Four Es for Value for Money

- 1. Economy:** Getting the best value inputs. This involves good procurement practices.
- 2. Efficiency:** Spending the money on the right thing (‘allocative efficiency’) and spending the money right (‘technical efficiency’) This involves good planning and management processes.
- 3. Effectiveness:** Knowing that the desired final outcome is achieved. This involves good evaluation.
- 4. Equity:** Ensuring the benefits are distributed fairly. This involves good governance in delivery and good impact assessments.

<sup>7</sup> DFID's Approach to Value For Money. Department for International Development, July 2011

<sup>8</sup> UK National Audit Office, quoted in DFID's Approach to Value For Money. Department for International Development, July 2011

There is a chronology to the results chain and the Four Es, so that evidence of economy being achieved can be identified first when inputs are procured. Evidence of efficiency emerges somewhat later, when implementation is under way and is affecting processes and intermediate outputs. Effectiveness tends to be identifiable some years down the line. At this stage of NHSSP, just over 18 months into implementation, a VfM assessment can usually only expect to be able to find evidence of the first two Es: economy and efficiency.

## 2.2 The Case Studies and Data Limitations

For a valid VfM assessment at this stage of NHSSP, using the Four Es framework, the following criteria had to be met:

- the programme must have been running long enough to have begun generating evidence on any of the four Es;
- it must be possible to plausibly and as exclusively as possible link NHSSP and other known inputs to these results;
- it must be possible to isolate all main costs.

The initial suggestions for case studies in the terms of reference (see Annex 3) did not meet these criteria: neither the Social Audit nor the One-Stop Crisis Management Centres (OCMCs) originally proposed have been in implementation long enough, while the Safe Motherhood programme is in fact a series of sub-programmes with challenging data collection and attribution issues which could not be tackled with the time and resources available. We therefore spent some time identifying alternatives. They are:

- (i) Electronic bidding (E-bidding) for health facility contracts;
- (ii) Electronic annual work-planning and budgeting (e-AWPB);
- (iii) Integrated designs for health facility construction.

These three case studies are completed and the results presented in this report. A fourth case study, of technical assistance to improve child vaccination rates in districts with low coverage will be presented in 2013.

NHSSP TA costs were provided by Options, which records them on an activity basis for planning and monitoring purposes. For most of the case studies, activities had begun under previous DFID-funded health programmes. We therefore also traced these costs where possible, relying on advisors' estimates in some instances for these and Government of Nepal (GoN) costs, which are not recorded on a programme basis. Both DFID and its programmes could do more to record (and keep) cost information by thematic area.

Good and comprehensive data were readily available for contract prices before and after e-bidding, enabling a baseline to be clearly established for this case study. Construction cost information for the integrated designs is kept at the district level and we were able to collate the data for a small sample. However, for e-AWPB, baseline information was less clearly recorded. Where possible, results for impacts on staff time or other administrative outcomes were constructed using mostly qualitative information from interviews with advisors and MoHP staff.

For future VfM studies, it will be important to ensure that good baseline data are available from the outset.

### **2.3 A VfM Framework for the Decision Process: the Five Efficiencies**

Results are presented using DFID's Four Es VfM framework. However, it is important to note there are limitations to the Four Es framework, particularly for the health sector. The Four Es are based on an audit approach, designed to be applicable in any sector. They are useful for breaking down and reviewing a project implementation plan or a project that is *already underway*. They are less helpful for another key process necessary for achieving value for money: ensuring that limited resources are allocated to the 'right' health issues and the 'right' interventions are selected in *the first instance*. This is a multi-staged decision process which the 4Es framework does not fully reflect: a fact which hinders its adoption by health institutions less familiar with the notion of value for money than DFID. A possible additional framework (the 'Five Efficiencies') for guidance at the planning stage of a new health programme is outlined in Annex 2. It is recommended that DFID and NHSSP consider adopting and developing this framework alongside the 4 Es as part of its longer term aim of introducing development partners in the health sector to VFM processes.

# 3. Case Study One: Electronic Work Plan and Budget (e-AWPB)

The e-AWPB workstream of NHSSP is part of a programme to introduce IT-based financial management systems for budget preparation into the MoHP and DoHS; and to develop financial management expertise in MoHP, both centrally and in the regions.<sup>9</sup>

The e-AWPB is the first phase, aiming to introduce IT into the annual planning ('budget formulation') cycle at the centre. A second phase - to computerize transactions and on-going budget management ('budget execution') throughout all health sector spending units<sup>10</sup> - is just beginning (July 2012).

Activities and inputs under NHSSP since August 2010 have been:

- Adaptation of existing software to introduce enhanced features (e.g. automated coding and calculations) and reporting capability;
- Access via the MoHP website enabled;
- Training of about 50 MoHP planning staff in use of the improved system.

## 3.1 Background to e-AWPB

Owing to centralisation of financial management at the Ministry of Finance, there has always been limited financial management capacity in the Planning and Accounts sections of MoHP and DoHS<sup>11</sup>. Furthermore, control and monitoring of spending is limited by the absence of a single centralized system. Although computers are available in most MoHP/DoHS offices, there is no common accounting package, with the result that accountants use individual personal systems to record transactions and prepare financial reports. Most calculations and preparation work is done manually. With over 360 individual spending units<sup>12</sup> and a total annual budget of NPR 20 billion/£150 million<sup>13</sup>, the scope for error, abuse and loss of spending control is significant.

---

<sup>9</sup> An equivalent World Bank-led programme of support to public financial management is under way at the Ministry of Finance.

<sup>10</sup> Known as TABUCS –Transactional Accounting and Budget Control System.

<sup>11</sup> Financial management staff members are part of the Financial Comptroller General's Office.

<sup>12</sup> MoHP estimate. A spending unit is any part of the health system which holds a budget and is responsible for expenditure.

<sup>13</sup> Nepal Health Budget Analysis 2011-12. NHSSP. NPR 25 billion minus the 18% estimated in the Budget Analysis for salaries, which do not go through spending units' budgets.

The annual work plan and budget cycle begins each March, running through the next four months to the start of the financial year in July. For the MoHP, this involves reconciling the proposed budgets and workplans of the 360 spending units with the resource envelope set by the Ministry of Finance and National Planning Commission. Almost all are still prepared manually and must be checked and consolidated first by twelve parent Divisions (e.g. Family Planning Division or Logistics Management Division) and then finally by the Planning Section of MoHP. It is a time consuming process, again with considerable potential for error. Capability to do this final budget combination stage electronically is only part of the overall planning process but it represents an important first step.<sup>14</sup>

### 3.2 Case Study Methodology

The majority of the benefits of an improved public finance management system arises when it encompasses the many actual transactions ('budget execution') and extends to spending units in the districts. This has not yet begun. The case study therefore looks at the first phase/workplan cycle only. The scope of this first phase is much more limited – in this case, to the main central MoHP/DoHS institutions and their small pool of current users - but efficiency improvements (timeliness, accuracy, avoidance of duplication, staff time savings) can in principle be identified. Unfortunately, however, no baseline exists against which to measure any changes and retrospectively constructing one was not possible in the time available.<sup>15</sup>

We therefore measure **efficiency** in terms of a single indicator: reported staff time savings. We measure **economy** in relation to a private sector benchmark: the cost of the system relative to the size of the budget which it is intended to manage.

We do not attempt to measure **effectiveness**. The proposed NHSSP outcome measure for the combined e-AWPB and TABUCS programme of 'improved financial management directly impacting on the absorption rate of committed funds'<sup>16</sup> could in principle be used here. We could also look for evidence that the improved AWPB process has led to budget reallocations – away from activities known to respond to a low burden of disease (BoD) or well-funded by others towards higher BoD or less well-funded areas. However, the new system has only become fully operational in 2012 and it is too early to confidently detect its impact on either on budget allocations or the budget absorption rate. Annual budgets and end-of-year budget reports from now on will provide an accumulating evidence base with which to make such an assessment. It is recommended that NHSSP does this before the end of the programme.

---

<sup>14</sup> NHSSP Inception Report; Options January 2011

<sup>15</sup> Indicators of relative efficiency improvements and effectiveness are in the process of being defined for the remainder of the e-AWPB programme.

<sup>16</sup> NHSSP Inception Report, Options January 2011

### 3.3 Costs

We attempted to identify both GoN and TA costs. Costs were available from NHSSP accounts but GoN costs had to be estimated by MoHP and NHSSP staff. There was no single consolidated source of actual or estimated costs for the programme.

**Table 1:** Total NHSSP Technical Assistance Costs for e-AWPB since August 2010 (£)

Input	Budget	Actual
Long term TA	1,100	5,050
Short term TA	28,264	8,431
Activities	0	0
Overheads	16,901	16,030
<b>Total</b>	<b>46,265</b>	<b>29,511</b>

Source: NHSSP Programme Manager<sup>17</sup>

**Table 2. Estimated Government of Nepal Costs for e-AWPB by Financial Year (NPR '000s)**

Input	2010/11	2011/12	Total
Software	1,000	700	1,700
Local consultant	250	300	550
Training	300	350	650
Workshop	0	350	350
Production of manual	0	600	600
MoHP staff	50	50	100
<b>Total</b>	<b>1,600</b>	<b>2,350</b>	<b>3,950</b>

Source: NHSSP Health Financing Advisor's estimates

NPR 4 million is equivalent to £30,000, so total identified spend to date is approximately £30,000 + £30,000 = £60,000.

We do not have any estimates of operation and maintenance costs, e.g. of web hosting or annual maintenance, upgrading or replacement, nor of any attributable MoHP overheads.

When NHSSP began, a 'simple, interactive database in Access 2003'<sup>18</sup> ... designed to generate analytical tables in a systematic way' had already been 'partly developed and implemented' in MoHP by Research Triangle Institute (RTI) under the previous DFID funded Health Sector Reform Support Programme dating from 2006. This support is reported to have been 'substantial',<sup>19</sup> and

<sup>17</sup> Budget estimate on overheads are based on total budgeted overheads for the entire project prorata'd for the current project timeframe; for actuals the overheads are calculated on total actual overheads to date, divided by 7 thematic areas and 6 broad areas of the health financing work (of which e-AWPB forms a part). Advisor costs have been calculated by Oxford Policy Management; activity and TA costs are actuals.

<sup>18</sup> Microsoft's database application for desktops.

<sup>19</sup> Transactional Accounting and Budget Control System (TABUCS): A Concept Note. NHSSP July 2011.

(based on advice from RTI)<sup>20</sup> is estimated to have cost approximately £25,000. There is a difference in opinion whether there has been substantial enough revision and renewal from the original design to be able to disregard this previous investment. To accommodate this variance, we explore the implications for VfM of including the earlier phase of spending in the VfM assessment section below.

### 3.4 Results

The original RTI software is reported to have been in partial use since 2010 at the Finance and Planning sections of the MoHP and some centres and divisions at DoHS. We were told that by 2012, however, only two out of the twelve divisions of MoHP/DoHS were using it<sup>21</sup>. This year, all twelve divisions are using the revamped system for the first time. As of July 2012, there are 55 registered users in 34 central health institutions (MoHP, DoHS, divisions, tuberculosis centres, hospitals and the Nepal Public Health Laboratory).

There has been no systematic recording of the impact of the new system on time saved but we were told by a sample of users in DoHS that they estimated that the new system had halved the amount of time they now spend on the planning cycle.

### 3.5 Value for Money Assessment

Total identified costs (excluding the earlier RTI phase) are £60,000. With 55 registered users, costs per user to date are £60,000/55 = £1,091.<sup>22</sup> The MoHP planning staff we interviewed estimated that they would normally have spent two of the four months of the planning period on planning work, and that this has now halved. This one month saved out of every twelve is an 8% efficiency improvement overall.

Assuming the 55<sup>23</sup> registered users experience the same time saving and that they have an average monthly salary of NPR 30,000<sup>24</sup> (£200), the monetary value of the total time saved in MoHP and DOHS is £11,000 every year.

To test whether the £60,000 spent to date is good VfM, we can compare the cost with the value of the time saved *per user*. We can also compare the total cost with the *total value of resources managed*.

---

<sup>20</sup> RTI estimates (in personal communications) local direct costs of NPR2.4 million: NPR 750,000 for design and project management; NPR 950,000 for programming; NPR 700,000 for training and manual printing. For consistency, as a rational estimate we have added 40% for RTI overheads to this figure.

<sup>21</sup> MoHP (personal communication).

<sup>22</sup> We were told that the system is used most by the Divisions who do the main budget compilation work. An alternative figure would therefore be costs to date *per active and most important user group* (the 12 divisions) = £60,000/12 = £5,000. This is not a standard unit, however, and is not useful for comparison so we continue to use the *per user* statistic.

<sup>23</sup> Although two out of the twelve divisions were reported to be using the previous system, we have assumed they have benefitted equally from the improvements.

<sup>24</sup> Based on an under-secretary's salary of Rs 26,000 per month plus allowances of approx. NPR 4,000 per month. See 'Commission recommends hefty civil service pay hike'. July 11, 2011 at [http://archives.myrepublica.com/portal/index.php?action=news\\_details&news\\_id=7309](http://archives.myrepublica.com/portal/index.php?action=news_details&news_id=7309)

We have estimated that the saving per user is one month's salary per year. Assuming that to be £200 per year (salary only) and the cost per user to be £1,000, this implies a payback period<sup>25</sup> of 5 years. It seems likely that the life of the new system will be at least 5 years<sup>26</sup>, therefore on this minimum measure, the investment appears to be within the bounds of VfM. Using these assumptions over 15 years, the programme would generate rate of return of 13.5%. If we were to include other payroll costs (such as pension or sick pay provisions) in the estimated saving and assumed this to amount to another 50% of salary, savings per user would be £300 per year, the payback period would fall to just over 3 years and the rate of return would rise to 22%.

We have calculated the identified investment cost under NHSSP to be £60,000: 0.04% of the total value of the 2011/12 MoHP budget of £150 million. Private sector experience in introducing similar 'enterprise resource planning' (ERP) systems suggests that large companies (with revenues of \$1 billion or more) can expect a total cost equal to about 0.5% of total revenues<sup>27</sup>. ERP costs increase with the financial size of the company, so we should expect the appropriate benchmark for e-AWPB to be lower than 0.5%. Even if we reduce it by a factor of ten, however, the VfM comparison looks favourable.

If we were to include the £25,000 of the earlier (RTI) phase of development of e-AWPB, the total identified costs would rise by over 40% to £85,000. The cost per user would rise to £1,545 and the payback period would rise to 8 years. The increased cost would be equal to 0.05% of the annual resources managed. These results could nevertheless still be regarded as within the bounds of VfM.

We have noted that other, equally important, impacts – timeliness, accuracy, improved management decisions – have not been quantified or monetised. The literature on ERP systems finds that these do not tend to be quantified in the private sector either<sup>28</sup>. Instead, they are usually assessed qualitatively, through surveys of users, and tracked over time. The Public Expenditure and Financial Accountability (PEFA) monitoring approach which is being explored as the basis for monitoring the follow-on to e-AWPB (i.e. the transactional accounting budgeting control system (TABUCS)) is essentially a qualitative assessment, benchmarked and systematized so as to measure progress from a baseline.

---

<sup>25</sup> The time it takes to recover the cost of the initial investment.

<sup>26</sup> The life of an Enterprise Resource Planning system in a small business may be 5-10 years; for larger organisations they are likely, with modifications, to last considerably longer.

<sup>27</sup> Quoted in *Financial Management Information Systems: 25 Years of World Bank Experience on What Works and What Doesn't*. World Bank, 2011. See Annex.

<sup>28</sup> 'The literature suggests that management accountants will be less likely to do routine tasks and more likely to be involved with analysis. Similarly, prior studies suggest that the output of management accountants will likely be more precise, more accurate and produced more frequently. However, there is no conclusive evidence to support these expectations from the research. In summary, there is confusion in the literature as to the potential for ERP systems to change management accounting and a lack of clear identification of the changes that have actually occurred.' B. Jackling & G. Sprackman. *The Impact of Enterprise Resource Planning Systems on Management Accounting: an Australian Study*. Deakin University, Victoria, Australia, 2005.

### 3.6 Conclusions and Recommendations

Much of the work under the programme has been in-house, with limited international TA inputs. As a result, introducing/upgrading the whole package appears to have cost a modest £60,000. If the estimated costs of the previous programme of DFID-funded support were to be included, the total cost would rise to a still acceptable £85,000.

The goal of the e-AWPB programme goes far beyond the results captured by this VfM assessment to enhancing government accountability and transparency as well as improving expenditure management. A sound public financial management system not only attracts foreign resources from development partners (and gives those partners confidence to channel them through the national system) but also ensures effective utilisation of such resources and establishes transparency and accountability of public funds. We have captured none of this here, largely because the system has not yet been fully implemented and results such as these are still to emerge.

The time is right, as the main TABUCS phase begins, to develop measures of these impacts. Adapting the World Bank's PEFA measures<sup>29</sup> as planned is a sensible first approach but they are really only various measures of improving **effectiveness** over time. The new TABUCS phase should also have **economy** and **efficiency** indicators: TABUCS is likely to be a much more substantial investment than the planning phase, with more scope to incur cost over-runs in implementation<sup>30</sup>; having some indicators of the range of acceptable costs and expected efficiency savings would be a valuable contribution to managing VfM in the future. Producing a programme plan and budget which consolidates both NHSSP and GoN expenditure would be a good start.

---

<sup>29</sup> Public Expenditure Framework Assessment (PEFA) designed by the World Bank to evaluate progress in reforming national public expenditure systems. <http://www.pefa.org/>

<sup>30</sup> Furthermore, there is enough research on the private sector experience in introducing such systems to provide some potentially useful benchmarks.

# 4. Case Study Two: e-bidding for Health Facility Construction Contracts

The construction of health facilities in Nepal is contracted out to the private sector by GoN's Department of Urban Development and Buildings Construction (DUDBC) on behalf of the MoHP. As part of a wider Government programme of e-procurement,<sup>31</sup> DUDBC has recently introduced electronic publication of tender notices, electronic access to tender documents, and electronic submission of tenders.

The introduction of this 'e-bidding' was begun under the DFID-funded Support to Safe Motherhood Programme (SSMP) in 2008,<sup>32</sup> including software development and testing in DUDBC.<sup>33</sup> Support has continued under NHSSP to:

- standardize bidding documents and procedures;
- train DUDBC staff members at central and district levels to implement e-bidding;
- educate stakeholders and potential contractors on the changes and new requirements;
- develop legal requirements and e-security (such as digital signatures).

E-bidding for health facility contracts went live for the first time in FY 2010/11.<sup>34</sup>

## 4.1 Background to e-bidding

There is a perception of lack of competition in the procurement of public contracts in Nepal in general. The level of competition for Government contracts is low: the average number of bidders per GoN contract is 4.5 compared, for example, to an average of 7.3 in World Bank-

---

<sup>31</sup> The Government made e-procurement mandatory in all public procurement over NPRs20 million in 2011 and intends to expand it to all procurement from 2012.

<sup>32</sup> NHSSP Infrastructure advisor: "Workshops were organized in November 2008 and January 2009 for consultation on initiation of e-bidding for works and goods in the health sector. The contract for software development and for making DUDBC ready for e-bidding was let during SSMP (7<sup>th</sup> April to 15<sup>th</sup> May 2010), with the repair and maintenance contract extending up to NHSSP period until March 2011). Training to bidders, other orientations, initiation of e-bidding were initiated after NHSSP in Jan 2011. "

<sup>33</sup> Inception Report, NHSSP 2010

<sup>34</sup> E-procurement of pharmaceuticals and medical equipment is planned to be introduced into MoHP under a project funded by the Asian Development Bank.

financed projects<sup>35</sup>. Local news reports violence and intimidation against contractors placing bids in a range of sectors. We do not have equivalent information for the health sector specifically, but anecdotal evidence suggests something similar exists. Lack of competition, with the potential of collusion and bid-rigging, is believed to keep contract values higher than they should be. (There are also health sector-specific issues around sub-optimal design and maintenance of facilities, which are being tackled through other parts of the NHSSP programme.)<sup>36</sup>

## 4.2 Case Study Methodology

Reasons for introducing e-bidding usually include:

- improved administrative efficiency (mainly through moving away from a paper-based process);
- increased openness and transparency in government business;
- increased competition and reduced prices for government contracts.

We have attempted to quantify only the last of these – increased competition and reduced prices - due to lack of data on other areas. However, there are linkages between them all: there is evidence<sup>37</sup> that increased openness increases competition and therefore reduces the average prices of contracts. There is also evidence that intense competition in public tendering reduces the risk (and therefore the cost) of post-contract amendments.<sup>38</sup>

Data for 985 different health facility contracts worth over NPR 15 billion (£110 million) over the period FY 2004/05 to 2011/12 was provided by NHSSP. We selected 553 contracts for analysis, of which 416 were let and agreed in the five-year period before e-bidding began in FY 2010/11 and 137 in the one year since.

Before calling for a bid, DUDBC estimates an expected value for every contract using standard unit cost estimates<sup>39</sup> for different components of the facility design. We calculate by what percentage the winning bid is below this estimate before and after the introduction of e-bidding. DUDBC estimates are updated annually for each district by the District Development

---

<sup>35</sup> R. Benamghar & A Iimi. *Efficiency In Public Procurement In Rural Road Projects Of Nepal*. World Bank Policy Research Working Paper 5736. July 2011.

<sup>36</sup> E.g. the introduction of integrated designs for health facilities, the subject of a separate VfM case study.

<sup>37</sup> In Nigeria, for example, a survey of private firms on perceptions of public sector procurement reforms found that the majority had decided not to submit expressions of interest in recent public tenders because they did not trust the selection process. There was a general perception that contractors are predetermined or must pay a bribe (particularly at the subnational levels). R. Benamghar & A Iimi (2011). *ibid*

<sup>38</sup> It is argued that contractors selected through intense competitive bidding are more likely to be well disciplined and therefore less likely to provoke renegotiation about costs or miss the project completion date. R. Benamghar & A Iimi (2011). *ibid*

<sup>39</sup> Unit costs are updated annually for each district by the District Development Committee based on local market trends in prices for transportation, labour rates etc.

Committee (made up of technicians, contractors and others) based on local market trends in prices for transportation, labour rates etc. It is believed that these estimates may be themselves inflated to provide cover for over-priced bids. We assume that, if and where this occurs, the percentage by which estimates are inflated remains constant across the six years under review. A separate comparison is done for each of five of the smaller facility types (basic obstetric unit, comprehensive obstetric unit, health post, health post with a two bed unit for maternity cases and primary health care centre). Hospitals were not included,<sup>40</sup> nor were other contract types for which the numbers were too small for comparison.

### 4.3 Costs

Options report TA costs under NHSSP to date of £30,556 – substantially less than the £44,000 estimated at inception<sup>41</sup>. In addition, costs of just over NPR 2 million<sup>42</sup> (approximately £15,500) for both the software development and new hardware for the e-bidding platform in DUDBC and TA of approximately £7,500 incurred under SSMP have been identified.

**Table 3: Total NHSSP, SSMP and GoN Technical Assistance Costs since August 2010 (£)**

Input	NHSSP Budget	NHSSP Actual	SSMP Actual
Software development	0	0	5,370
Hardware	0	0	10,185
Long term TA	16,733	15,680	3,000
Short term TA	2,000	666	1,444
Activities	11,100	470	1,452
Overheads	14,487	13,740	1,666
<b>Total</b>	<b>44,320</b>	<b>30,556</b>	<b>23,117</b>

Source: NHSSP Programme Manager<sup>43</sup>

The total identified costs to date are: £30,556 + £23,117 = £53,673.

We have not been able to isolate GoN staff costs of introducing e-procurement, nor identify any subsequent possible cost efficiencies since there is no programme-based reporting of Government expenditures or savings.

<sup>40</sup> A few, exceptionally large, observations such as hospital construction costs could skew the results.

<sup>41</sup> As reported in the Annual Review of the Nepal Health Sector Support Programme January 2011 – December 2011, savings incurred are reinvested into programme activities contributing to the overall VfM of NHSSP.

<sup>42</sup> NPR725,000 for software development and NPR 1,375,000 new hardware. Records provided by NHSSP Infrastructure advisor.

<sup>43</sup> For NHSSP, overheads are based on total prorata'd for budget estimates and project to date for actual, divided by 7 thematic areas and 7 broad areas of procurement and infrastructure work; advisor costs are based on total costs of the advisor programme to date divided by number of key areas on which the advisor is working; activity and TA costs are actuals.

## 4.4 Results

We found that for the five years preceding e-bidding, the winning bid price across the five types of facility averaged 9% below the DUDBC estimate. In the one year following the introduction of e-bidding, the average difference between winning bid prices and DUDBC estimates averaged 21%, an improvement of 12%. The results are set out in Table 4 below.

**Table 4: Selected Health Facility Estimated and Actual Contract Prices 2004/05 - 2011/12**

A. Type of Facility	B. Number of Projects		C. MoHP Estimated Total NPR 000'		D. Agreed contract Total NPR 000'		Difference between Estimate and Agreed Contract (C-D) Total NPR 000'		Difference between Estimate and Agreed Contract (C-D) Percentage (%)	
	Without E-bids	With E-bids	Without E-bids	With E-bids	Without E-bids	With E-bids	Without E-bids	With E-bids	Without E-bids	With E-bids
BEOC	27	11	211,948	136,009	194,021	113,431	17,927	22,577	8	17
CEOC	21	3	189,109	395,73.61	169,473	30,504	19,636	9,069	10	23
HP	190	79	2,461,788	1,607,804	2,276,045	1,281,736	185,743	326,068	8	20
HP_2mat <sup>44</sup>	84	28	280,971	129,559	243,415	93,505	37,556	36,059	13	28
PHCC	94	16	2315,113	931225	211,0530	718,684	204,582	212,541	9	23
<b>Total</b>	<b>416</b>	<b>137</b>	<b>5,458,929</b>	<b>2,844,170</b>	<b>4,993,485</b>	<b>2,237,861</b>	<b>465,444</b>	<b>606,310</b>	<b>9</b>	<b>21</b>

## 4.5 Value for Money Assessment

A cost saving of 12% on the annual MoHP public works construction budget in the first year has been achieved. With a budget for new build and renovation of NPR 3.8 billion in 2011/12<sup>45</sup>, a 12% saving amounts to NPR 456 million (£3.4 million).

Against a total identified expenditure (TA and GoN capital spend) of under £54,000, we have found first year savings of £3.4 million. This level of annual saving can be expected to continue into the future and may even increase as more potential contractors are encouraged to bid and this, as evidence suggests, continues to reduce prices.

Our assumption that the margin of error in DUDBC construction cost estimates remains constant across the six years under review ignores the possibility that estimates in the year e-bidding was introduced may have anticipated the impact of the new system. This would most likely act to reduce the over-inflation element in the estimate, leading us to under-estimate the impact of e-bidding.

<sup>44</sup> Health Post with two additional beds for maternity cases.

<sup>45</sup> *Nepal Health Budget Analysis 2011-12*. NHSSP, 2012.

It is also possible that other factors, either in Government of Nepal procurement practices or in the wider construction sector, are influencing the change in construction costs. Reform efforts in DUDBC over recent years directed towards improving supervision and financial management of contracts may be discouraging less capable or less responsible contractors, hence pushing down the average price of a DUDBC contract. We have been unable to test this assumption, although if it is occurring it is likely to have been a gradual process and not a step-change in the last year, as we have observed. More significantly, MoHP's introduction of integrated facility design, which we examine in the third case study, has been introduced about the same time as e-bidding and could indeed be associated with a similar step-change in prices.

We examine this in more detail in the integrated facility design case study below. However, a simple sensitivity test confirms our positive results for e-bidding: if we assume a full 50% of the savings are due to factors beyond e-bidding, the savings in the first year would still exceed total identified costs threefold. The present value of savings over fifteen years would fall to a still very healthy £17 million.<sup>46</sup> Furthermore, the 12% saving on contract prices we have estimated is consistent with international experience. In Norway, the 'e-handel' platform is reported to be delivering contract price savings in the region of 2-10%. The UK has reported savings 'frequently exceeding 10%' through the use of e-auctions. A comparison of public hospitals procured in 2009 (using paper-based systems) and 2010 (using e-Procurement) in Portugal concluded that a cost reduction of 18% had been achieved due to the increase in competition generated by e-procurement.<sup>47</sup>

We were not able to identify the impact (costs or benefits) on administrative efficiency as a result of the introduction of e-bidding. While computerisation may be expected to reduce the time spent on many related activities, full realisation of such efficiencies often depends on new 'back-office' processes and organisational reform. There are some consequences of e-bidding which may actually increase the administrative load; in the road sector in Nepal, the time required to evaluate bids and award a contract was found to increase with the number of bids received. The World Bank study estimated that one additional bid could add 12 days on average to the evaluation period.<sup>48</sup>

#### **4.6 Conclusions and Recommendations**

We have found that the introduction of e-bidding has generated contract price savings in the first year of 12% of the MoHP construction budget worth £3.4 million. On the basis of the costs identified, this generates a first year benefit-cost ratio of over 60:1 and an estimated rate of return of 560%. We have not identified all costs due to lack of data, especially on the GoN side. However, unidentified costs are very unlikely to be high enough to significantly undermine this conclusion. The level of savings on contract values is consistent with international experience.

We can infer from the price savings achieved that competition in bidding has increased. This conclusion could be confirmed with evidence that the average number of bidders per contract has risen and/or that the difference between the winning bid price and the second-best losing

---

<sup>46</sup> Discounted at 3.5%.

<sup>47</sup> R. Benamghar & A Iimi. *Efficiency In Public Procurement In Rural Road Projects Of Nepal* World Bank Policy Research Working Paper 5736. July 2011.

<sup>48</sup> R. Benamghar & A Iimi. *Efficiency In Public Procurement In Rural Road Projects Of Nepal* World Bank Policy Research Working Paper 5736. July 2011.

bid price (an indicator that bid-rigging through 'cover pricing'<sup>49</sup> is occurring) is reduced. We understand these data exist in DUDBC but we have not yet been able to access them.

While we can conclude that the introduction of e-bidding has been good value for money, there is evidence that additional, low or no cost, actions can be useful in increasing competition. The World Bank study of rural roads suggests several actions that could be replicated in health facility procurement:

- *a longer bid preparation period* can reduce the entry barriers for potential contractors, particularly inexperienced firms. In addition, having a standard minimum bid preparation time would help combat corruption since one of the indicators of possible corruption or collusion is that an invitation to bid is published just a few days or weeks before bids have to be submitted.
- *reducing the cost of bidding documents* also reduces the costs of entry, especially to small firms. While Government would lose the revenue arising from the charge, the impact on the number of bidders and average prices could be significant.
- *advertising in national rather than local newspapers* The World Bank study estimated that if the media is changed from local to national newspapers, bidders for roads contracts would increase by about 20%, which would contribute to decreasing the procurement costs by 6-7%.

In conclusion, e-bidding for health facilities appears to have been developed with good **economy**, although many costs remain unidentified. E-bidding has had an immediate impact on the **efficiency** of the procurement process, in that average contract prices have fallen. Other potentially important efficiencies in related administrative processes have still to be demonstrated.

---

<sup>49</sup> Cover pricing is when colluding companies agree to submit seriously under-priced bids, in order that one of their number is guaranteed to win. Also known as 'low-balling'.

# 5. Case Study 3: Integrated designs for health facility construction

## 5.1 Background to integrated designs

The use of integrated designs for health facilities began in August 2010 as part of NHSSP's activities to improve the 'tools, skills, and systems to provide functional comprehensive emergency obstetric and neonatal care services.'<sup>50</sup> Before the development of the new designs, there were no established universal standards for health infrastructure in Nepal. Larger projects (e.g. hospitals) used Indian standards, while smaller projects were the result of ad hoc requirements and designs. Different parts of a facility were often constructed at different times without any functional linkages or with some important function spaces (e.g. staff accommodation) absent.

The process of introducing integrated facility design has been simple and low-cost. The new designs have been drawn up by the NHSSP infrastructure adviser (a qualified architect) based on research and in consultation with the DUDBC and district health offices. Since 2010, all contracts for all types of facilities (except basic emergency obstetric care BEOC units, which as a matter of policy are being added to existing Primary Health Care Centres) have been let with integrated design. Construction has begun using the new integrated designs but as yet no facility has been completed.

The integrated construction of previously ad-hoc built units of a health facility has the following theoretical benefits:

1. Construction costs are potentially reduced in many ways: providing for central services saves space, so reducing the need for expensive land; available space is appropriately planned and can allow for expansion over time; economies of scale become possible in transportation, preparation of the construction site, materials, supervision, monitoring and the purchase of tools and machinery.
2. Construction work is faster and cheaper because only a single plinth area is needed and reduced foundations are required.
3. Small projects entail low-value contracts which tend to be won by small, inexperienced contractors producing relatively poor quality work at high unit cost. For a larger integrated construction, the services of an 'A' level contractor can be obtained, leading to improved build quality and reduced unit costs.<sup>51</sup>
4. Construction productivity may rise over time as technicians learn standard construction techniques.
5. Well-designed linkages between medical units facilitate the efficient movement of staff and patients. Construction carried out without a master plan tends to treat linkages

---

<sup>50</sup> NHSSP logframe Indicator 1.1.

<sup>51</sup> Conversely, larger contracts can be more attractive to corrupt practices.

- between units as an afterthought, so impeding staff and patient flows. In some cases in the past, service provision became so difficult that some buildings were simply abandoned, thereby wasting the entire investment.
6. Each unit is designed to create an enabling environment for staff, including accommodation. This enables 24-hour service delivery and provides for their safety, particularly where facilities are located in isolated areas.

## 5.2 Case Study Methodology

With no facility of integrated design yet complete, we cannot assess any of the longer term cost savings, productivity improvements or putative health benefits that may result. We therefore focused on estimating only the differences in the construction costs. We compared the construction cost before and after the introduction of integrated design of a small sample of the two most common health facilities: the PHCC and the Health Post (HP).

We undertook a detailed cost analysis of two PHCCs and four HPs (six facilities in all) using a matched pair approach. All six facilities were located in the Western Region of Nepal in three different (although adjacent) districts, with each matched pair in the same district.

**Table 5: Location of health facilities selected for Case Study**

District	Health Facility	Region	Zone	Population (2011)
Rupandehi	2 Health Posts (1 integrated, 1 non-integrated)	Western	Lumbini	900,000
Palpa	2 Health Posts (1 integrated, 1 non-integrated)	Western	Lumbini	270,000
Kaski	2 PHCC (1 integrated, 1 non-integrated)	Western	Gandaki	381,000
Total	6 (4 Health Posts and 2 PHCCs)			

Matching of the three pairs was done on the basis of similarity of size and type of location. The ‘before’ (non-integrated) example of each pair was constructed 5 years or less prior to its introduction in order (i) for there to be records still available and (ii) to be of a sufficiently modern standard to make comparison plausible.<sup>52</sup> The ‘after’ example in each case is still under construction. Effort was also made in selecting the sample to randomly include units that were procured both with and without e-bidding.

Cost information for the six facilities was obtained from the district offices of DUDBC in the form of either actual bills of quantity (BOQ) attached to approved invoices submitted for completed facilities or estimated BOQs for those still under construction. All the integrated (‘after’) examples are still under construction, therefore their cost is an estimate; the un-integrated (‘before’) facilities are completed and their costs are actual. We checked the possibility that the estimates for the integrated examples are consistently biased upwards by comparing estimated and actual prices for the completed facilities, where this information existed. We found an

<sup>52</sup> Many old health posts are of such poor standard and built so long ago that they are not comparable with more modern constructions.

average 2-2.5% over-estimate. We considered this small enough to be within our overall margins of error and not to seriously affect our conclusions.

Construction costs have risen rapidly in recent years in Nepal. In order to accommodate price changes DUDBC re-estimates the unit cost of each construction item every year. This is done at the district level in order to reflect regional variations in supply and demand. We do not have reliable time series for these unit costs for each district. We have therefore used the latest quarterly survey data from the Central Bureau of Statistics (see Table 6) to convert all costs in all districts to a common year (2011/12).

**Table 6: Quarterly Price Index of Construction Materials and Labour up to 1st Quarter of 2011/12**

	2008/9	2009/10				2010/11				2011/12	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Materials	100.00	115.2	110.5	115.4	119.7	119.3	124.4	124.4	125.7	131.7	130.0
Wages	100.00	114.9	116.3	120.0	125.9	138.4	141.3	150.6	151.5	164.9	167.2

To make the health facilities more strictly comparable with each other we also excluded some minor additional non-medical items introduced into the standardized examples, e.g. boundary walls and ramps.

### 5.3 Costs

The only cost identified for the introduction of integrated designs for health facilities is the long-term technical assistance (TA) cost of the NHSSP adviser (see Table 7). There have been no identifiable government costs for this intervention so far.

**Table 7: Total NHSSP Technical Assistance Costs since August 2010 (£ sterling)**

Input	NHSSP Budget	NHSSP Actual
Long term TA	£16,733	£15,680
Short term TA	£0	£0
Activities	£0	£0
Overheads	£14,487	£13,740
<b>Total</b>	<b>£31,220</b>	<b>£29,420</b>

Source: NHSSP Programme Manager<sup>53</sup>

<sup>53</sup> Overheads are based on total budget prorata'd for 20 months for budget estimates and project expenditure for actuals, divided by 7 thematic areas and 7 broad areas of procurement and infrastructure work. Budgeted and actual long term technical advisor (LTTA) costs includes but is not limited to salary, leave allowances, bonuses, profit, and taxes as per the contractual allowances. For both budget and actual, total costs of the LTTA costs are divided by the number of key areas on which the advisor is working (for infrastructure this is 4 major areas); activity and TA costs are actuals.

## 5.4 Results

We found that, at current 2011/12 prices, the average cost of construction without integrated design is NPR 37,746 (£280) per square metre while the average cost of construction with integrated design is NPR 31,701 (£235) per square metre: a difference of NPR 6,045 (£45) per square metre, ie 16%. This excludes land costs.<sup>54</sup> If we compare the two pairs of 2-bed health posts<sup>55</sup>, the integrated-design facilities cover an average one-third less ground area.

**Table 8: Total and square metre costs of six integrated and non-integrated health facilities in Nepal.**

	Design	FY	Procured via e-bidding	Construction Status	No of Beds	Ground Coverage (Sq Meter)	Total Floor Area (Sq Meter)	Total Area (Sq Meter)	Total Cost NPR (000s)	Per Sq Meter Cost NPR
<b>Rupandehi</b>										
Bagaha HP	Standardized	2011/12	Yes	Under Construction	2	236.3	447.2	447.2	15,040,000	33,633
Herdauna HP Building	Non Standardized	2007/08	No	Completed		209.4	209.4	438.5	19,200,000	43,784
Herdauna Birthing Center	Non Standardized	2011/12	Yes	Completed	2	93.2	93.2			
Dhakdhai Quarter	Non Standardized	2008/09	No	Completed		136.0	136.0			
<b>Palpa</b>										
Kusum Khola HP	Standardized	2009/10	No	Under Construction	2	236.3	447.2	447.2	14,500,000	32,425
Madan Pokhara Health Post Building	Non Standardized	2009/10	No	Completed		200.8	401.6	537.5	17,460,000	32,485
Madan Pokhara Birthing Center	Non Standardized	2008/09	No	Completed	2	93.2	135.9			
<b>Kaski</b>										
Siswa PHCC	Standardized	2011/12	Yes	Under Construction	15	438.0	1,234.2	1,234.2	35,850,000	29,047
Bhedabari PHCC Building	Non Standardized	2008/09	No	Completed	8	266.0	532.0	1,269.2	46,990,000	37,024
Bhedabari PHCC Family Quarter	Non Standardized	2010/11	Yes	Completed		249.8	499.5			
Bhedabari PHCC BEOC	Non Standardized	2011/12	Yes	Contract Signed	3	237.7	237.7			

## 5.5 Value for Money Assessment

In 2011/12, MoHP's budget for new build and renovation was NPR 3.8 billion<sup>56</sup>. Assuming that two-thirds of the budget is spent on new build and that all new build is executed with integrated facility designs, the savings achieved in one year would be  $\text{NPR } 3.8 \text{ billion} \times 0.66 \times 0.16 = \text{NPR } 400 \text{ million} (\text{£}2.97 \text{ million})$ .

This first year saving of £2.97 million is achieved with an NHSSP expenditure of £30,556 - a cost-benefit ratio of over 90:1. If these savings are maintained at the same real level over 15 years and there are no additional future costs, the NPV<sup>57</sup> of the investment will be £30.6 million and the estimated rate of return would be 1,300%. This does not include land costs. Nor does it include future possible maintenance cost savings over the lifetime of the building or less tangible benefits such as improved staff efficiency, patient comfort or health impacts.

<sup>54</sup> The site for a new health facility is often donated by the community. It therefore does not appear as a budget cost for MoHP, although it is a real economic cost to the community.

<sup>55</sup> The pair of primary health care centres in Kaski are larger and not of comparable (bed) size.

<sup>56</sup> *Nepal Health Budget Analysis 2011-12*. NHSSP, 2012.

<sup>57</sup> At a discount rate of 3.5%. Discounted at 6%, PV of savings would be £28 million.

## 5.6 Conclusions and Recommendations

Introduction of integrated designs for construction has coincided with the introduction of e-bidding for construction contracts which the previous case study shows to have been responsible for reducing the average price of contracts. Two of the three integrated designs were procured under e-bidding and these two are indeed the ones which show the greatest price advantage over their non-integrated comparator. It is therefore likely in this small sample that some part of the cost savings we have found is also attributable to the e-bidding process. If we take this into account by assuming only 50% of the savings we found is due to the integrated designs, they would be £1.5 million in the first year and the present value of this maintained over 15 years would still be a healthy £15.5 million.

The full impact of the use of integrated designs will be felt over the lifetime of the building. Implications for maintenance and running costs, for example, will be detected only in the medium to longer term. These should be monitored. There is a consensus in the literature<sup>58</sup> that better design raises staff efficiency and improves health outcomes. This has rarely been effectively measured in health facilities, however, even in developed countries. What evidence there is along these lines comes from office buildings. It is therefore not recommended to attempt to measure this.

---

<sup>58</sup> A.Dilani *The Therapeutic Benefits of Salutogenic Hospital Design* Hospital Management, [Volume 14, Issue 3 /2012](#)

# 6. Conclusions and Recommendations

On the basis of the available data and using only identified costs and benefits, we **conclude that all three programmes are showing value for money.**

**The e-AWPB programme has halved the time spent by staff on the planning cycle.** Based on the salary cost of time saved by planning staff only, the investment to date would be paid back in 5 years. Using the simple rule of thumb that, for any investment, the pay-back period should be less than the life of that investment, this phase of e-AWPB passes a minimum VfM test<sup>59</sup>. This result would appear more favourable if Nepal civil service salaries were not amongst some of the lowest in the world.<sup>60</sup> Other impacts on accuracy, avoidance of duplication or improved management decisions are not included. They were not measured but are felt by users to be significant. Impacts on the allocative efficiency of budget allocations have also not yet been detected, although they will be relatively readily measured through future annual budgets. If these show budget allocation shifting towards areas of higher burden of disease, the potential ultimate impact on health outcomes could be substantial.

**The introduction of e-bidding in 2011/12 has reduced the average price of new contracts by 12%.** This is in line with international experience. **It has saved MoHP NPR 456 million (£ 3.4 million) in the first year alone.**

**The introduction of integrated designs for health facility construction in 2010/11 has reduced the average construction cost in the small sample we examined by £45 per square metre, a reduction of 16%.** If this were to be repeated across all new construction in 2011/12, we estimate a potential saving of almost £3 million in the first year alone.

Because e-bidding and integrated designs were introduced at the same time, it is likely that the savings we have detected are attributable to both innovations simultaneously. Methodologically, It is possible that we are counting the same savings twice. We did a simple sensitivity test of combining the costs of the two programmes and attributing only one set of savings. In this case, the net present value over 15 years still amounts to £35 million, indicating that combined investment has still been worthwhile.

**Identified expenditure under NHSSP on e-AWPB is £60,000, on e-bidding is £54,000 and on integrated design is £31,000. All therefore appear to be relatively low cost,** with limited international TA inputs.

---

<sup>59</sup> See footnote 19.

<sup>60</sup> Madhu Nidhi Tiwari *Governance Reform in Political Transition: The Case of Nepal's Civil Service Reform*. Nepalese Journal of Public Policy and Governance, Vol. xxiv, No.1, July, 2009

**We were not able to identify all GoN financial costs or administrative impacts, whether positive or negative.** The introduction of e-procurement in particular can increase as well as reduce administrative costs and processes. It is important to have a clearer picture of these in the future for a more complete view of VfM. This is not just a question of calculating VfM, but of delivering a successful programme.

Consolidated cost information is not easy to access. This may largely be because sector-wide support implies wide-ranging, long-term, capacity development in activities that are continuously on-going. There are few clear beginning and ends to activities or spend. This presents a problem for a VfM assessment which requires costs and benefits to be isolated and attributed. In order to more easily access data that would facilitate a VfM assessment, it would be **beneficial for a more projectised approach to be developed under the umbrella of the programme.** For example, for specifically defined areas (that would act as VfM ‘tracer’ elements of the programme) a VfM framework could be established. This would include an up-front definition of the activity specific objectives, budgets (both TA and GoN), timeline and targets of each key component of support.

A VfM assessment does not demand every output or outcome to be monetisable. This will often not be possible. However, **when outputs are definable, they are usually quantifiable, allowing progress against a baseline to be measurable.** There are often equivalent commercial or civil society sectors which provide examples and benchmarks.

As a VfM assessment undertaken by economists, these case studies have focussed on what can be measured and quantified in terms of costs and monetisable benefits. **This is not a substitute for a technically expert review. Indeed, they should be undertaken together:** a truly sound and robust VfM assessment requires specialist knowledge of the technical dimensions in order to best integrate financial and economic information into judgements about feasible options and outcomes.

DFID’s Four Es are based on an audit approach, designed to be applicable in any sector. They are useful for breaking down and reviewing a project implementation plan or a project that is *already underway*. They are less helpful for another key process necessary for achieving value for money: ensuring that limited resources are allocated to the ‘right’ health issues and the ‘right’ interventions are selected in *the first instance*. This is a multi-staged decision process which the 4Es framework does not fully reflect. A fact which hinders its adoption by health institutions less familiar with the notion of value for money than DFID. A possible additional framework (named the ‘Five Efficiencies’) for guidance at the planning stage of a new health programme is outlined in Annex 2. It is recommended that DFID and NHSSP consider adopting and developing this framework alongside the 4 Es as part of its longer term aim of introducing development partners in the health sector to VfM processes.

# Annex 1: E-Planning in the Private Sector

## Electronic Work Planning and Budgeting: Comparisons with the Private Sector

Taken From: *Financial Management Information Systems: 25 Years of World Bank Experience on What Works and What Doesn't*. World Bank, 2011.

Financial Management Information Systems (FMIS) solutions used in public sector projects were originally designed to address similar needs in the private sector. Hence, an overview of the implementation of similar information systems in the private sector is presented below to highlight some of the common patterns of success and failure.

Information systems similar to FMIS are called Enterprise Resource Planning (ERP) systems in the private sector. ERP solutions are designed to integrate all departments and functions across a company into a single computer system that can serve different departments' particular needs. An ERP functional module generally includes Finance, HR, Manufacturing, and the Warehouse. In general, private firms initiate ERP implementation by installing Finance and HR modules first, and expanding gradually to have the full package for domestic and international business needs. As in public sector projects, commercial ERP packages require a substantial and costly change in the ways companies do business. In most cases, it takes several years to implement such changes. ERP vendors usually promise to implement the core modules in three to six months. This may be true for small firms, in which case the ERP system is nothing more than a very expensive accounting system. For a comprehensive ERP implementation, business processes need to be changed and staff must be trained in the new rules and procedures. Such complex transformational ERP projects usually run between one and three years, on average, despite high levels of ICT literacy in private firms and the large number of qualified consultants involved.

Transformations enabled by the Internet, such as cloud computing or software as a service (SaaS) may reduce the implementation time of ERP packages. Nevertheless, changing business processes and company culture remain lengthy processes. Moreover, storage of confidential or business critical information in remotely hosted "trusted" servers should be handled carefully. Many companies are also benefitting from mobile services and advanced Web applications (Web 2.0) to improve the efficiency and reduce the cost of operations. The manifestation of these new trends in the public sector are not visible yet, due to the special arrangements needed to meet specific data storage and information security needs of PFM information systems, as well as the size of the problem (a relatively large number of concurrent users and connected nodes).

One of the most often-cited studies of the total cost of ownership of ERP, completed by Meta Group in 2002 (acquired by Gartner in 2005) **taking into consideration the hardware, software, professional services and internal staff costs, plus two year maintenance required, revealed**

**that among the 63 companies surveyed— including small, medium and large companies in a range of industries—the average total cost of ownership was \$15 million** (the highest was \$300 million and lowest was \$400,000).

Results from a 2007 Aberdeen Group survey of more than 1,680 manufacturing companies of all sizes found a correlation between the size (users and nodes) of an ERP deployment and the total costs. According to the report, “as a company grows, the number of users goes up, along with the total cost of software and services.” For example, **large companies with more than \$1 billion in revenues can expect to pay, on average, nearly \$6 million in total ERP costs.** This is comparable to implementation within the public sector.

Interestingly, internal resistance to change is often mentioned as one of the key factors for failure in private sector ERP projects. Another failure factor is the high level of customizations which make the ERP software more unstable and harder to maintain when it is finally activated. Not surprisingly, these are similar to the patterns of failure visible in the public sector as well.

# Annex 2: The Five Efficiencies

## A Framework for ensuring VfM in health programmes at the design stage: 'The Five Efficiencies'

The notion of value for money is intuitively simple. In practice, however, the *measurement* of VfM is challenging. A start can be made by seeing VfM as a '**process of successfully transforming financial resources into valued health system outputs.**'<sup>61</sup> There are several stages to that transformation, each of which can be measured with different degrees of accuracy and ease. The framework proposes five different stages (called here 'efficiencies') which are common to all health interventions. Each stage or efficiency can be assessed separately, generating a set of VfM indicators for the intervention under review. This should also enable an element of diagnosis in the process, allowing the assessor to isolate where, amongst the five efficiencies, particular problems or potential for improvement lie.

The five efficiencies are as follows. They are summarised in a matrix in the Annex, which includes suggestions on how they may be measured.

1. **Allocative Efficiency** – This is the extent to which the limited funds of the health system are *directed towards the 'right' health issues* – i.e. the most serious health burdens. Does the financial size of the programme under review reflect the scale of the problem? Is the relative size of the programme in the total health budget commensurate with its relative importance as a health issue nationwide? International guides to the health budget allocation decision, such as the health-related Millennium Development Goals or Essential Medicine Lists - as well as other micro-level planning tools for national prioritisation, such as WHO's Lives Saved Tool (LiST) - are aimed at improving the allocative efficiency of existing intervention mixes.

Theoretically, the allocation decision is the start of the sector planning process. In practice, however, the process never begins by scratch; how the health budget is actually allocated is heavily determined by pre-existing spending patterns. Changing spending patterns to improve allocative efficiency is therefore likely to be a slow and incremental process.

As we have said, cost-effectiveness is not the only consideration when deciding on an optimal mix of interventions. In cases where fairness, equity or basic decency are at issue, the social value of a particular health intervention may differ from the value of the health benefits it produces.

2. **Technical Efficiency** - Technical efficiency refers to the extent to which resources may be being wasted on *inappropriate or poorly implemented interventions*. Health systems

---

<sup>61</sup> Peter C Smith. *Measuring value for money in healthcare: concepts and tools* Centre for Health Economics University of York. September 2009.

should spend money on a chosen intervention only if it is effective in a particular setting and if the same results could not be obtained in another way for lower cost. In this framework, technical efficiency is intended to refer specifically to *medical/scientific evidence and choices* - before questions around delivery are considered. It can also refer to other types of ‘pure technology’ questions, however, such as the evidence for the chosen standardized integrated design for health buildings in the infrastructure programme. In all cases, there is potential for efficiency gains from (i) a better mix of interventions or (ii) better (i.e. less wasteful) implementation of the chosen intervention. The former depends on the availability of (and evidence for) interventions that can substitute to some degree for one another.

3. **Delivery Efficiency** - Programme managers must choose *how to deliver* the selected intervention to the targeted communities, households, and individuals. For example, bed nets can be distributed in conjunction with immunization campaigns, sold commercially with or without subsidy, or delivered by community health workers. Delivery efficiency also refers to the choice between public and private sector provision, the contracting of NGOs, or the balance between the three. These delivery models may differ in effectiveness or cost, and as a result there may be efficiency gains from switching.
4. **Administrative Efficiency** – While delivery efficiency (above) will include consideration of delivery-specific administrative costs, this fourth category aims to capture the role of *the wider health system* in the cost-effectiveness of the particular programme being assessed. Administrative efficiency is achieved when those elements of the wider health system necessary for the particular programme are present, functioning and operating at low cost. It is not enough to consider the share of total expenditure going to overheads, however defined: although reducing administrative expenses might free resources to be spent on prevention and treatment, spending more on management and training might in some cases improve planning and implementation and thus increase overall efficiency. For this reason it is difficult to determine the “right” amount to spend on programme management, though cross-country comparisons and broad benchmarks do exist. Administrative efficiency also involves institutional incentives and accountability. The WHO list of major causes of inefficiency (Box 1, above) suggests outright fraud and corruption also may be important in some places.
5. **Aid Efficiency** - Forty per cent of health funding in Nepal comes from donors. It is therefore reasonable to assume that *the way these donor resources are provided*, e.g. in vertical programmes, multi-donor trust funds or via results-based aid (RBA) arrangements, has important implications for value for money.

### Prospective and Retrospective Assessment and the VfM Cycle

In the matrix we make the distinction between **prospective** and **retrospective** VfM assessment. This is because different programmes are always going to be at different stages of implementation, with different types and



quantity of associated information available for the assessor.<sup>62</sup> Different types of indicators of VfM, with different levels of certainty and robustness, will result. The VfM assessment framework needs to be able to accommodate this.

Including an option for either a prospective or retrospective VfM assessment reflects the 'transformation process' of turning resources into health outcomes referred to earlier (para 2.1), which has elsewhere been called the '**VfM cycle**': achieving VfM is the planning and corporate management processes of identifying need, appraising options, commissioning and monitoring delivery, evaluating outcomes and feeding the learning from that back into the start of the process.

The existence of an effective VfM cycle at a health system-wide level is critical for achieving VfM in individual programmes. It is also important when capturing VfM in a single measure is elusive: the second-best alternative for demonstrating VfM is always to ensure that *at a minimum, the right processes are in place*. This is what we are attempting to capture and isolate in the fourth 'administrative efficiency'.

---

<sup>62</sup> Prospective VfM assessment is equivalent to DFID's **appraisal** stage of a programme, while retrospective assessment is similar to **evaluation**. In VfM assessments, however, in each case there is more emphasis in *linking costs to (expected or actual) outputs and outcomes - and benchmarking them*.

### Conceptual Framework for VFM Assessment of Health in Nepal: 'The Five Efficiencies'

	Definition	Prospective Indicators (appraisal)	Retrospective Indicators (evaluation)	DFID's four Es	Sources of info for each case study
<p><b>1 Allocative Efficiency</b></p> <p><i>Is the programme directed to tackling a proven high priority?</i></p>	Allocative efficiency is achieved when the current set of interventions maximize health, given the budget constraint	<p>Global health burden</p> <p>Distribution of burden</p> <p>Total health budget</p>	<p>Actual cost per QALY added comparison</p> <p>Distribution of impacts</p> <p>Budget savings</p>	<p>Effectiveness</p> <p>Equity</p>	<p>Health sector strategy and background papers.</p> <p>Health sector budget</p>
<p><b>2 Technical Efficiency</b></p> <p><i>Is the right medical-technical option being used?</i></p>	Technical efficiency is achieved when as much as possible is produced with the inputs employed, and at minimum cost.	<p>Research &amp; evidence</p> <p>Technical evaluations</p> <p>Modifications for context</p> <p>Results chain</p>	<p>Actual unit costs achieved compared to</p> <p>i) expectations; i</p> <p>i) international comparisons</p> <p>iii) rejected options.</p> <p>Indirect benefits/costs generated</p>	<p>Efficiency</p>	<p>Project proposal and forecast budgets.</p> <p>Budget outturns.</p> <p>Annual reviews.</p>
<p><b>3 Delivery Efficiency</b></p> <p><i>Is the service being delivered to the user through the most cost-effective channel(s)?</i></p>	Delivery efficiency is achieved when no alternative channel can be demonstrated to reach more people or reach the same number at lower cost.	<p>Evidence and evaluations of feasible public, private, NGO, joint implementation options.</p> <p>Evidence of potential cost-saving features.</p> <p>Unit cost implied by programme budget &amp;</p>	<p>Actual unit costs compared to</p> <p>i) expectations;</p> <p>ii) rejected options.</p> <p>Evidence of cost-savings achieved.</p> <p>Measures of patient experience (promptness, dignity,</p>	<p>Efficiency</p> <p>Economy</p>	<p>Options appraisals</p> <p>Project monitoring reports</p> <p>Cost summaries</p>

		outputs falls within a max-min.	empowerment)		User Surveys
<p><b>4 Administrative Efficiency</b></p> <p><i>Are all back-office functions necessary for the VfM cycle in place and are related overhead costs proportionate?</i></p>	Administrative efficiency is achieved when those elements of the wider health system necessary for the particular programme are present, functioning and operating at low cost.	<p>Systems for monitoring costs &amp; outputs</p> <p>Processes for controlling abuse &amp; corruption</p> <p>Expected distribution of impacts is understood</p> <p>Costs for the above attributable to programme</p>	<p>Evidence of improvements in VfM cycle in response to needs of programme</p> <p>Actual distribution of impacts identified</p> <p>Costs of the above</p> <p>Evidence of savings</p>	Efficiency	<p>Annual budgets</p> <p>Annual Reviews</p>
<p><b>5 Aid Efficiency</b></p> <p><i>Does the way donors provide funding keep transactions costs low and foster domestic health institutions?</i></p>	Aid efficiency is achieved when no other aid instrument could deliver funds at lower cost or greater benefit for health system strengthening.	...	....		Aid Effectiveness assessments

# Annex 3: Terms of Reference

## Terms of Reference

### 1) Background

The Government of Nepal (GoN) is committed to improving the health status of Nepali citizens and has made impressive health gains despite conflict and other difficulties. The Nepal Health Sector Programme-1 (NHSP-1), the first health Sector-Wide Approach (SWAp) in Nepal, began in July 2004, and ended in mid-July 2010. NHSP-1 was a highly successful programme in achieving improvements in health outcomes. Building on its successes, the MOHP along with External Development Partners have designed the second phase of the Nepal Health Sector Programme named as NHSP-2, a 5 year programme, which will be implemented from mid-July 2010. The goal of NHSP-2 is to improve the health status of the people of Nepal, especially women, the poor and excluded. The purpose is to improve utilisation of essential health care and other services, especially by women, the poor and excluded. Options Consultancy Services Ltd (Options) and partners are providing technical support to the GoN to implement NHSP-2.

### 2) Specific background

Our programme of support to the GoN (the Nepal Health Sector Support Programme – NHSSP) is based upon a framework of capacity enhancement (CE) to the Ministry of Health and Population (MOHP), Department Of Health Services (DOHS) and Regional Health Directorates (RHDs).

The National Audit Office defines VfM as being ‘the optimal use of resources to achieve intended outcomes.’ A recent paper defines DFID’s approach in aid programmes as ‘maximising the impact of each pound spent to improve poor people’s lives.’<sup>63</sup>

### 3) Rationale

As part of NHSSP ongoing commitment to support the MoHP, DoHS and RHDs achieve value for money (VfM) in the delivery of NHSP-2 it is proposed that 4 case studies are developed which demonstrate the VfM of specific activities or interventions undertaken through the collaboration

---

<sup>63</sup> DFID’s Approach to Value for Money (VfM). DFID, July 2011.

between government, NHSSP and other partners. The findings will be useful to guide the policy and management decisions needed to continue and /or modify such activities in order to ensure improvement in and sustainability of results.

The VFM case studies, where possible, will provide indications of monetisable savings. However, the studies will not be limited to saving money, and should encompass a range of areas including more speculative areas where savings could be attributed, and finally areas where no attribution was possible, i.e. the 'value' could be other non-financial values.

The areas identified for the case studies are:

1. Safe Motherhood: guidelines for Dip. Of Gyn/Obs, SBA training review, blood transfusion guidelines and training, CEONC strengthening
2. Gender Equality and Social Inclusion: Social audit
3. Gender Equality and Social Inclusion: One-Stop Crisis Management Centres (OCMCs)
4. Infrastructure: standardized designs and strengthening of the Health Infrastructure Information System (HIIS)

#### **4) Assignment Objectives**

##### **Overall Purpose**

The overall purpose is to review documentation and carry out interviews and consultations with key stakeholders in order to produce 4 case studies of VfM in activities carried out by government and NHSSP.

The main objective of the assignment is to develop 4 VfM case studies which can be used by the MoHP, DoHS, DFID and NHSSP in demonstrating the quantifiable and non-quantifiable results from specific changes resulting from the collaboration between government, NHSSP and partners, .

##### **Specific objectives:**

The specific objectives are

1. to describe, analyse and assess in terms of VfM the four case studies, including the following aspects:
  - Objectives of the projects/activities
  - Practice:
    - History of key events
    - Structures
    - Activities
  - Performance/results , including analysis of key strengths and weaknesses
  - Costs
  - Contextual factors affecting process and results/analysis of why events and results occurred as they did
  - Analysis of VfM: economy, efficiency, effectiveness, cost-effectiveness
  - Potential for sustainability and scale-up
2. To make recommendations which will assist in maintaining and improving the results of each of the 4 cases studied (and in guiding scale-up?)

3. To analyse the 4 cases in order to draw more generalised conclusions about the lessons learned in achieving or not VfM.
4. To prepare 4 case studies of VfM (and an overview report of the consultancy).

## **5) Activities**

The International consultant will:

- Hold initial briefings with the NHSSP Advisors, MoHP / DoHS counterparts and local consultants.
- Carry out desk-based review of current information on the 4 areas identified as VfM case studies
- Develop a workplan and methodology with relevant NHSSP Advisers and the local consultants
- Carry out field visits and interview key informants and stakeholders – service providers, beneficiaries, local and international partners, government officials and others- to obtain required information
- As necessary, train interviewers to collect data, and arrange for transcription of interviews and translation into English
- Develop case studies based on Economy, Efficiency, Effectiveness, and Cost Effectiveness
- Prepare a draft report
- Facilitate a workshop to review the draft report with key stakeholders and revise it based on feedback received.

The report should follow the outline of:

- Executive Summary
- Introduction
- 4 case studies, including objectives and research questions, methodology, results, conclusions and recommendations for each case
- Overall conclusions and recommendations re VfM
- References
- Annexes

## **6) Outputs**

- Development of an analytical framework for measuring and improving VFM performance in health service delivery (with possible relevance for broader service delivery)
- Recommendations on how we could use the analytical framework and case study findings for future programme development such as the selection of aid instruments
- Analysis on the use and appropriateness of results based aid approaches
- Draft report of four case studies that can be utilised by various actors, in particular DFID, to demonstrate VFM.
- Final report of case studies
- A consultancy process report which provides an overview of the consultancy, an executive summary of the 4 case studies, the methodology used to prepare the case studies (unless this is in the case studies themselves), the list of interviewees and documents reviewed.

Soft copies of both the draft and final draft reports should be provided in word doc. format. Three hard copies of both reports should also be submitted.

**7) Timing and duration**

The assignment will take place between 8<sup>th</sup> June and 31<sup>st</sup> July 2012 with the international consultant providing in-county inputs between the above dates.

# Annex 4: People Consulted

Name	Position	Organisation
Alison Dembo Rath	NHSSP Technical Director	Options Consultancy Services Ltd
Anil Maharjan	Senior Technical Officer	Nepal Central Blood Transfusion Service
Astrid Thygesen	Senior Procurement Advisor	NHSSP
Chhaya Jha	GESI Advisor, NHSSP	Nepal Ministry of Health & Population
Damodhar Adhikari	Health Financing Advisor	RTI Ltd
David Hepburn	Senior Procurement Advisor	NHSSP
Deborah Thomas	Gender/Equity Mentor	Options Ltd
Duncan Overfield	Senior Economic Advisor	DFID Nepal
Dr. Ganga Shakya	Maternal Health Advisor	NHSSP
Greg Whiteside	NHSSP Senior Quality Assurance Advisor	NHSSP
Hom Nath Subedi	EAP Advisor	NHSSP
Jabinder Panday	Planning Officer	Department of Health Services
Kirstan Hawkins	NHSSP Technical Director	Options Consultancy Services Ltd
Krishna Bohara	Under Secretary	Nepal Ministry of Finance
Matthew Gordon	Human Development Team Leader	DFID Nepal
Maureen Dariang	EHCS Advisor	NHSSP
Dr. Mukunda Sharma	Pathologist	National Public Health Laboratories
Nancy Gerein	NHSSP International Lead	NHSSP

Rajan Adhikari	Planning Officer	Nepal Ministry of Health & Population
Ramchandra Man Singh	Health Systems & Governance Adviser	NHSSP
Sarah Hepworth	NHSSP Programme Manager	Options Consultancy Services Ltd
Sitaram Prasai	GESI Advisor	NHSSP
Sudhira Acharya	Planning Officer	Department of Health Services
Sunil Khadka	Infrastructure Advisor	NHSSP
Shree Krishna Bhatta	M&E Director	Nepal Ministry of Health & Population
Suresh Tiwari	Health Financing Advisor	NHSSP
Tomas Lievens	NHSSP Technical Director	Oxford Policy Management Ltd

# Annex 5: References

*Annual Review of the Nepal Health Sector Support Programme.* January – December 2011. NHSSP 2012.

*DFID's Approach to Value For Money.* Department for International Development, July 2011.

*Efficiency In Public Procurement In Rural Road Projects Of Nepal.* R. Benamghar & A Iimi. World Bank Policy Research Working Paper 5736. July 2011.

*Financial Management Information Systems: 25 Years of World Bank Experience on What Works and What Doesn't.* World Bank, 2011.

*Measuring value for money in healthcare: concepts and tools.* P. C Smith. Centre for Health Economics University of York. September 2009.

*Nepal Health Budget Analysis 2011-12.* NHSSP, 2012.

*Nepal Health Sector Support Programme Inception Report* Options Ltd, January 2011

Public Expenditure and Financial Accountability Programme (PEFA). <http://www.pefa.org/>

*The Impact of Enterprise Resource Planning Systems on Management Accounting: an Australian Study.* B. Jackling & G. Sprackman, Deakin University, Victoria, Australia, 2005.

*Transaction Accounting and Budget Control System (TABUCS): A Concept Note.* NHSSP July 2011.