Monitoring and Evaluation Plan

Vanuatu Transport Infrastructure Development Program

MCC Acknowledged and Approved:

Original M&E Plan: June 2006

Revised M&E Plan; Version I: June 2009

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Monitoring and Evaluation Plan
Vanuatu Transport Infrastructure Development Program

The M&E Plan contains the following sections:

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Introduction

The Monitoring and Evaluation (M&E) plan is an essential and integral component of any Millennium Challenge Corporation (MCC) program. The Vanuatu M&E Plan serves the following functions:

- Describes the goal of the Program and explains how the MCC and MCA-Vanuatu (MCA-V) will monitor the Project progress and benefits in order to determine whether they are achieving their intended results.
- Serves as a guide for Program implementation and management, so that MCA-V staff, steering committee members, and Implementing Entities understand the results they are responsible for achieving.
- Details the mechanisms for quarterly and annual reporting on results to track progress and contribute information towards potential needed Program Adjustments.[1]
- Describes methodology for evaluating the relationship between project activities and the program's goals and objectives.

This M&E Plan is considered a binding document and failure to comply with its stipulations could result in suspension of disbursements. It may be modified or amended as necessary only with the approval of MCC and if it is consistent with the requirements of the compact and any other relevant supplemental legal documents.

This current version represents revisions as of the "revised and updated" date listed on the cover page. The plan was revised to reflect changes in the Program that have taken place since Entry into Force (EIF), as well as updated sources of data that will provide better tracking of results.

1. Summary of Program and Project Activities

The overall objective of this MCC Compact (thereinafter known as "Compact") is to reduce poverty and increase incomes in rural areas by stimulating economic activity in the tourism and agricultural sectors through the improvement of transport infrastructure, which is key to economic growth and poverty reduction in Vanuatu (the "Compact Goal"). By focusing on one of the principal factors constraining private sector development and access to social services – namely poor roads – the program intends to reduce transport costs and improve reliability of access. By reducing transport costs, the program expects to stimulate agricultural and tourism activity in rural areas, thereby increasing incomes and reducing poverty.

Originally Vanuatu's MCA Program ("Program") consisted of two principal project activities: (i) civil works for the reconstruction or construction of priority infrastructure on eight islands, covering roads, wharfs, airstrips and warehouses (the "Infrastructure Activity"); and (ii) institutional strengthening efforts in the Public Works Department ("PWD"), a division within the Ministry of Infrastructure and Public Utilities ("MIPU"), including the provision of plant and equipment for maintenance of the infrastructure (the "Institutional Strengthening Activity"). However due to various unforeseen economic circumstances that drastically increased construction costs, the scope of work has been reduced to funding two road projects on the islands of Efate and Santo, and a reduced scope of institutional strengthening. This re-scoping initiative was approved by MCA-V Steering Committee on the 22nd of February 2008.

Infrastructure Activity

MCC Funding and additional funding from New Zealand Aid ("NZAID") will be used to rehabilitate or construct priority infrastructure (each an "Infrastructure Subproject Activity"), including:

(i) Efate - Ring Road. Upgrade 92.5 km of the Ring Road on Efate, the most populous of Vanuatu's islands, to a two-lane bitumen seal standard, with improved drainage systems; and

(ii) Santo - East Coast Road. Upgrade the 57.2 km road from Luganville to Port Olry on the island of Santo to a two-lane, bitumen seal standard, including associated drainage structures.

Given funding constraints, the following infrastructure sub-projects will no longer be rehabilitated using MCC funding: 1) Santo - South Coast Road Bridges, 2) Malekula - Norsup Lakatoro Lits Lits Road, 3) Malekula - South West Bay Airstrip, 4) Pentecost - Loltong Wharf and N-S Road, 5) Tanna - Whitesands Road, 6) Epi - Lamen Bay Wharf, 7) Ambae - Road Creek Crossings, 8) Malo - Road Upgrade and 9) warehouses in multiple locations.

[1] It should be noted that the M&E Plan is not the only tool used for program management of the Compact. The M&E Plan includes indicators to track progress at the process, output, outcome, objective and goal levels. Outcome, objective, and goal indicators help to track progress over the medium and long-term. Process and output indicators help to track achievement of key milestones as well as the timely delivery of goods and services. Other program management components provide more detailed time-bound information for tracking progress including, for example, work plans and monthly construction and supervisory reports.

Institutional Strengthening Activity

Recognizing the importance of maintenance of transport infrastructure, the Institutional Strengthening Activity will provide focused assistance to the PWD to remove key constraints that the department faces in effectively delivering maintenance, repair services, and contract management. Under the Institutional Strengthening Activity, the Program also provides support for the sustainability and viability of the PWD through organizational reform and policy changes. MCC Funding will be used for:

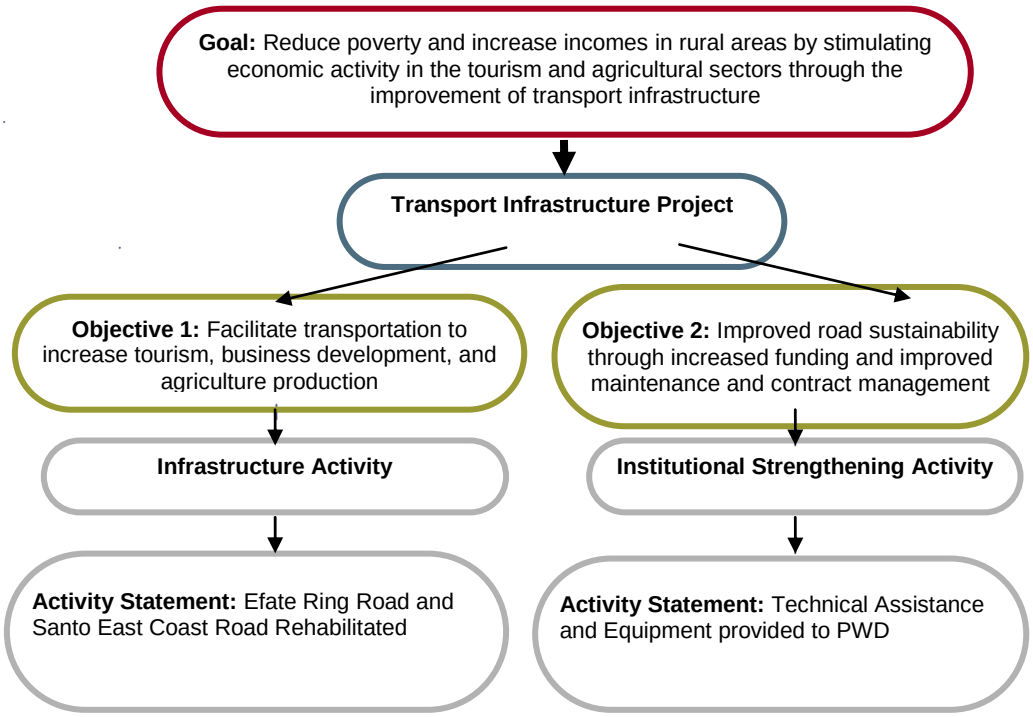
(i) Plant and Equipment - Provide essential plant and equipment to maintain the various transport infrastructures. MCC funding will be used to supply new equipment (equivalent to USD $1,048,648) to PWD for infrastructure maintenance.

(ii) Technical Assistance - Provide contract and project management capacity and strengthen road maintenance and safety. In a renewed attempt to strengthen PWD, 1) a new Acting Director-General of the Ministry of Infrastructure and Public Utilities (MIPU) has been appointed to manage change and PWD strengthening, 2) MCA-V has recruited and trained an Engineering Support Unit (ESU) comprising an engineer's representative, three site supervisors, two environmental and social impact officers, and an administrative officer (When the Compact ends, these staff will be integrated into PWD as permanent members of the public service), 3) a new Manager for Compact Responsibilities is being engaged, 4) two road maintenance crews are being established and 5) MCA-V is funding a seven month Road Assessment and Maintenance Management (RAMM) consultancy to a) improve the register of roads, b) identify and develop systematic inspections, maintenance management plans and budgeting for more effective implementation and management of road assets of the project roads, c) promote strategic use of increased Government funds for road maintenance following the completion of construction, as well as for Vanuatu's road network as a whole, as defined in the Compact and the Government's budget documents and d) advise on legislative reforms for road sustainability and safety.

Program Logic

The following Program Logic represents the basic outline of the Program and the expected causal links between the Project Activities and the Program Objectives and Goals.

Figure 1: Vanuatu Compact Program Logic



2. Program Impact

Economic Impact

The economic impact of the compact was estimated by forecasting the probable economic value-added benefits of each project relative to the costs, as encapsulated in the Economic Rate of Return ("ERR").

The original ERR for the overall program was estimated to be 24.2%, calculated based on the sum of all costs and benefits over a 20-year time horizon, for all original planned sub-projects. Only benefits that could reasonably be expected to generate quantifiable economic returns (increases in value-added) were included in the analysis. Costs and benefits were estimated using the best available data. Conservative assumptions were made when hard data was scarce or unavailable. As such, the resulting base case ERR projections can be considered reasonable estimates of the expected economic impact of the projects.

As noted previously, however, the Program underwent considerable re-scoping in early 2008, due to cost increases identified as project planning got underway. As a result of the re-scoping of the program, only two sub-projects remain in the compact, the Efate Ring Road and the Santo East Coast Road. In addition, the updated estimated costs for those projects increased from the original estimate. Consequently, it was necessary to re-calculate the ERRs for each one, to ensure that they were still economically viable within the required cost-benefit threshold.

Table 1: Revised Economic Rate of Return

Project	Updated Projected ERR
Efate: Round Island Road	15.2%
Santo: East Coast Road	28.5%
Program Total	20.7%

The same ERR assumptions -- presented in I -- and model used for the original calculations were used for the updated rates of return. The only parameters that were changed were the estimated costs. Despite the higher cost, rates of return for both road projects remained robust and above the minimum hurdle rate of 12%.

Benefits

Expected benefits for each project were identified and quantified by estimating the induced value added impact of (i) reduced transport costs; and (ii) improved reliability of access on economic activity in the tourism and agriculture sectors. The full range of quantifiable benefits and means of estimation for the civil works subprojects are summarised in Annex I: Methodology for Economic Benefits Calculations. In addition, PWD operations and maintenance cost savings were considered as providing a national benefit in estimating the program ERR, but were incorporated into the analysis using estimated amounts; consequently, it may be difficult to measure these benefits over the course of the Compact against specific baseline values. Baselines for other key benefits in tourism, roadside enterprise development, traffic counts, household income, including basic household agriculture production and economic activity have been established, and follow-up data will be collected at the end of the Compact for comparative purposes. In addition to the expected economic benefits, the M&E Plan also considers the potential for additional benefits with regards to improved access to social services such as health care, education, vocational and capacity training activities within the two project areas. The M&E Plan has been developed to establish the extent to which expected benefits are achieved.

Beneficiaries

The primary beneficiaries of the proposed projects fall into the following two broad categories:

- Providers (and employees) of tourist-related goods and services (accommodation providers, airlines, tour companies, shops, restaurants, artisans and other food outlets including produce markets that are orientated to tourist clientele)
- Local producers (landowners; existing and potential lessees of land; processors of primary produce) and inhabitants of remote communities with limited access to social and other services, although, the Project does recognize that the role of traditional economic practices continues to play a large role in the social and economic lifestyles of beneficiaries in a variety of ways.

As per the October 28, 2005 MCC Investment Memorandum, the original ERR and beneficiary calculations held a growth rate of 15% a year, once construction was completed, was assumed for the tourism sector. Based on a growth rate assumption of 15% a year and employment data from the 2000 from the National Tourism Development Office, an original target estimate was calculated of 280 additional formal sector jobs and 25 new locally-owned businesses *each year,* impacting the lives of over 1,300 people[2]. This number was then revised in 2008 based on several factors. First, data from the MCA-sponsored Tourism Income and Expenditure Survey, whose baseline data collection took place in 2007, was used to update the tourism employment baseline numbers.[3] The tourism employment growth rates were then calculated using an estimated rate of 8.25% for Efate and 8.8% for Santo, which are based on Gross Domestic Price ("GDP") growth rate estimates from 2008 by the International Monetary Fund ("IMF") and the Asian Development Bank ("ADB"), adjusted for the assumption that the tourism sector will benefit disproportionately in growth. [4]

Prior to the termination of the nine sub-projects due to the 2008 re-scoping, the original program-wide beneficiaries were estimated at 65,000. Terminated sub-projects include: 1) Santo - South Coast Road Bridges, 2) Malekula - Norsup Lakatoro Lits Lits Road, 3) Malekula - South West Bay Airstrip, 4) Pentecost - Loltong Wharf and N-S Road, 5) Tanna - Whitesands Road, 6) Epi - Lamen Bay Wharf, 7) Ambae - Road Creek Crossings, 8) Malo - Road Upgrade and 9) warehouses in multiple locations.

Since the 2008 re-scoping, two alternative methods of calculating beneficiaries have been selected. The first method, based on the MCC definition of an "impact corridor", includes village populations that are within a five (5) kilometer distance of either side of the Efate Ring Road and the Santo East Coast Road. Using this method of calculation, the estimated number of beneficiaries is 14,783; i.e., 7,135 beneficiaries from Efate and 7,648 from Santo. The second method includes the aforementioned village populations as well as the outer island populations of 1) Lelepa, 2) Pele, 3) Emau, 4) Ngunga and 5) Moso situated in the northern part of Efate, and the southeast outer island of 1) Mavea of Santo as these village populations depend on the MCC funded roads for access to markets, social, educational and health services. The estimated number of beneficiaries using the second estimation method identifies 21,000 beneficiaries; equivalent to14,000 beneficiaries from Efate and neighboring outer islands and 7,000 beneficiaries from Santo and its neighboring southeast outer island.

Moreover, given that 67% of the working population[5] generates only small quantities of cash from the sale of goods, long distances and high transport costs have a significant impact on their ability to increase cash income. Furthermore, without cash income, rural residents are unable to pay for productivity-enhancing social services, such as school fees or health services.

In terms of how these individuals in the targeted project areas benefit from the road work, two key survey efforts will track the impact. The HIES will look at how the projects influence changes in agricultural production, marketing of agricultural goods, and any shifts in quantities of agricultural products consumed for subsistence purposes or sold for cash income. In addition, the Baseline Roadside Enterprise Survey, and its follow-up, the Vanuatu National Statistics Office's ("VNSO") Formal and Informal Business Sector Surveys, will track changes in growth of businesses and markets along the roads, including agricultural businesses.

Risks

The following are possible risk factors that could affect the Program's ability to meet its expected goals, objectives, targets, and timelines.

Tourism Industry Risk

Growth of the tourism sector is important for realising the expected benefits of this program. The tourism sector, however, is influenced by many factors, some within the Government of Vanuatu's ("GoV") control and some outside. In its favour, several factors support tourism growth in Vanuatu. From a national perspective, the country has managed to attract credible investors such as Warwick Hotels and Pacific Blue. From an external perspective, Vanuatu is poised to capture a larger share of the pacific market from other destinations which have experienced some decrease within the last few years, such as Bali and Fiji. If these trends were to continue, higher benefits than what has been projected can be expected. Alternatively, if these trends were to reverse, as a result of exogenous shocks such as the global financial crisis that began in 2008, there will be an adverse impact on the projected benefits

[2] Assuming five people per household.
[3] According to the 2007 tourism survey, it is estimated for the updated baseline that there are 2968 FTE tourism jobs on Efate and 427 FTE tourism jobs on Santo.
[4] The tourism employment growth rates represent a mean growth rate, based on a combination of slow and rapid growth scenarios. Those slow and rapid growth scenarios were, in turn, based on a counterfactual (without-project) assumption of a basic growth rate of 3.8% in the sector. The counterfactual growth rate is based on recent (2008) downward adjustments to Vanuatu's GDP growth forecast by the IMF and the ADB. The IMF has revised its growth forecast to an annual average of 3.75%, or about 60% of the growth rate estimates for the same time period that was put out in previous years. The ADB's 2009 growth rate estimate is 2.9%.
[5] Sixty-seven percent of the economically active ni-Vanuatu population are considered to live predominantly off subsistence activities (HIES 2006)

of the program. The reversal of these trends could be induced by changes in government commitment to tourism development or other exogenous shocks. Hence, development of the tourism sector will be closely monitored by MCA-V over the course of the program.

Additional Cost Over-Run Risk

As previously noted, the Program underwent a significant re-scoping due to higher costs than those that were available at the time of the Program's initial feasibility and design study estimates.

In a small island economy such as Vanuatu's, a large foreign aid program such as the MCA Compact stands to have a substantial influence, and a significant restructuring of the program could have reverberations at the macroeconomic level. For example, the ADB's 2006 Asian Development Outlook cited the MCA Program as a significant economic factor in its assessment of Vanuatu, noting that the 11 initially planned transport infrastructure sub-projects were expected to contribute to expansion in the construction sector, in particular, and to the tourism and agriculture sectors to a lesser extent. Considering that these three areas are among the largest contributors to the country's GDP, their growth over the next few years will likely be lower than originally predicted due to the significant reduction in the project scope. The reduced geographic area of influence of re-scoped program activities will also reduce impacts on improvements in transportation access and reductions in transaction costs for conducting business in Vanuatu.

Timing and Schedule Risk

The timeline for completion of all projects was overly ambitious. Delays in execution of key preparatory activities could have resulted in increased risks for the timely completion of all works by the April 2011 compact end date. Given the progress as of July 2010, project completion is no longer regarded as a significant risk. Of greater concern will be MCA-V's reliance on Vanuatu's national data gathering programs such as the HIES and the Formal and Informal Business Sector Surveys. There is a perceived risk that data will not be available for analysis by the compact end date.

3. Monitoring Component

The M&E Plan measures the results of the Program using quantitative, objective and reliable data ("Indicators"). Each Indicator has one or more expected results that specify the expected value and the expected time by which that result will be achieved ("Target"). The M&E Plan will measure and report on four types of Indicators, where applicable. First, the Compact Goal Indicators (each, a "Goal Indicator") will measure the impact of the Program on the incomes and poverty levels of Ni-Vanuatu who are affected by the Program (collectively, "Beneficiaries"). Second, Objective Indicators (each, an "Objective Indicator") will measure the final results of the Projects in order to monitor their success in meeting the Objectives. Third, Outcome Indicators (each, an "Outcome Indicator") will measure the intermediate results of goods and services delivered under the Project in order to provide an early measure of the likely impact of the Projects on the Objectives. Fourth, Project Activity Indicators and Process Milestones (each, an "Activity Indicator" and "Process Milestone") will measure the delivery of key goods and services in order to monitor the pace of Project Activity execution.

It should be noted that the current monitoring component has been revised substantially from its original to reflect both the significant changes in the Program since EIF as well as the availability of more suitable metrics to measure Program progress and results. The monitoring framework described in the following sections outlines all of the current indicators and targets in the above categories. Changes – along with the reasons for them – are summarized in Annexes II and III; Summary of Indicator and Target Changes.

Goal Indicators

The Goal for the project is to alleviate poverty by increasing economic activity and the incomes of men and women in rural areas through the amelioration of transport infrastructure. Three indicators will be used to measure the program goal: (a) the change in cash income, used to measure the extent of income earned through participation in the formal economy, whilst taking note of changes within the traditional economy practices within beneficiary populations, (b) change in poverty, as indicated by an improved standard of living above the most basic needs poverty line, and (c) change in employment in the tourism sector.

The updated cash income and poverty indicators and targets were developed following the HIES 2006, which had been previously identified as a source for updated baseline data, and the accompanying poverty analysis that was conducted after the survey. Using the HIES 2006, Vanuatu developed more reliable measures of cash income, and also established a national poverty line, defined as the "Basic Needs Poverty Line". Consequently, baseline poverty and income measures that had not been previously available were established, which will provide a much-improved measure of high-level Program results.

The HIES is being repeated again beginning in June 2010 through to early April 2011, the final year of the Compact, to estimate the actual rise in income and reduction in poverty of targeted beneficiaries over the life of the compact. Special focus within the HIES 2010-2011 will be given to issues of access to social services and attempting to capture the 'flows' into households of traditional economic goods and gifts.

The updated tourism employment indicators and targets were developed using a combination of data from the 2006 HIES and the 2007 tourism income and employment baseline survey. The tourism survey will be repeated towards the end of 2010 through to early April 2011.

Both the 2010-2011 HIES and follow-up of the tourism survey will provide relevant end-of-compact follow-up data on the Goal indicators to measure progress against the baselines and targets.

Objective Indicators and Outcome Indicators

The Objective and Outcome Indicators (with associated targets) that will be used to monitor the success of the two subprojects are outlined below. The indicators selected were based on the relative weight of benefits identified in the economic evaluation of each subproject and the practical means by which data on the indicators can be collected. Given that expected behavioral change associated with the implementation of the Program is not expected until after project completion, none of the objective or outcome indicators are linked to disbursements.

Output Indicators and Process Milestones

Project Activity Indicators and Process Milestones measure the delivery of key goods and services in order to monitor the pace of Program execution. These indicators were recently refined as part of this revision to reflect more meaningful metrics tied to the project implementation plans.

4. Evaluation Component

Final Evaluation Methodology

The MCC Department of Economics and Evaluation and the Vanuatu National Office are exploring opportunities for conducting a rigorous post compact impact evaluation on the island of Santo comparing treatment groups (villages within a 5 kilometer distance of either side of the Santo East Coast Road) with that of homogeneous communities significantly distant from the six-meter bitumen sealed road in order to evaluate the impact of improved rural transport on agricultural activity and rural household incomes. The 2006 HIES will serve as the primary baseline dataset and the 2010 HIES survey results will provide close-out data for comparison of the two groups. Other evaluation related survey data will be discussed below. MCC will fund the cost of the post compact evaluation using MCC due diligence funds. In conjunction with MCA-Vanuatu, MCC will prepare the terms of reference and openly compete a request for proposals issuing a task order for the design and analysis of survey data among five MCC pre-qualified Indefinite Delivery Indefinite Quantity (IDIQ) evaluation firms. Pre-qualified IDIQ firms include the Poverty Action Lab, Social Impact, IRIS, NORC and IMPAQ. The IDIQ firm that wins the award of contract will have an option to sub-contract for local data collection services. Post-compact data collection services could be either sub-contracted directly by the IDIQ firm or, alternatively, by means of a cooperative agreement between the MCC and the Vanuatu National Statistical Institute.

In the event that the opportunities for a rigorous impact evaluation are not possible, the MCC will measure program impact using a simple pre/post comparison methodology, i.e. comparing data collected prior to and following implementation of project activities. It may be necessary to utilize this strategy as island populations are relatively heterogeneous exacerbated by the diffuse geographic fragmentation of the 106 island nation, widespread settlement, and generally low population density, thereby, making it difficult to establish a credible counterfactual, i.e. a group of individuals who in the absence of the Program would have outcomes similar to those who have been exposed to the Program.

Apart from a rigorous impact evaluation, MCA-Vanuatu and MCC will jointly conduct a) a Compact Completion Report (CCR) and b) close-out economic rate of return and beneficiary analyses.

Objectives

The objective of the evaluation component of the M&E plan is to measure the extent to which the program contributes to poverty alleviation and economic growth and test key assumptions made in the economic analysis. As such, the objectives of the evaluation component will be to assess the following data sets, which have been separated into different sections depending on status of the data set:

- Role of transportation infrastructure on agricultural production and sales and development of businesses in the project areas (which will be based primarily on the):
    - Roadside Enterprise Survey and VNSO Formal and Informal Business Sector Surveys;
    - Monitoring data (e.g. traffic volumes and tourism activity); and
    - HIES (2006 and 2010).
- Impact of the roads on the tourism economy (including income, tourism expenditures, and tourism employment levels), which will be based on the:
    - International Visitor Survey (TRIP);
    - Domestic Tourism Survey (TRIP);
    - Cruise Ship Survey (TRIP);
    - Tourism Business Survey (TRIP);
    - Yacht Visitor Survey (TRIP);
    - Roadside Enterprise Survey (MCA-V);
    - Formal and Informal Sector Survey (NSO);
    - Foreign Investor and Land Values Survey (MCA-V).
- Impact of transport infrastructure on household income and poverty in Vanuatu, based on the:
    - HIES (2006 & 2010).
    - Post Compact MCC-funded Santo East Coast Road Impact Evaluation
- Impact of transport infrastructure on access to schools, healthcare, and other social services, based on the:
    - Interpretation of the results of the HIES (2006 & 2010);
    - Post Compact MCC-funded Santo East Coast Road Impact Evaluation

Activities

Evaluation activities will consist of two parts:

I. Final Evaluation, as described above. The Final Evaluation must at a minimum (i) evaluate the efficiency and effectiveness of the Project activities; (ii) seek to establish the causal relationship between the Projects and the compact goal; (iii) thoroughly address the evaluation objectives identified above; (iv) determine if and analyze the reasons why the compact goal was or was not achieved; (v) identify positive and negative unintended results of the Program; (vi) provide lessons learned that may be applied to similar projects; and (vii) assess the likelihood that results will be sustained over time.

II. Ad Hoc Evaluations. Ad-hoc will be used during the compact close-out period to address specific questions or concerns raised during implementation that have not been covered by planned surveys or studies. Ad hoc surveys are discussed below.

5. Surveys

The following is a summary of the surveys that have been or will be undertaken to provide requisite data/information for the Monitoring and Evaluation of program activities. It is important to note that a number of these surveys were conducted as baseline surveys only.

I. 2007-2008 Baseline Surveys and 2010-2011End-of-Compact Surveys

- **Baseline Survey of Road-side Enterprises.** A special survey was conducted by MCA-V in 2008 to create a census of all businesses along the two project roads. The survey captured the type, size of business, gender of owner and time period in operation. It will be important to track business development along the roads, as the rise in the number of business establishments will provide a secondary indicator of the impact of the road projects on prompting commercial activity. As a result of the information gained during this survey, VNSO were able to develop the questionnaires for the National Informal and Formal Business Sector Surveys.

- **Baseline Survey of Tourism and Tourism Expenditures**. These surveys, contracted by MCA-V to Tourism Research Investment and Planning (TRIP), a private consulting firm, estimate baseline and end-of-compact data on tourism expenditure, tourist behavior patterns, tourism employment, and other impacts of the tourism industry on the Vanuatu national economy, such as contribution to GDP. The baseline survey was conducted in 2007, and the follow-up survey will be conducted in late 2010, with final reporting by April 2011.
- **Baseline Survey of Household Income and Expenditure (HIES)**. The HIES is conducted by the VNSO, and will provide the basis for measuring the extent to which the Goal for the project of increasing per capita income and reducing poverty is achieved. The survey will explicitly account for income from agricultural activities (as distinct from salaries/wages paid by employers) and will have a higher rate of sampling of project beneficiary groups to ensure statistical validity. The 2006 iteration of the survey provided baseline data. MCA-V will fund and coordinate with VNSO implementation of a follow-up survey in 2010 to measure end-of-compact results.
- **Baseline Traffic Counts and Origin and Destination Surveys**. MCA-V and the PWD worked together in September 2008 to conduct baseline traffic counts on the project roads, using automated traffic counters. The baseline counts also included a baseline Origin and Destination Survey on a select sample of vehicle. Surveys were undertaken for seven days at 12 hour intervals (6AM-6PM) at each location so that fluctuations in demand by day of week can be taken into account and to ensure statistical significance given the generally low levels of traffic. As there is little traffic at night, each survey will be undertaken for a 12 hour period.
- **2011 Traffic Count Surveys**. There are scheduled for early 2011 (December 2010-March 2011). Owing to issues with inconsistent methodology, staffing capacity and pressing time lines, surveys for 2009 and early 2010 have not been consistent. there are now plans to resume the Traffic Count surveys in September 2010, and the final count for early 2011 in conjunction with the end line **Origin and Destination** survey.
- **2010 National Formal and Informal Sector Survey**. To track business development at the end of the compact and compare with the ex-ante information captured in the Road-Side Enterprise Survey, MCA-V has provided funds to the VNSO to incorporate this information collection into their National Formal and Informal Sector Surveys in 2010. The entire sample of businesses along the two project roads will be included in the total samples of these surveys, and VNSO will adjust the questionnaires to capture additional information relevant to tracking the impact of the compact.
- **2010Household Income Expenditure Survey**. The 2006 iteration of the survey provided baseline data. MCA-V will fund and coordinate with VNSO implementation of a follow-up survey in 2010, to measure end-of-compact results.

II. Special Studies Undertaken by MCA-V

- **National Basic Needs Poverty Line Study.** As part of the recommendations for the first Data Quality Audit in 2007, and after the first HIES results of 2007, both MCA-V and MCC strongly felt that there needed to be more in-depth analysis done into developing Vanuatu's poverty line to replicate the estimation methodology for poverty in Efate and Santo, as the current Vanuatu Poverty Report only provided rates for Port Vila, Luganville and Rural (covering whole of Vanuatu), therefore, for the purposes of the project, it was proving quite difficult to measure poverty for the two areas of interest. The final draft is scheduled to be submitted to MCA-V by the consultant by September 2010 and when this report is approved, MCA-V hopes that the information will be useful, not just for our own purposes, but for any evaluation and future program development activities in Vanuatu.

III. Discontinued Surveys

- **Accommodation Survey**. It was originally intended that a routine monthly survey of a sample of hotel and bungalow accommodation would be done by the VNSO for major establishments in Port Vila, Santo, and Tanna. The sample was planned to cover the majority of available rooms in Vanuatu, and will be updated from time to time as necessary. The survey was to collect room-night and bed-night occupancy rates. However because it was difficult to obtain information from hotel operators and owners as issues of privacy usage of this information was a genuine concern led to a lack of response rates. Therefore, it was agreed that occupancy rates be eliminated from the list of indicators and M&E Plan.
- **Road Condition Survey**. A survey of road conditions was previously conducted to monitor change in road conditions, as well as performance of PWD. The survey was meant to assess the condition of the road through a visual assessment of its condition and how fast it is possible to drive on the road under certain consistent conditions, holding other factors constant.

This survey has since been discontinued, as it was not considered a viable measure for road conditions and maintenance indicators, in favor of an "International Roughness Index" indicator that the World Bank uses for paved and unpaved roads as stipulated in the Indicator Definition Tables in this document. Refer to Annex IV: Methodology for Calculating the International Roughness Index

6. Implementation

Roles and Responsibilities

As the entity account to the GoV and MCC, MCA-V will be responsible for managing the implementation of the monitoring and evaluation plan, including all data collection and reporting activities. MCA-V responsibilities as they relate to M&E fall into the following tasks:

- **Orientation, Management, and Consolidation of Primary Data:** Before beginning implementation of individual Projects or Project Activities, MCA-V will orient staff of supporting agencies and Implementing Entities on how performance will be measured, and will provide any necessary training or technical assistance to comply with the M&E Plan. MCA-V will collect data from implementing agencies and review comments and suggestions from stakeholders and Project Managers. MCA-V will undertake some M&E surveys itself, but will generally arrange for others to do this work.
- **Procurement and Oversight of Implementing Entities and/or Consultants for Special Studies and Surveys:** MCA-Vanuatu will engage and oversee implementing entities and/or independent international consultants to develop, conduct and/or provide technical assistance for specials surveys and studies.
- **Information Management:** All M&E related data and records including but not limited to contracts, financial information, surveys and special studies, materials, papers and computer records, will need to be stored with secure access to MCA-V and MCC as and when required. Since the Vanuatu program is a small program all its data are managed through Microsoft Excel Spreadsheets and Microsoft Access. Some of the data are managed by the VNSO.
- **Data Quality:** MCA-V will regularly assess the quality and timeliness of data submitted by implementing agencies and will provide recommendations to improve quality and compliance. MCA-V has engaged the services of an independent international consultant as the Data Quality Auditor (DQA). The first audit was done in 2007, the second in 2009 and it is expected that the final audit will take place in late 2010. MCA-V will implement recommendations of the DQA within three months of the audit or provide justification for non-compliance when recommendations are not followed.
- **Data Reporting and Outreach:** MCA-V will be responsible for reporting on program performance to MCC, MCA-Steering Committee and stakeholders. As such, MCA-V will directly participate in the monitoring of program activities through site visits, reviews of project reports, and beneficiary feedback. MCA-V reports will present and interpret the data on program performance, identifying issues and, where necessary, remedial measures.

Disaggregating Data by Gender, Age, and Income

Given that this program aims to provide public goods for the benefit of communities, rather than individuals, it is difficult to identify individual beneficiaries. Nevertheless, as practicable, reporting on the following indicators will be disaggregated by gender, age, and/or income:

- Cash income, disaggregated by sex of head of household
- Tourism jobs created
- Owners of road-side business establishments

It is also important to discuss the issue of the Poverty Study which was highlighted in the previous section on "Special Studies undertaken by MCA-V". Given that the overall goal of the Compact is to measure whether the program has achieved goals of increasing income of the rural poor and increasing employment via rural transport infrastructure upgrades, it is essential that MCA-V is able to develop valid and quantifiable poverty indicators such as those that have now been developed in the National Basic Needs Poverty Line Study for Efate and Santo. It is also relevant to point out that these poverty rates that were calculated for the two project areas have been done so using the VNSO National Poverty rate methodology (based on that developed by the Asian Development Bank), and that they are based on expenditure per household using baseline information gathered in the HIES 2006.

Furthermore, regarding the HIES, it is important to note, that as part of the recommendations by the Data Quality Auditor, the questionnaires for the 2006 HIES were revised substantially to obtain more gender-disaggregated

information and to provide more insight into intra-household dynamics. Data from both the 2006 and 2010 HIES should be able to help provide insight into some of the program impacts along gender lines.

Reporting

MCA-Vanuatu shall follow current approved MCC reporting guidelines, as posted on the MCC website (www.mcc.gov) and provided by the agency to MCA units. Quarterly and annual reports, Indicator Tracking Tables, periodic data quality reviews, M&E work-plans, procurement plans, budgets, etc. will be submitted according to schedules and formats outlined in such guidance.

All data collected in surveys should be reported in a form that can be made publicly available, such as on the MCA-V website. This will primarily involve meeting privacy and confidentiality conditions whereby data cannot be linked to individual people or small localized communities/groups. This data, and all associated progress reports, including those relating to survey design and analysis and reports of the DQA should be made available on the MCA-V's website.

Data Quality Reviews

MCA-V will provide capacity building services to implementing agencies to ensure pertinent and reliable data is collected for program monitoring and evaluation. In addition, MCA-V will conduct onsite, ad-hoc, data audits to check for consistency and reliability of data received from implementing agencies. Data audits will be conducted by MCA-V more frequently during the beginning of the program and less frequently as data quality improves.

In addition, an independent consultant (the DQA) has been engaged to review the quality of the data gathered through the M&E Plan to ensure that data reported are as valid, reliable, and timely as resources will allow. The objective of the data quality review will be to verify the quality and the consistency of data across different implementation units and reporting institutions. The data quality reviews will also identify strategies for improving data quality when applicable.

The DQA has entered into an Auditor/Reviewer Agreement with MCA-V and is contracted to perform three audit reviews throughout the duration of the program. The first audit took place in 2007, the second audit took place in 2009 and the final review will occur in the latter months of 2010 and intermittently extend into the early months of 2011 to coincide with survey design, field supervision, data entry and survey close-out activities.

Approval Procedures

MCA-V will request the following M&E related approvals: :

- MCA-V will seek MCC's approval prior to engaging consultants, contractors or other government agencies to undertake surveys, studies or audits per MCC Procurement Guidelines as posted to the MCC Web site.
- MCA-V will submit any proposals for change to the Indicator Tracking Table to MCC-M&E for approval prior to making any changes to said table.
- MCA-V will submit proposals for change to the M&E Plan to MCC for approval prior to making any changes to an approved M&E Plan.
- MCA-V will follow any other requirements outlined in MCC's approval procedures, as they relate to M&E activities as per MCC's Policy on Monitoring and Evaluation as posted to the MCC Web site.

M&E Risks

M&E Plan implementation risks include the following:

- MCA-V fails to initiate surveys as scheduled, which can be mitigated through sound project management;
- Survey design is poor; which can be mitigated by ensuring that the DQA is used effectively to review survey designs prior to implementation, surveys are approved by MCC prior to implementation, and surveys are repeated if the DQA identifies problems with implementation;
- Data collection quality is low, which can be mitigated by ensuring clear specification of data to be collected, the effective training and supervision of enumerators, and introduction of quality controls on data entry and data validation;
- Budgetary allocation for each survey is insufficient to effectively carry out the survey; which can be mitigated by reviewing, updating and reallocating M&E budgets annually and
- Surveys are unable to identify tangible changes or causal links between the project and projected outcomes; which can be mitigated through effective survey design, questionnaire development and adequate representative sampling.

MCA-V will provide technical assistance to the VNSO, PWD and other collaborating entities in order to ensure that surveys are planned well in advance of their projected implementation date and to improve overall survey design. MCA-V, supported by the Program Steering Committee, will be responsible for the effective implementation of data collection when it is covered by MCA-V project funds and for ensuring that other government agencies are able to fulfill their data collection obligations.

7. Budget and Corresponding Procurement Plan

The cost of the M&E activity is estimated at USD1,063,000. Refer to see Annex V and Annex VI for the revised M&E Budget and corresponding Procurement Plan, respectively. The costs have been budgeted based on a detailed examination of unit costs for each component sub-activity. The cost of the program is equal to 2.19% of the cost of physical works; equivalent to USD 29.69 million for construction of the Efate Ring Road and USD 18.79 million for construction of the Santo East Coast Road. Most expenditure occurs towards the end of the project, reflecting the cost of the HIES and other evaluation-related surveys, studies and/or contracts.

Annexes

Annex I: Methodology for Economic Rate of Returns Calculations

Introduction

The economic assessment of the proposed subprojects has been done in accordance with best practices and using the best available data as a basis for defining and valuing costs and benefits.

Especially with respect to benefits, a great deal of judgment has had to be applied. In many cases hard data are scarce or simply unavailable – partly because of weaknesses in the country's statistical base and partly because the benefits are by their nature conjectural.

Therefore people close to the realities of each subproject were widely consulted. The resulting estimates are based on reasonable assumptions and those assumptions are presented clearly.

Costs

Costs are relatively straight-forward and have been estimated in two ways:

- Where design specifications were available, design assumptions were reviewed and in some cases estimated quantities and costs updated.
- In the case of a changed design or a new subproject, fresh estimates were made using estimated quantities based on concept designs and rates developed based on previous contracts in Vanuatu.

Benefits

MCC's goal is poverty alleviation through economic development, therefore in identifying benefits we have focused on enhanced production and value added – i.e., additions to GDP. In this regard the key contributions that the proposed projects make are (a) reduced transport costs and (b) improved reliability of access.

The full range of benefits identified are summarised in the following table and discussed in detail below.

Annex II: Summary of Indicator and Target Changes from 2006 M&E Plan to 2009 M&E Plan

Objective Indicators

1.	Indicator	Cash Income Per Capita (Efate and Santo)
	Date	January 2009
	Project / Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	No: Revised Indicator
	Modification	Modified Definition
	Justification	Indicator has been revised to cover only the Efate and Santo project areas; additional project areas that were originally included in this indicator have been removed because those projects have been eliminated as part of the 2008 Compact restructuring. In addition, the Year 5 targets for this indicator were updated, based on the 2006 Household Income and Expenditure Survey data. (The original estimates were from 2000 data, and were highlighted as subject to change pending updated survey data.)

2.	Indicator	Poverty Rate (Efate and Santo)
	Date	January 2009
	Project / Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	No
	Modification	New Indicator
	Justification	This indicator was added, following the creation in 2008 of a national poverty line in Vanuatu, known as the Basic Needs Poverty Line (BNPL). The current BNPL is based on the 2006 HIES data. When the original M&E Plan was prepared, Vanuatu did not have a national poverty line estimate, so a proxy indicator based on the minimum wage was used. The BNPL is a more appropriate indicator to look at program impact on poverty. Furthermore, using the BNPL will make the MCA-V program monitoring more consistent with larger national efforts.

3.	Indicator	Fraction of individuals with monthly cash income less than minimum wage (20,000 Vatu)
	Date	January 2009
	Project / Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired
	Justification	At the time this indicator was included, Vanuatu did not have a national poverty line, so this was deemed the next best proxy. With the 2006 HIES, a Basic Needs Poverty Line was developed, which is a substantially-improved method for measuring poverty levels.

4.	Indicator	Increased Tourism Employment (Efate and Santo)
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Revised Baseline and Target
	Justification	A new baseline was established with data from the 2007 Tourism Income and Expenditure Survey. Targets were also revised to take into account the revised baseline and project re-scoping.

5.	Indicator	Number of Tourists Per Annum – Malekula and Tanna
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the Tanna and Malekula sub-projects.

6.	Indicator	Number of International Tourists Per Annum - Efate
	Date	June 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The number of international tourist will only be reported at the national level due to limited reliability of inter-island travel data.

7.	Indicator	Number of International Tourists Per Annum - Santo
	Date	June 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	Due to limited number of flights to Santo and the fact that most visitors transit from Vila meant that it is unreliable to calculate the number of tourist travelling to Santo per annum.

8.	Indicator	Number of Hotel and Bungalow Bed-Nights Occupied
	Date	June 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Modified Indicator
	Modification	Change Definition
	Justification	Indicator modified from Hotel and Bungalow Bed Nights to Room Nights, as there is a higher probability of reliably monitoring ”room-night occupancy” as compared to the number of beds occupied within a given room.

9.	Indicator	Number of Bed-Nights – Tanna and Malekula
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the Tanna and Malekula sub-projects.

10.	Indicator	Number of Room Nights Occupied (per annum) - Efate
	Date	June 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	Poor response to questionnaires resulting in unreliable data.

11.	Indicator	Number of Room Nights Occupied (per annum) - Santo
	Date	June 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	Poor response to questionnaires resulting in unreliable data.

12.	Indicator	Airfreight uplifted from SW Bay, Malekula
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the SW Bay, Malekula sub-project.

13.	Indicator	Cargo shipped from Loltong Wharf, Pentecost
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the Loltong Wharf, Pentecost sub-project.

14.	Indicator	Traffic volume, Santo South Coast Bridges, Malekula Lits Lits Road, and Pentecost North-South Road
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the Santo South Coast Bridges, Malekula Lits Lits Road, and Pentecost North-South Road sub-projects.

15.	Indicator	Days the Road is Closed – Santo South Coast Bridges, Pentecost North-South Road
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the Santo South Coast Bridges, Pentecost North-South Road sub-projects.

16.	Indicator	Number of SW Bay Malekula flights cancelled due to flooding
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the SW Bay Malekula sub-project.

17.	Indicator	Time at Wharf (hours/vessel)
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the Wharf sub-project.

18.	Indicator	Damaged Cargo (Tons/Year)
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the Wharf sub-project.

19.	Indicator	Warehouse Revenue (% of operating costs)
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the Wharf sub-project.

20.	Indicator	Kilometres of Roads upgraded, Malekula, Malo, Pentecost, and Tanna
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the Malekula, Malo, Pentecost, and Tanna sub-projects.

21.	Indicator	Number of River Crossings Constructed
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the River Crossings sub-projects.

22.	Indicator	Airstrip meters upgraded at SW Bay, Malekula
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the SW Bay, Malekula airstrip sub-project.

23.	Indicator	Number of maritime wharves reconstructed
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	The 2008 Program re-scoping terminated the maritime wharves sub-project.

24.	Indicator	PWD Budget as a percent of transport revenue collected
	Date	January 2009
	Project/Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Infrastructure Activity
	Original Indicator	Yes
	Modification	Retired Indicator
	Justification	This indicator is no longer relevant given the content of the Implementing Entity Agreement and the Service Performance Agreement with PWD.

Annex III: Summary of Indicator and Target Changes from 2009 M&E Plan 2009 to 2010 M&E Plan

Outcome Indicators

1.	Indicator	Number of enterprises situated in the Efate Ring Road
	Date	10 September 2010
	Project / Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Transport Infrastructure
	Original Indicator	NA
	Modification	New indicator
	Justification	In order to comply with recommendations of December 2009 Data Quality Audit

2.	Indicator	Number of persons employed in enterprises situated on the Efate Ring Road
	Date	10 September 2010
	Project / Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Transport Infrastructure
	Original Indicator	NA
	Modification	New indicator
	Justification	In order to comply with recommendations of December 2009 Data Quality Audit

3.	Indicator	Number of enterprises situated on the Santo East Coast Road
	Date	10 September 2010
	Project / Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Transport Infrastructure
	Original Indicator	NA: New indicator
	Modification	New indicator
	Justification	In order to comply with recommendations of December 2009 Data Quality Audit

4.	Indicator	Number of persons employed in enterprises situated on the Santo East Coast Road
	Date	10 September 2010
	Project / Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Transport Infrastructure
	Original Indicator	NA
	Modification	New indicator
	Justification	In order to comply with recommendations of December 2009 Data Quality Audit

5.	Indicator	Percentage of international air visitors travelling to other parts of Efate
	Date	10 September 2010
	Project / Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Transport Infrastructure
	Original Indicator	NA
	Modification	New indicator
	Justification	In order to comply with recommendations of December 2009 Data Quality Audit

6.	Indicator	Percentage of Efate cruise visitors travelling to other parts of Efate
	Date	10 September 2010
	Project / Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Transport Infrastructure
	Original Indicator	NA
	Modification	New indicator
	Justification	In order to comply with recommendations of December 2009 Data Quality Audit

7.	Indicator	Percentage of international air visitors travelling to other parts of Santo
	Date	10 September 2010
	Project / Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Transport Infrastructure
	Original Indicator	NA
	Modification	New indicator
	Justification	In order to comply with recommendations of December 2009 Data Quality Audit

8.	Indicator	Total expenditure of international air visitors (USD)
	Date	10 September 2010
	Project / Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Transport Infrastructure
	Original Indicator	NA
	Modification	New indicator
	Justification	In order to comply with recommendations of December 2009 Data Quality Audit

Objective Indicators

1.	Indicator	Number of New Hotel Rooms Constructed – Efate
	Date	10 September 2009
	Project / Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Transport Infrastructure
	Original Indicator	Yes
	Modification	Retire from Indicator Tracking Table
	Justification	Low response rate adversely affects the validity and reliability of the data.

2.	Indicator	Number of New Hotel Rooms Constructed – Santo
	Date	10 September 2009
	Project / Objective	Facilitate Transportation to increase tourism, business development, and agriculture production
	Activity	Transport Infrastructure
	Original Indicator	Yes
	Modification	Retire from Indicator Tracking Table
	Justification	Low response rate adversely affects the validity and reliability of the data.

3.	Indicator	Roughness: Santo East Coast Road
	Date	10 December 2009
	Project / Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	Share of road length in “Fair” condition (percent) – Santo
	Modification	Retire original indicator due to change in method of classification.
	Justification	MCC Road Sector Common Indicator reporting requirement

4.	Indicator	Roughness: Efate Ring Road
	Date	10 December 2009
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	Share of road length in “Fair” condition (percent) – Efate
	Modification	None: New indicator
	Justification	MCC Road Sector Common Indicator reporting requirement

5.	Indicator	Annual PWD Score (Level)
	Date	10 December 2009
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Institutional Strengthening Activity
	Original Indicator	NA
	Modification	Retire from Indicator Tracking Table
	Justification	A composite index fails to accurately differential satisfactory from unsatisfactory performance on component activities.

6.	Indicator	Traffic Volume (Average Annual Daily Traffic) – Efate Ring Road
	Date	10 September 2010
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	Yes
	Modification	Corrections to the baseline calculations result in the establishment of different Year 4 and end of compact targets.

7.	Indicator	Traffic Volume (Average Annual Daily Traffic) – Santo East Coast Road
	Date	10 September 2010
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	NA: Same indicator, different methodology
	Modification	Corrections to the baseline calculations result in the establishment of different Year 4 and end of compact targets.

Output Indicators

1.	Indicator	USD Value of signed contracts for feasibility and/or design studies disbursed (Level)
	Date	10 December 2009
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New indicator
	Justification	MCC Road Sector Common Indicator reporting requirement

2.	Indicator	Percent of contracted road works disbursed (Cumulative)
	Date	10 December 2009
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	MCC Road Sector Common Indicator reporting requirement

3.	Indicator	Total USD Value of “adjusted” signed contracts for all road works; including approved variations (Cumulative)
	Date	10 December 2009
	Project / Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	MCC Road Sector Common Indicator reporting requirement

4.	Indicator	USD Value of signed contracts for feasibility and/or design studies (Level)
	Date	10 December 2009
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	MCC Road Sector Common Indicator reporting requirement

5.	Indicator	USD Value of signed contracts for supervision and program management (Level)
	Date	10 December 2009
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	MCC Road Sector Common Indicator reporting requirement

6.	Indicator	Percent disbursed for contracted design/feasibility studies (Cumulative)
	Date	10 December 2009
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	MCC Road Sector Common Indicator reporting requirement

7.	Indicator	Kilometers of all systems of roads under design (Cumulative)
	Date	10 December 2009
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	MCC Road Sector Common Indicator reporting requirement

8.	Indicator	Kilometers of roads under works contract
	Date	10 December 2009
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	MCC Road Sector Common Indicator reporting requirement

Process Milestone Indicators

1.	Indicator	MCA-V awards contract for TA-RAMM consultant
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New indicator
	Justification	Introduced performance indicator to monitor contract award date on critical path to achievement of Institutional Strengthening Activity Objective.

2.	Indicator	PWD Santo East Coast Road maintenance crews trained in sealed road maintenance procedures and equipment
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

3.	Indicator	PWD Efate Ring Road maintenance crews trained in sealed road maintenance procedures and equipment
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

4.	Indicator	Trained ESU members (7) hired as full-time staff of PWD
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

5.	Indicator	2010- 2015 National Road Maintenance Strategic Action Plan approved
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

6.	Indicator	Amendment of Road Traffic (Control) (Amendment) Act No. 41 of 2006 approved
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

7.	Indicator	2010 Traffic Count Surveys on MCC funded roads completed
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

8.	Indicator	2011 Traffic Count Surveys on MCC funded roads completed
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

9.	Indicator	USD value of GoV 2010 annual allocation for road maintenance approved
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

10.	Indicator	USD value of GoV 2011 annual allocation for road maintenance approved
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

11.	Indicator	MIPU 2011 Annual Road Maintenance Plan delivered to MCC
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

12.	Indicator	MIPU 2009 Annual Report on Use of GoV Allocation for Road Maintenance delivered to MCC
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

13.	Indicator	MIPU 2020 Annual Report on Use of GoV Allocation for Road Maintenance delivered to MCC
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

14.	Indicator	DEW contract for PWD Engineering and Environmental Support awarded
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

15.	Indicator	Kilometers of Efate Ring Road under cyclical maintenance community contracts issued by PWD
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

16.	Indicator	Kilometers of Santo East Coast Road under cyclical maintenance community contracts issued by PWD
	Date	10 September 2010
	Project/Objective	Institutional Strengthening Activity
	Activity	Transport Infrastructure
	Original Indicator	No
	Modification	New Indicator
	Justification	Introduced performance indicator to monitor capacity building of PWD on critical path to achievement of Institutional Strengthening Activity Objective.

17.	Indicator	Environmental and Social Assessment (ESA) Reconnaissance Survey & Scoping Report Completed
	Date	10 September 2010
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	Yes
	Modification	Modify Process Milestone Date Target
	Justification	Failed consultant contract resulted in issuance of follow-on contract re-establishing target date from 08May08 to 15May08

18.	Indicator	Environment and Social Assessment (ESA) and Environment Management Plan (EMP) for Efate Completed
	Date	10 September 2010
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	Yes
	Modification	Modify Process Milestone Date Target
	Justification	Completion of EMP is contingent on completion of the Environmental and Social Assessment and Reconnaissance Survey & Scoping Report (ESA/RSSR). Target change in ESA/RSSR resulted in target change for EMP from 30May08 to 25Aug08.

19.	Indicator	Environment and Social Assessment (ESA) and Environment Management Plan (EMP) for Santo Completed
	Date	10 September 2010
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	Yes
	Modification	Modify Process Milestone Date Target
	Justification	In January 2009, the program re-scoping reduced the number of sub-projects from 11 to 2. Accordingly, the target for the Santo ESA/EMP was rescheduled from 30May08 to 10Dec08.

20.	Indicator	Access to all quarry sites on Santo East Coast Road
	Date	10 September 2010
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	Yes
	Modification	Modify Process Milestone Date Target
	Justification	Due to the inadequacy of quarry material from the permitted Vathrath site, it was necessary to secure a permit for the alternative Maour site resulting in a change of target date from 31Dec09 to 26Apr10.

21.	Indicator	Santo RAP Completed
	Date	10 September 2010
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	Yes
	Modification	Modify Process Milestone Date Target
	Justification	Target changed from 31Apr09 to 17 Apr09 due to correction in reporting.

22.	Indicator	Quality and Safety Plans Completed
	Date	10 September 2010
	Project/Objective	Improved road sustainability through increased funding and improved maintenance
	Activity	Transport Infrastructure
	Original Indicator	Yes
	Modification	Modify Process Milestone Date Target
	Justification	Target changed from the May08 original forecast to 10Dec08 due to the later than anticipated signing (8May08 signing) of the design and build contract. As the Quality and Safety plans are contingent on the completion of the project road EMP's, the revised Quality and Safety Plan completion date was rescheduled to coincide with the latter of the two EMP's target dates.

Annex IV: Methodology for Calculating the International Roughness Index

The means for calculating the IRI for both roads was determined using experience and visual guides to assess roughness index.

Roughness Range (IRI)	Road Description
1.5 to 2.5	**Recently bladed surface of fine gravel or soil surface with excellent longitudinal and transverse profile (usually found only in short lengths).**
3.5 to 4.5	**Ride comfortable up to 80-100 km/h, aware of gentle undulations or swaying. Negligible depressions (e.g. < 5mm/3m) and no potholes.**
7.5 to 9.0	**Ride comfortable up to 70-80 km/h but aware of sharp movements and some wheel bounce. Frequent shallow/moderate depressions or shallow potholes (e.g. 6-30mm/3m with frequency 5-10 per 50m). Moderate corrugations (e.g. 6-20mm/0.7-1.5m).**
11.5 to 13.0	**Ride comfortable at 50km/h (or 40-70 km/h on specific sections). Frequent moderate transverse depressions (e.g. 20-40mm/3m-5m at frequency 10-20 per 50m) or occasional deep depressions or potholes (e.g. 40-80mm/3m with frequency less than 5 per 50m). Strong corrugations (e.g. > 20mm/0.7-1.5m).**
16.0 to 17.5	**Ride comfortable at 30-40 km/h. Frequent deep transverse depressions and/or potholes (e.g. 40-80mm/1.5m at frequency 5-10 per 50m); or occasional very deep depressions (e.g. 80mm/1-5m with frequency less than 5 per 50m) with other shallow depressions. Not possible to avoid all the depressions except the worst.**
20.0 to 22.0	**Ride comfortable at 20-30 km/h. Speeds higher that 40-50 km/h would cause extreme discomfort and possible damage to the car. On a good general profile: frequent deep depressions and/or potholes (e.g. 40-80mm/1.5m at frequency 10-15 per 50m) and occasional very deep depressions (e.g. > 80mm/0.6-2m). On a poor general profile: frequent moderate defects and depressions (e.g. poor earth surface).**

Source: "Transport, Water and Urban Development: Unpaved Roads' Roughness Estimation by Subjective Evaluation", Rodrigo S. Archondo-Callao, Infrastructure Notes, Transport No. RT-02, October 1999.

Notes:

A. The "comfortable" ride is relative to a medium-size sedan car with regular independent shock absorber suspension. Ride varies from car to car so detailed descriptions are generally not transportable, but an observer can quickly become "calibrated" for a given vehicle. The ride sensation can be described by the observer at a speed relevant to the level of roughness being defined. These descriptions can help considerably, but they must be developed for local conditions and vehicle types.

B. Travel Speed (km/h): Travel speed indicates common travelling speeds on dry, straight roads without traffic congestion, with due considerations of care for the vehicle and comfort of the occupants.

Annex V: M&E Budget (USD 2006-2009 Disbursements and 2010-2011 Estimates) & Procurement Plan

M&E Budget (USD 2006-2009 Disbursements and 2010-2011 Estimates)

Component	2006	2007	2008	2009	2010	2011	Total
Surveys							
Household Income Expenditure Survey		97,595	-	1,750	358,074	214,581	672,000
Formal & Informal Sector Survey	-	-	-	-	-	67,700	67,700
Hotel Capacity & Occupancy Survey		573	56		-	-	629
Road-side Enterprise Survey			1,580		9.250	9,250	20,080
TRIP Tourism Surveys*	-	-	-	-	-	-	-
Tourism Accommodation Survey	-	-	-	1,013	-	-	1,013
Traffic Counts and Origin and Destination Surveys	-	-	3,322	1,689	14,995	14,994	35,000
Surveys Subtotal	**0**	**98,168**	**4,958**	**4,452**	**36,9867**	**29,8525**	**796,422**
Technical Assistance							
Data Quality Audits	-	23,944	29,929	-	48,922	17,205	120,000
Compact Completion Report					15,500	15,500	31,000
Basic Needs Poverty Line						31,250	31,250
Foreign Investor Survey	-	-	-		22,450	14,913	37,363
Technical Assistance Subtotal	**0**	**23,944**	**29,929**	**-**	**86,872**	**78,868**	**219,613**
Site Visits							
MCA-Vanuatu site visits		685		5,021	30,795	10,464	46,965
Site Visit Subtotal	**0**	**685**	**0**	**5,021**	**30,795**	**10,464**	**46,965**
TOTAL	**0**	**122,797**	**34,887**	**9,473**	**580,486**	**315,357**	**1,063,000**

* AusAID funds five tourism surveys equivalent to USD 283,395.

M&E Procurement Plan

Procurement	Consultant Task Summary	Procurement Year(s) 06	07	08	09	10	11	Budget (USD)	Notes
Household Income and Expenditure Survey (HIES) 2010	Provide Technical Assistance for VNSO on survey design, implementation and analysis.	■				■	■	$672,000	Final report on the HIES is expected to be received in April 2011. VNSO will begin training enumerators and supervisors in September 2010.
Poverty Analysis Technical Assistance	Provide technical assistance to VNSO for establishing a National Basic Needs Poverty Line (NBNPL) and documentation of metadata.					■	■	$31,250	The Expression of Interest and Request for Proposals are to be published by October 15, 2010.
Formal and Informal Business Sector Survey	Nationwide						■	$67,700	Survey will likely be initiated in February 2011following availability of HIES enumerators.
Roadside Enterprise Survey	Baseline conducted in 2008.	■					■	20,080	To be conducted in Efate Ring Road and Santo East Coast Road catchment areas. MCA-V to supervise.
TRIP Tourism Surveys: International Visitor Survey, Domestic Visitor Survey, Cruise Ship Visitor Survey, Tourism Business Survey and Yacht Visitor Survey	International Visitor Survey to be completed by November 2010, Domestic Visitor Survey to be completed by October 2010, Cruise Ship Visitor Survey completed August 2010, Tourism Business Survey to be completed by November 2010 and Yacht Visitor Survey to be completed by October 2010. TRIP draft report “Final Surveys” to be delivered to MCA-V by 31 Jan 2011. Final Report due 31 March 2011.		■	■		■	■	$283,395	This procurement is funded by AusAid. Baseline conducted from June 2007 to May 2008.
Foreign Investor and Land Values Survey	Design, administer, and analyze data in road catchment areas					■	■	$37,363	MCA-V to administer.
Traffic Counts and Origin and Destination Survey	Downer to provide technical assistance to ESU and PWD provincial staff.	■				■	■	$35,000	This procurement is funded by Downer variation order and PWD IEA.
Data Quality Audit	Must be independent of all other consultant contracts to ensure independence.		■		■	■	■	$120,000	The third Data Quality Review will include: multiple engagements with the Data Quality Auditor during the 40 week implementation of the 2010 Household Income and Expenditure Survey and the 2010 Formal and Informal Sector Business Survey. Data Quality Auditor engagements include 1) July-August 2010 desk review of survey questionnaires and field materials, 2) September 2010 field visit and 3) February-March 2011 data analysis.
Compact Completion Report (CCR)	Provide technical assistance to MCA-V to prepare final report and provide oversight to MCA-V supervised surveys.					■	■	$31,000	The Expression of Interest and Request for Proposals are to be published by October 15, 2010.

No actions required

■ Performance period

(1) Procurements may be combined with approval by MCC. The Data Quality Procurement, however, cannot be combined with another procurement action.

Tables

Table 1: Methodology for Economic Benefits Calculations

Nature of benefits	Specific Benefits and Means of Estimation		
	Road Projects	*Wharf Projects*	*Airstrip Projects*
Induced agricultural production	Additional production of principle cash crops (kava, copra, taro) that would be induced by lower transport costs, fewer road closures, and more reliable shipping or air services. Estimates were based on conservative percentage increases above current production levels of products most sensitive to transportation bottlenecks.		
Induced fisheries production		Additional tonnage and value of marine products that would be induced by more frequent and/or more reliable shipping or air services. Estimates were based on conservative percentage increases above current production levels.	
Reduced loss/damage to cargo	Inadequate infrastructure causes, directly or indirectly, damage and total loss of cargoes. Reported examples include broken eggs and bottles transported on bad roads; kava shrinkage when vessels are delayed; loss through mishandling at wharves or inadequate wharf side storage; and loss of perishable cargoes, such as marine products when flights are delayed or cancelled. Reasonable estimates (~1%-2% of current levels of production) were considered restored added value as a result of improvements in the quality of transport infrastructure and reliability of services.		
Reduced vehicle/ vessel costs	The HDM model was used to predict road user costs for differ-ent road surface qualities given current levels of traffic, and hence quantify the benefits of road improvements. Reduced vehicle operating costs was assumed to generate an additional 15% increase in traffic, with unit benefits being equal to half those enjoyed by normal traffic.	The hourly cost of vessel operation was applied to the estimated time savings attribut-able to wharf improvements.	
Reduced Closures	Where roads suffer periods of closure, benefits will include restoration of lost trips and/or avoidance of longer detours.		Increase in Air Vanuatu's revenue as a result of fewer flight cancellations due to flooding. Estimated as revenue lost when flights are cancelled and passengers demand refunds (i.e. are not rescheduled). Airstrip improvements restore that value.
Relieving passengers of wasted land/ sea journeys to the airstrip			By the time a flight is known not to be landing, passengers are often already on their way to the airstrip. Estimates have been made of the frequency and cost of such wasted trips.

Nature of benefits	Specific Benefits and Means of Estimation		
	Road Projects	*Wharf Projects*	*Airstrip Projects*
Induced tourist expenditure	Poor transport infrastructure constrains private investment in tourist services, tourist numbers, and access to spending opportunities. The proposed projects, together with other infrastructure and policy improvements, will induce development of tourist accommodation, encourage longer stays and increase average daily expenditure. Each project is examined on its own merits and specific benefits are identified. Factors are applied in recognition that improved roads, wharves and airstrips are not the only contributors to tourism development.		
Induced expenditure by foreign residents	On Efate and Santo only, the proposed road improvement will intensify the existing trend towards subdivision and development of land for residential purposes. The great majority of lessees are foreigners, a proportion of whose spending in Vanuatu represents a benefit.		
Local value added contribution of construction	The cost for each of the civil projects was broken down into foreign and local components. Wages paid to locally-hired labourers and local purchasing of selected inputs for construction contributes directly to the Vanuatu economy. Therefore, it was assumed that 50% of the local component of construction costs, approximately $10 million over the life of the program, will directly benefit locally-hired labourers and businesses.		

Generalised assumptions applicable to all subproject ERRs:

- Default growth rate for benefits – 3% (IMF projection)
- Tourism growth rate applied to tourism benefits– 7% (WTTC projections)
- Economic conversion factor – 1.0
- Annual Inflation – 3% (2002-2003)
- Exchange rate – 108 VUV/USD
- Time horizon – 20 years
- Tourism expenditure factor (percent of tourism expenditure that benefits the local economy) – 72% (based on Fiji estimate)
- Local Value Added construction factor (percent of local construction costs that directly benefit the local economy through worker wages and local purchases) – 50%
- Oversight and Management Maintenance costs were excluded from individual project ERRs to avoid double counting because it was treated in the national maintenance strengthening ERR.

These assumptions will be monitored and updated over the course of the compact.

Table 2: Goal Indicator Definition Table

Compact Goal: Reduce poverty and increase incomes in rural areas by stimulating economic activity in the tourism and agricultural sectors through the improvement of transport infrastructure												
Goal Indicators	**Definition**	**Source**	**Methodology**	**Reporting Frequency**	**Responsible Party**	**Baseline *(Year)***		***Year 1***	***Year 2***	***Year 3***	***Year 4***	***Year 5 Target***	***End of Compact Target***
Cash Income (per capita in US Dollars)	Average cash income of persons living in the project catchment area.	Household Income & Expenditure Survey 2010	Baseline data total based on analysis of changes in agricultural production and marketing of agricultural goods – subsistence vs. cash economy.	Baseline and Year 5	VNSO	EFATE	$ 1,291 *(2006)*					$1,617	$1,617
						SANTO	$2,122 *(2006)*					$2,711	$2,711
Poverty Rate	The proportion of households in the project catchment areas (urban and rural) living below the National Basic Needs Poverty Line (NBNPL).	Household Income & Expenditure Survey 2010	Baseline data used to develop a measure of income and national poverty line.	Baseline and Year 5	VNSO	EFATE	37.7% *(2006)*					31.2%	31.2%
						SANTO	14.6% *(2006)*					7.3%	7.3%
Tourism Employment	Number of jobs in the tourism sector.	Tourism Income and Expenditure Survey	Calculate tourism employment numbers. The tourism employment growth rates were then calculated using an estimated rate of 8.25% for Efate.	Baseline and Year 5	Trip Consultants	EFATE	2968 *(2007)*					3,000	3,000
						SANTO	427 *(2007)*					500	500

Table 3: Objective and Outcome Indicator Definition Table

Objective I: Facilitate transportation to increase tourism, business development and agriculture production

Outcome I: Efate Ring Road and Santo East Coast Road rehabilitated

Objective II: Improved roads sustainability through increased funding and improved maintenance and management
Outcome II: Technical assistance and equipment provided to Public Works Department

Objective Indicators	Definition	Source	Methodology	Reporting Frequency	Responsible Party	Baseline *(Year)*	*Year 1*	*Year 2*	*Year 3*	*Year 4*	*Year 5 Target*	*End of Compact Target*
Number of International Tourists (per annum) -Vanuatu	Number of International Tourists, per International arrivals (per annum)	NSO Quarterly Tourism Statistics Report	Customs and Immigration Department Arrivals quarterly records as stored by VNSO	Quarterly	National Statistical Office	61,453 (2005)	65,755	70,358	75,283	84,170	87,743	87,743
***Traffic Volume (Average Annual Daily Traffic) – Efate Ring Road**	Average number of vehicles per day averaged over different times (6:00AM to 6:00PM), seven days a week and over different seasons to arrive at an annualized daily average.	Traffic count surveys conducted with automatic traffic counting equipment	Vehicles using the road are counted using Automatic Traffic Counters two times a year throughout the duration of the project	Baseline, Year 4, Year 5	Joint collaboration of Roads Contractor, PWD and ESU	85 *(27May to 02June 2008)*	N/A	N/A	N/A	94	98	98
***Traffic Volume (Average Annual Daily Traffic) – Santo East Coast Road**	Total daily average number of vehicles on the road used to determine volume of traffic	Traffic count surveys conducted with automatic traffic counting equipment	Vehicles using the road are counted using Automatic Traffic Counters two times a year throughout the duration of the project	Baseline, Year 4, Year 5	Joint collaboration of Roads Contractor, PWD and ESU	307 *(August 20-26, 2008)*	N/A	N/A	N/A	338	355	355
Days Road is Closed per Annum: Efate Ring Road	Total number of days a year road is closed due to construction, maintenance and/or weather conditions	PWD – Efate routine road reports from 2008 - 2011	FIDIC Engineer and SHEFA PWD road works inspection and quarterly reporting	Quarterly	MCA-V M&E Unit	9 (2008)	0	0	0	0	0	0

Roughness: Efate Ring Road	The International Roughness Index (IRI) is a “ride quality” assessment tool developed by the World Bank and used by Road Infrastructure projects within MCC	MCA-V	Riding on Efate Ring Road and using a medium-size pick-up car with regular independent shock absorber suspension, using experience and visual guides to assess roughness index	Baseline, Year 5	MCA Project Management Advisor	17.5 (2008)	17.5	N/A	N/A	N/A	3.5	3.5
Roughness: Santo East Coast Road	The International Roughness Index (IRI) is a “ride quality” assessment tool developed by the World Bank and used by Road Infrastructure projects within MCC	MCA-V	Riding on Efate Ring Road and using a medium-size pick-up car with regular independent shock absorber suspension, using experience and visual guides to assess roughness index	Baseline, Year 5	MCA Project Management Advisor	22.0 (2008)	22.0	N/A	N/A	N/A	3.5	3.5

*Roughness measurements for both roads are derived from the International Roughness Index (IRI) and are derived from the World Bank model. See Annex IV for IRI Table.

Outcome Indicator	Definition	Source	Methodology	Reporting Frequency	Responsible Party	Baseline *(Year)*	*Year 1*	*Year 2*	*Year 3*	*Year 4*	*Year 5 Target*	*End of Compact Target*
Number of enterprises situated on the Efate Ring Road	A database of formal and informal businesses within the Efate Ring Road area	Road Side Enterprise Survey 2008, Formal and Informal Sector Survey 2010	Sum of all formal and informal enterprises within project area	Baseline, Year 5	VNSO	247 (2008)	247					
Number of persons employed in enterprises situated on the Efate Ring Road	A database of persons employed in formal and informal businesses within the Efate Ring Road area	Road Side Enterprise Survey 2008, Formal and Informal Sector Survey 2010	Sum of all persons employed in both formal and informal enterprises within project area	Baseline, Year 5	VNSO	248 (2008)	248					
Number of enterprises situated on the Santo East Coast Road	A database of formal and informal businesses within the Santo East Coast Road area	Road Side Enterprise Survey 2008, Formal and Informal Sector Survey 2010	Sum of all formal and informal enterprises within project area	Baseline, Year 5	VNSO	113 (2008)	113					
Number of persons employed in enterprises situated on the Santo East Coast Road	A database of persons employed in formal and informal businesses within the Santo East Coast Road area	Road Side Enterprise Survey 2008, Formal and Informal Sector Survey 2010	Sum of all persons employed in both formal and informal enterprises within project area	Baseline, Year 5	VNSO	145 (2008)	145					

Percentage of international air visitors travelling to other parts of Efate	Proportion of visitors arriving by air who visit areas of Efate beyond Port Vila	International Air Departures Tourism Survey reports	The aggregate sum of all international air visitors travelling to areas outside of Efate	Baseline, Year 5	TRIP Consultants	59 (2007)	59					
Percentage of Efate cruise visitors travelling to other parts of Efate	Proportion of visitors arriving by cruise ship who visit areas of Efate beyond Port Vila	Cruise Ship Tourism Survey reports	The aggregate sum of all cruise ship visitors travelling to areas outside of Efate	Baseline, Year 5	TRIP Consultants	40 (2007)	40					
Percentage of international air visitors travelling to other parts of Santo[6]	Proportion of visitors arriving by air who visit Santo during their visit	Domestic Air Departures Tourism Survey reports	The aggregate sum of all international air visitors travelling to other parts of Santo	Baseline, Year 5	TRIP Consultants	10 (2007)	10					
Total expenditure of international air visitors (USD)[7]	Estimated total expenditure of air visitors to Vanuatu	International Air Departures Tourism Survey reports	Sum of total estimated expenditure for all international air visitors in USD	Baseline, Year 5	TRIP Consultants	(2007)	93,79 (2008)					

[6] 10 percent is the total number of visitors recorded travelling from Efate to Santo (based on Survey results); this figure does not include those who travelled directly by international flights to Santo from Brisbane.
[7] All expenditure figures in the TRIP Baseline Survey were originally converted to Vatu. A conversion rate of 103.8 vatu to 1US$ has been used (as the average rate for the four periods surveyed) in this calculation.

Table 4: Output Indicator Definition Table

Output Indicators	Definition	Source	Methodology	Reporting Frequency	Responsible Party	Baseline *(Year)*	*Year 1*	*Year 2*	*Year 3*	*Year 4*	*Year 5 Target*	*End of Compact Target*
Kilometers of all systems of roads under design (Cumulative)	The length of roads expressed in kilometres under design contracts; including building new roads, re-habilitating, resurfacing or upgrading existing roads.	Signed design contracts	Sum of all signed contracts	Quarterly	MCA Procurement Agent	0 (2008)	124.5	124.5	124.5	149.7	149.7	149.7
Kilometers of all systems of roads under works contracts	The length of roads in kilometres under works contracts for the construction or rehabilitation; this may include building new roads or modifying existing roads	Signed works contracts	Sum of USD value of signed road works contracts	Quarterly	MCA Procurement Agent	0 (2008)	124.5	124.5	124.5	149.7	149.7	149.7
Kilometers of Roads Completed: Total	Length of roads in kilometres for which construction or rehabilitation is complete	Issuance of "*Take over Certification*" by Contractor and certified by FIDIC Engineer	Calculated based on distance contractor has completed road upgrade activities on a monthly basis as reported by the FIDIC Engineer and Engineering Support Unit	Quarterly	MCA contracted FIDIC engineer	*0 (2008)*	0	0	10	70	58.7	149.7
Kilometers of Roads Completed: Efate Ring Road	Length of roads in kilometres for which construction or rehabilitation is complete – as per issuance of "*Take over Certification*" by Contractor and certified by Engineer	Issuance of "Take over Certification" by Contractor and certified by FIDIC Engineer	Calculated based on distance contractor has completed road construction/rehabilitation on a monthly basis as reported by the FIDIC Engineer and Engineering Support Unit	Quarterly	MCA contracted FIDIC engineer	*0 (2008)*	0	0	10	70	12.5	92.5

Kilometers of Roads Completed: Santo East Coast Road	Length of roads in kilometres for which construction or rehabilitation is complete – as per issuance of "*Take over Certification*" by Contractor and certified by Engineer	Issuance of "Take over Certification" by Contractor and certified by FIDIC Engineer	Calculated based on distance contractor has completed road construction/rehabilitation on a monthly basis as reported by the FIDIC Engineer and Engineering Support Unit	Quarterly	MCA contracted FIDIC engineer	*0 (2008)*	0	0	0	0	57.2	57.2
USD value of signed contracts for feasibility and/or design studies (Cumulative)	USD value of all signed contracts for feasibility and design contracts	Signed feasibility and design contracts	Sum of USD value of signed feasibility and design contracts	Quarterly	MCA Fiscal Agent	0.00 (2008)						2,995,088
USD value disbursed of signed contracts for feasibility and/or design studies (Cumulative)	USD value of all signed contracts for feasibility and design contracts disbursed	Monthly Interim Payment Certificate	The aggregate amount of USD disbursed divided by the USD value of all signed feasibility and design contracts of new or rehabilitated roads	Quarterly	MCA Fiscal Agent	0.00 (2008)						2,995,088
Percent disbursed of contracted design/feasibility studies (Cumulative)	The aggregate USD amount of design/feasibility studies disbursed divided by the USD value of all signed feasibility and/or design study contracts for systems of roads	Monthly Interim Payment Certificate issued by FIDIC Engineer	The aggregate USD amount disbursed divided by the USD value of all signed contracts to develop feasibility and/or design studies for systems of roads	Quarterly	MCA Fiscal Agent	0% (2008)					100%	100%
USD value of "adjusted" signed contracts for all road works (Cumulative)	Total USD value of all signed contracts for all road works; including approved variations. Cost sharing or co-financing by other donors or host government should not be included.	Signed contracts and approved variation orders	Sum of all signed contracts and approved variation orders	Quarterly	MCA Fiscal Agent	0.00 (2008)					**66,267,291**	**66,267,291**

USD value disbursed of “adjusted” signed contracts for all road works (Cumulative)	USD value of all “adjusted” signed contracts (including approved variations) for all road works disbursed	Actual cash disbursements as recorded in Cash Account of QDRP Detailed Financial Plan		Quarterly								
Percent disbursed of “adjusted” signed contracts for all road works (Cumulative)	The aggregate amount of USD disbursed of all “adjusted” signed contracts (including approved variations) divided by the USD value of all “adjusted” signed contracts (including approved variations) for construction of new or rehabilitated roads	Actual cash disbursements as recorded in Cash Account of QDRP Detailed Financial Plan based on the Monthly Interim Payment Certificate issued by FIDIC Engineer	The aggregate amount of USD disbursed divided by the USD value of all signed contracts for construction of new or rehabilitated roads	Quarterly	MCA Fiscal Agent	0% (2008)					100%	100%
USD value of signed contracts for supervision and program management (Cumulative)	USD value of all signed contracts for supervision and program management	Signed supervision and program management contracts	Sum of USD value of signed supervision and program management contracts	Quarterly	MCA Fiscal Agent	0.00 (2008)						
USD value disbursed of signed contracts for supervision and program management (Cumulative)	USD value of all signed contracts for supervision and program management disbursed	Actual cash disbursements as recorded in Cash Account of QDRP Detailed Financial Plan		Quarterly								

Percent disbursed of signed contracts for supervision and program management (Cumulative)	The aggregate USD amount of signed contracts for supervision and program management disbursed divided by the USD value of all signed contracts for supervision and program management for all systems of roads			Quarterly								

Table 5: Process Milestone Indicator Definition Table

Process Milestone Indicators	Definition	Data Source	Responsible Entity	Frequency of Data Collection	Target Date	Actual Completion Date	Status: Pending or Satisfied
Environmental and Social Assessment (ESA) Reconnaissance Survey & Scoping Report Completed	Prepare Reconnaissance Survey and Scoping Report for each sub-project site establishing existing environmental and social parameters and comparing said parameters to relevant Government of Vanuatu environmental laws and legislation and MCC Environmental Guidelines. Compare findings against preliminary report produced during due diligence. Given said analyses, identify and prioritize environmental and social issues related to location, design, construction and operation of each sub-project.	Reconnaissance Survey and Scoping Report	MCA contracted ESA Consultant	Once, when completed	15 May 2008	23 July 2008	Satisfied
ESA and EMP for Efate Completed	Prepare Environmental Management Plans for each Efate Ring Road sub-project site documenting potential positive and negative environmental and social impacts and recommend measures needed to prevent, minimize, reduce or compensate for adverse impacts and enhance positive impacts. The ESA and EMP are Conditions Precedent under the MCC Disbursement Guidelines which MCA-V must fulfil prior to initiation of Efate Ring road works.	Environment Social Assessment and Environmental Management Plan: Efate Ring Road Subproject MCA02 Final Report	MCA contracted ESA Consultant	Once, upon completion	25 August 2008	16 September 2008	Satisfied
ESA and EMP for Santo Completed	Prepare Environmental Management Plans for each Santo East Coast Road sub-project site documenting potential positive and negative environmental and social impacts and recommend measures needed to prevent, minimize, reduce or compensate for adverse impacts and enhance positive impacts. The ESA and EMP are Conditions Precedent under the MCC Disbursement Guidelines which MCA-V must fulfil prior to initiation of Santo East Coast Road works.	Environment Social Assessment and Environmental Management Plan: Santo East Coast Road Subproject MCA03 Final Report	MCA contracted ESA Consultant	Once, upon completion	10 December 2008	02 February 2009	Satisfied

Access to all quarry sites on Efate Ring Road	As per the Mines and Minerals Act Cap 190 and Quarry Permit Regulation Order No.8 of 2005, "A person must apply to the commissioner of Mines for the issue or renewal of a quarry permit". Accordingly, Clause 6 of the Employers Requirements under the Construction of Civil Works (Design and Build) Contract requires that the Contractor, with assistance from the Department of Public Works and MCA-V, locate suitable sites for aggregate material and secure a valid quarry permit corresponding to each Efate Ring Road quarry site.	Issuance of Quarry Permits	Joint collaboration of the Department of Geology and Mines, the Department of Environment and Conservation, The Engineer, Design and Built Contractor and MCA-ESI Officer	Once, upon completion	1.Snakehill – September 2008 2. Kakola - August 2009 3. Tanoliu-October 2008 4. Meten Hill - October 2008 5. Malarua - November 2008 6. Epule - September 2009 7. La Cressioniere – December 2009 8. Nangus - February 2010 2009 M&E Plan Target: 31Dec09	1.Snakehill – 7 October 2008 2. Kakola 1 – 5 August 2009 3. Tanoliu – 27 October 2008 4. Meten Hill - 29 October 2008 5. Malarua – 4 November 2008 6. Epule – 30 September 2009 7. La Cressioniere – 1st December 2009 8. Nangus – 10 February 2010	Satisfied
Access to all quarry sites on Santo East Coast Road	As per the Mines and Minerals Act Cap 190 and Quarry Permit Regulation Order No.8 of 2005, "A person must apply to the commissioner of Mines for the issue or renewal of a quarry permit". Accordingly, Clause 6 of the Employers Requirements under the Construction of Civil Works (Design and Build) Contract requires that the Contractor, with assistance from the Department of Public Works and MCA-V, locate suitable sites for aggregate material and secure a valid quarry permit corresponding to each Santo east Coast Road quarry site.	Issuance of Quarry Permits	Joint collaboration of the Department of Geology and Mines, the Department of Environment and Conservation, The Engineer, Design and Built Contractor and MCA-ESI Officer	Once, upon completion	1. Lope Lope -August 2009 2.Matevulu –January 2009 3. Lomanioc –January 2009 4. Loreloraseri –January 2010 5. Vatrath – March 2010 6. Maour – June 2010 Revised 2010 M&E Plan Target: 26Apr10; Refer to Annex III for justification.	1. Lope Lope – 17 August 2009 2. Matevulu – 13 January 2009 3. Lomanioc – 13 January 2009 4. Loreloraseri – 8 January 2010 5. Vatrath – March 2010 6. Maour – 11 June 2010	Satisfied
Quarry pricing and payment system in place	A pricing system as per the Mines and Minerals Act of Vanuatu	1. Mines and Minerals Act CAP 190 of 1986 – Instrument of Exemption Remission of Royalty Payment Order of 2010 2. Contract for the Construction of Civil Works (Design and Build)	Commissioner of Mines Ministry of Lands and Natural Resources	Once, upon completion	April 2008	17th June 2010	Satisfied
Design-Build contract signed	Design and build road construction contract sign date	Contract document	MCA Procurement Agent	Once, upon completion	8 May 2008	2 May 2008	Satisfied

Quality and Safety Plans Completed	A requirement for the Construction of Civil Works (Design and Build) Contract	Project Plan – MCA02- Efate Ring Road MCA03- Santo East Coast Road	Design and Build Contractor	Once, upon completion	10 December 2008	9 March 2009	Satisfied
Efate Resettlement Action Plan (RAP) Completed	The Resettlement Acton Plan (RAP) is a plan based on a review of the entire length of the proposed road upgrade. The Plan involves recording items of economic or commercial value adjacent to the road, recording names of the associated or affected owners and making arrangements for their respective compensation or entitlements. The RAP is a Condition Precedent as per a) MCC Disbursement Guidelines and b) MCC Resettlement Guidance based on World Bank OP 4.12 Involuntary Resettlement.	Updated Small Scale Resettlement Action Plan 08 – 31st March 2009 - 0km to 97km (End of Seal) Efate Ring Road MCA02 Subproject FINAL REPORT	MCA-V ESI Officer with assistance from The Engineer and Design and Built Contractor	Once, upon completion	31March 2009	10 April 2009	Satisfied
Santo Resettlement Action Plan (RAP) Completed	The Resettlement Acton Plan (RAP) is a plan based on a review of the entire length of the proposed road upgrade. The Plan involves recording items of economic or commercial value adjacent to the road, recording names of the associated or affected owners and making arrangements for their respective compensation or entitlements. The RAP is a Condition Precedent as per a) MCC Disbursement Guidelines and b) MCC Resettlement Guidance based on World Bank OP 4.12 Involuntary Resettlement.	Small Scale Resettlement Action Plan 07: 0km to 58.3 km Santo East Coast Road MCA03 Subproject- Final Report	MCA-V ESI Officer with assistance from The Engineer and Design and Built Contractor	Once, upon completion	17 April 2009	14 April 2009	Satisfied
Final Design Complete, Efate (all sections)	A component of the Design and Build contract	Engineer's Monthly Report	FIDIC Engineer	Once, upon completion	12 October 2009	12 October 2009	Satisfied
Final Design Complete, Santo (all sections)	A component of the Design and Build contract	Engineer's Monthly Report	FIDIC Engineer	Once, upon completion	12 October 2009	12 October 2009	Satisfied
Trained ESU members (7) hired as full-time staff of PWD	Full-time equivalent public servant contract signed	Contracts as issued by Public Service Commission	Ministry of Infrastructure and Public Utilities	Once, upon completion	29 April 2011		Pending

MCA-V awards contract for TA-RAMM consultant	Nine month independent consultant contract awarded	Contract as issued by MCA Procurement Agent	MCA Procurement Agent	Once, upon completion	15 October 2010		Pending
PWD Santo East Coast Road maintenance crews trained in sealed road maintenance procedures and equipment	Classroom instruction and field training using Contractor's Road Maintenance Manual and World Bank Road Maintenance Curriculum.	MCA Project Manger Advisor and TA-RAMM certification	EDI Downer Works, Ltd. and TA-RAMM	Once, upon completion	28 April 2011		Pending
PWD Efate Ring Road maintenance crews trained in sealed road maintenance procedures and equipment	Classroom instruction and field training using Contractor's Road Maintenance Manual and World Bank Road Maintenance Curriculum.	MCA Project Manger Advisor and TA-RAMM certification	EDI Downer Works, Ltd. and TA-RAMM	Once, upon completion	28 April 2011		Pending
MIPU Annual Reports of 2009 Use of Government of Vanuatu Allocation for Road Maintenance delivered to MCC	Annual budgetary allocation of national budget for MIPU to use on MCC road maintenance activities	Government of the Republic of Vanuatu 2009 Program Budget Estimates, Volume 2	MIPU and the Parliament of the Government of Vanuatu	Once, upon completion	31 October 2009		Pending
MIPU Annual Reports of 2010: Use of Government of Vanuatu Allocation for Road Maintenance delivered to MCC	Annual budgetary allocation of national budget for MIPU to use on MCC road maintenance activities	Government of the Republic of Vanuatu 2010 Program Budget Estimates, Volume 2	MIPU and the Parliament of the Government of Vanuatu	Once, upon completion	31 October 2010		Pending
MIPU 2011 Annual Road Maintenance Plan delivered to MCC	Annual budgetary allocation of national budget for MIPU to use on MCC road maintenance activities	Government of the Republic of Vanuatu 2011 Program Budget Estimates, Volume 2	MIPU and the Parliament of the Government of Vanuatu	Once, upon completion	31 October 2010		Pending
USD value equivalent of GoV annual allocation for road maintenance approved for 2010	Annual budgetary allocation of national budget for MIPU to use on MCC road maintenance activities	Government of the Republic of Vanuatu 2010 Program Budget Estimates, Volume 2	Official publication of parliamentary appropriations	Once, upon completion	31 October 2009	31 October 2009	Satisfied

USD value equivalent of GoV annual allocation for road maintenance approved for 2011	Annual budgetary allocation of national budget for MIPU to use on MCC road maintenance activities	Government of the Republic of Vanuatu 2010 Program Budget Estimates, Volume 2	Official publication of parliamentary appropriations	Once, upon completion	31 October 2010		Pending
Earthworks Initiated - Efate	A component of the Design and Build contract reporting guidelines that must be fulfilled as per the MCC CPR	Engineer's Monthly Report	FIDIC Engineer	Once, upon completion	30 May 2008 (Quarter 9)	January 2009	Satisfied
Earthworks Initiated - Santo	A component of the Design and Build contract reporting guidelines that must be fulfilled as per the MCC CPR	Engineer's Monthly Report	FIDIC Engineer	Once, upon completion	30 May 2008 (Quarter 9)	August 2009	Satisfied
Approval of 2010 – 2015 National Road Maintenance Strategic Action Plan	MIPU develops and introduces an action plan detailing five year roads maintenance strategy/plan passed by the Council of Ministers and integrated into the MIPU road work plans	2010 – 2015 National Road Maintenance Strategic Action Plan and associated documents	TA-RAMM to MIPU and Council of Ministers	Once, upon completion	15 December 2010		Pending
Amendment of Road Traffic (Control) (Amendment) Act No, 41 if 2006 passed and effective	Road Act amended to include requirements and penalties for sustaining the roads and speed limits	Amendment of Road Traffic (Control) (Amendment) Act	MIPU and the Parliament of the Government of Vanuatu	Once, upon completion	15 December 2010		Pending
2010 Traffic Count Surveys on MCC funded roads completed	Total daily average number of vehicles on the road used to determine volume of traffic annually		Joint collaboration between EDI Works Ltd and PWD	Once, upon completion	30 September 2010		Pending
2011 Traffic Count Surveys on MCC funded roads completed	Total daily average number of vehicles on the road used to determine volume of traffic annually		Joint collaboration between EDI Works Ltd and PWD	Once, upon completion	31 March 2011		Pending