Document of
The World Bank

Report No: ICR0000916

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IDA-35440 IDA-3544A)

ON A

CREDIT

IN THE AMOUNT OF SDR 50.9 MILLION
(US$64.52 MILLION EQUIVALENT)

TO THE

REPUBLIC OF UGANDA

FOR A

PROJECT IN SUPPORT OF THE

SECOND PHASE OF THE ROAD DEVELOPMENT PROGRAM

January 16, 2009

Africa Transport Sector
Country Department AFCE1
Africa Regional Office

CURRENCY EQUIVALENTS

(Exchange Rate Effective June 30, 2008)

Currency Unit = Uganda Shillings (UGX)
SDR1.00 = US$1.57
US$ 1.00 = 1,635 UGX

FISCAL YEAR

July 1 – June 30

ABBREVIATIONS AND ACRONYMS

APL	Adaptable Program Loan
CAS	Country Assistance Strategy
CHOGM	Commonwealth Heads of Government Meeting
DANIDA	Danish International Development Agency
DCA	Development Credit Agreement
DLP	Defect Liability Period
DUCARIP	District, Urban and Community Access Roads Investment Plan
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rate of Return
ELU	Environmental Liaison Unit
EOT	Extension of Time
EU	European Union
FM	Financial Management
GOU	Government of Uganda
HDM	Highway Design & Maintenance Model
ICR	Implementation Completion and Results Report
IDA	International Development Association
ISR	Implementation Status Report
LVR	Low Volume Roads
MOFPED	Ministry of Finance, Planning and Economic Development
MOWHC	Ministry of Works, Housing and Communication (July 1, 1998 to June 30, 2006)
MOWT	Ministry of Works and Transport
NDF	Nordic Development Fund
NPV	Net Present Value
NRSAP	National Road Safety Action Plan
NTMP	National Transport Master Plan
PDO	Project Development Objectives
PIP	Project Implementation Plan
QAG	Quality Assurance Group
RAFU	Road Agency Formation Unit
RAP	Resettlement Action Plan
RDP	Road Development Project

RDPP1	Road Development Program Phase 1
RDPP2	Road Development Program Phase 2
RF	Road Fund
RSDP	Road Sector Development Program
RSISTAP	Road Sector Institutional Support Technical Assistance Project
SDR	Special Drawing Rights
UNRA	Uganda National Roads Authority
VOC	Vehicle Operating Cost

Vice President:	Obiageli Katryn Ezekwesili
Country Director:	John Murray McIntire
Sector Manager:	C. Sanjivi Rajasingham
Project Team Leader:	Labite Victorio Ocaya
ICR Team Leader:	Dieter E. Schelling

REPUBLIC OF UGANDA
SECOND PHASE OF THE ROAD DEVELOPMENT PROGRAM

CONTENTS

A. Basic Information

Country:	Uganda	Project Name:	SECOND PHASE OF THE ROAD DEVELOPMENT PROGRAM
Project ID:	P065436	L/C/TF Number(s):	IDA-35440,IDA-3544A
ICR Date:	01/28/2009	ICR Type:	Core ICR
Lending Instrument:	APL	Borrower:	THE REPUBLIC OF UGANDA
Original Total Commitment:	XDR 50.9M	Disbursed Amount:	XDR 50.9M

Environmental Category: A

Implementing Agencies:
Road Agency Formation Unit
Ministry of Works and Transport of Uganda

Cofinanciers and Other External Partners:

B. Key Dates

Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	10/15/1998	Effectiveness:		04/11/2002
Appraisal:	03/01/2001	Restructuring(s):		
Approval:	07/03/2001	Mid-term Review:	02/21/2005	02/14/2005
		Closing:	06/30/2006	06/30/2008

C. Ratings Summary

C.1 Performance Rating by ICR

Outcomes:	Satisfactory
Risk to Development Outcome:	Moderate
Bank Performance:	Moderately Satisfactory
Borrower Performance:	Moderately Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)

Bank	Ratings	Borrower	Ratings
Quality at Entry:	Moderately Satisfactory	Government:	Moderately Satisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Moderately Satisfactory
Overall Bank Performance:	Moderately Satisfactory	**Overall Borrower Performance:**	Moderately Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	**Indicators**	**QAG Assessments (if any)**	**Rating**
Potential Problem Project at any time (Yes/No):	No	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	No	Quality of Supervision (QSA):	None
DO rating before Closing/Inactive status:	Satisfactory		

D. Sector and Theme Codes		
	Original	**Actual**
Sector Code (as % of total Bank financing)		
Central government administration	1	1
General transportation sector	3	3
Roads and highways	96	96
Theme Code (Primary/Secondary)		
Rural services and infrastructure	Primary	Primary

E. Bank Staff		
Positions	**At ICR**	**At Approval**
Vice President:	Obiageli Katryn Ezekwesili	Callisto E. Madavo
Country Director:	John McIntire	James W. Adams
Sector Manager:	C. Sanjivi Rajasingham	Yusupha B. Crookes
Project Team Leader:	Dieter E. Schelling	Yitzhak A. Kamhi
ICR Team Leader:	Labite Victorio Ocaya	
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F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document**)**

The overall development objective of the RDPP2 was to improve access to rural and economically productive areas and to progressively build up sustainable road sector planning, design and program management capability, as well as road safety management. The project comprised: (i) upgrading and strengthening of two high priority national roads; (ii) improvement of safety at selected road accident black spots and the associated road safety enforcement and management; (iii) pilot studies of innovative technologies and non-conventional materials in construction of low-traffic volume roads; (iv) consultancy services for the design and construction supervision of a future proposed

Road Agency headquarter building (both (iii) and (iv) above financed by NDF); and (v) preparation of a National Transport Master Plan (NTMP).

Key performance indicators are: (i) increased agricultural and industrial activity; (ii) increased traffic growth; (iii) reduction in average travel time on main roads; and (iv) reduction in transport and vehicle operating costs.

Revised Project Development Objectives (as approved by original approving authority)

(a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Increased agricultural and industrial activity measured in increased traffic growth			
Value quantitative or Qualitative)	Traffic data at design in terms of ADT was: Kikorongo-Kasese-Fort Portal & Kasese-Kilembe road (Contracts C007 & C008): 562 & 444; Equator road (Contract C009): 301; Karuma-Olwiyo (Contract C004): 490; Olwiyo-Pakwach (Contract C003): 567.	Twofold increase by original closing date of Credit	Not revised	Traffic (ADT) increased by an average of five times the base value at the revised closing date, as follows: Kikorongo-Kasese-Fort Portal: 2525; Kasese-Kilembe: 1972; Equator road:964; Karuma-Plwiyo: 490; Olwiyo-Pakwach: 567.
Date achieved	07/01/2001	06/30/2006	12/31/2006	06/30/2008
Comments (incl. % achievement)	While not all the increase in traffic can be attributed to the improved road condition, it can be taken as a good proxy for increased agricultural and industrial activity. Achieved substantially above 100% at the revised closing date.			
Indicator 2 :	Reduction in average travel time on main roads compared to baseline			
Value quantitative or Qualitative)	Approx. 5 hours travelling on the Karuma-Pakwach and approx. 4 hours on Katunguru-Fort Portal roads.	30% travel time reduction expected by completion of civil works construction.	Not revised	Approx. 1.6 hours travelling on the Karuma-Pakwach and approx. 2.1 hours on Katunguru-Fort Portal roads. This has reduced travelled time by 68% and 48% respectively.

Date achieved	07/01/2001	06/30/2006	12/31/2006	06/30/2008
Comments (incl. % achievement)	Achieved above 100% at the revised closing date.			
Indicator 3 :	Reduction in transport and vehicle operating costs (VOC) compared to baseline.			
Value quantitative or Qualitative)	US$ 0.352/veh-km on Karuma-Pakwach, Katunguru-Fort Portal and Equator roads	20% reduction expected by completion of civil works	Not revised	US$0.224/veh-km on Karuma-Pakwach, Katunguru-Fort Portal and Equator roads. VOC reduced by 36% on both roads.
Date achieved	07/01/2001	06/30/2006	12/31/2006	06/30/2008
Comments (incl. % achievement)	With the upgrading of Karuma-Pakwach road from gravel to paved standard and the strengthening of paved road Katunguru to Fort Portal, the VOC have been reduced on both roads by 36% against the planned target of 20%.			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Gravel roads upgraded to paved			
Value (quantitative or Qualitative)	The project started with design and tender document preparation for 108 km of gravel road upgrade	108 km of roads in good condition	Revised closing date	108 km of roads were upgraded from gravel to paved standard, which are in good condition.
Date achieved	07/01/2001	06/30/2005	06/30/2008	06/30/2008
Comments (incl. % achievement)	Achievement 100% at the revised closing date.			
Indicator 2 :	Paved road strengthened			
Value (quantitative or Qualitative)	The project started with design and tender document preparation of 163 km of paved road strengthening	163 km of paved road in good condition	Revised closing date	163 km of paved roads were strengthened, which are in good condition.
Date achieved	07/01/2001	06/30/2005	06/30/2008	06/30/2008
Comments (incl. % achievement)	Achievement 100% at revised closing date.			
Indicator 3 :	Road black spots on 2 major trunk roads identified and reconstructed			
Value (quantitative or Qualitative)	Feasibility study and design of black spots improvement program	Reconstruction completed	Improve 16 black spots on two major	12 number of black spots improved on Kampala Jinja road

			trunk roads	
Date achieved	07/01/2001	06/30/2004	06/30/2008	06/30/2008
Comments (incl. % achievement)	It was agreed to improve 16 black spots on Kampala-Jinja and Kampala-Entebbe roads. The 12 on Kampala-Jinja were improved. However the 4 on Kampala-Entebbe were not improved due to conflicting program of resealing. Achievement 75% at revised closing date			
Indicator 4 :	National and Greater Kampala Area Transport Plans agreed			
Value (quantitative or Qualitative)	No Master Plan to guide long term investment	Completed	Not revised	Transport master plan adopted for the whole national and Greater Kampala area
Date achieved	07/01/2001	06/30/2004	06/30/2008	06/30/2008
Comments (incl. % achievement)	Achievement 100% at revised closing date.			
Indicator 5 :	Innovative design prepared, road constructed and tested			
Value (quantitative or Qualitative)	NDF started the project with feasibility study and explored options for innovative design.	Road construction to be completed	Revised completion date	The innovative design for low traffic volume roads completed, but not yet tested.
Date achieved	07/01/2001	06/30/2006	06/30/2008	06/30/2008
Comments (incl. % achievement)	The innovative designs for the low traffic volume roads are ready under NDF and GOU funding are ready for award. UNRA plans to monitor the performance for 5 years after construction. Achievement 20%.			

G. Ratings of Project Performance in ISRs

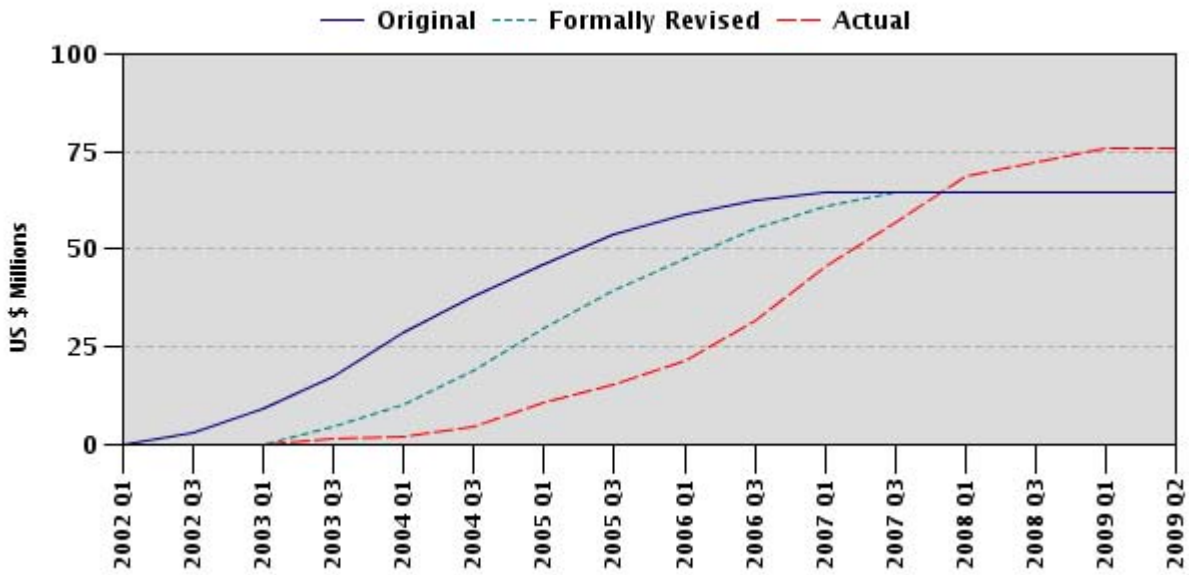
No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	12/19/2001	Satisfactory	Satisfactory	0.00
2	04/26/2002	Satisfactory	Satisfactory	0.00
3	06/13/2002	Satisfactory	Satisfactory	0.00
4	09/30/2002	Satisfactory	Satisfactory	0.00
5	11/22/2002	Satisfactory	Satisfactory	1.50
6	03/31/2003	Satisfactory	Satisfactory	1.50
7	08/06/2003	Satisfactory	Satisfactory	2.03
8	12/23/2003	Satisfactory	Satisfactory	3.31
9	04/26/2004	Satisfactory	Satisfactory	4.48
10	09/09/2004	Satisfactory	Satisfactory	9.44
11	12/15/2004	Satisfactory	Satisfactory	12.54
12	02/11/2005	Satisfactory	Satisfactory	14.60
13	04/09/2005	Satisfactory	Satisfactory	15.86
14	10/19/2005	Satisfactory	Satisfactory	21.57
15	05/16/2006	Satisfactory	Satisfactory	32.99

16	12/18/2006	Satisfactory	Satisfactory	51.94
17	06/19/2007	Satisfactory	Satisfactory	64.18
18	12/07/2007	Satisfactory	Satisfactory	70.05
19	06/10/2008	Satisfactory	Satisfactory	73.37

H. Restructuring (if any)

Not Applicable

I. Disbursement Profile



1. Project Context, Development Objectives and Design

1.1 Context at Appraisal

1. The Road Development Program (RDP) Phase II is the second phase of a four-phased APL program. The Board of the Bank approved the IDA Credit for the first phase of the RDP on June 29, 1999 and the Development Credit Agreement between Government and the Association was signed on November 22, 1999. The Credit became effective on February 1, 2000. In October 2000, during the supervision mission for the Phase I project and the pre-appraisal of Phase 2, the readiness of the various components was assessed. Account was also taken of the completion of the National Road Safety Audit Study, and a 3-year Action Plan for implementing much needed road safety improvements. Based on these, IDA agreed to a Government request (March 2000) to finance Phase I of the National Road Safety Action Plan from the proceeds of Phase II of the RDP. During the preparation mission in March 2000, the Nordic Development Fund (NDF) decided with the Bank's consent to provide, under Phase 2, parallel financing for a pilot project component to demonstrate the use of innovative technologies in the construction of low-volume traffic roads. In addition, NDF would, in accordance with their May 2000 Board approval, finance the feasibility study, design and supervision of the new Road Agency headquarters building, programmed to be constructed under Phase 3 of the program. Appraisal of the Phase II project also took into account the satisfactory rating of the ongoing phase I project. Further, evaluation of the technical, economic, social and environmental feasibility of the projects showed their readiness to be implemented concurrently with the first phase.

2. The Bank's APL project is a contribution to Government of Uganda's (GOU) 10-Year Road Sector Development Plan (RSDP-1996/7-2005/6) for the national road network, developed in 1995 and endorsed by the participating donors in November 1996. Projected total expenditure under the RSDP, over ten years, was estimated at about US$1.5 billion in constant end-1998 prices, and a further US$380 million to be allocated to the District feeder roads, urban roads and other transport projects. Over the whole 10-year RSDP period, GOU has committed resources amounting to US$700 million, EU US$223 million; IDA US$356 million, out of which, US$ 282 million is being provided under the RDP (of which the RDP Phase 2 (RDPP2) is to be the 2nd phase, following-on from RDP Phase I (RDPPI)) with the remaining IDA financing provided under the then ongoing Transport Rehabilitation Project (TRP - Cr. 2587-UG), Road Sector Institutional Support Technical Assistance Project (RSISTAP - Cr.2987-UG) and El Nino Emergency Road Repair Project (Cr. 3064-UG)); and various bilateral donors the balance. The indicative size and the implementation period for the IDA APL as agreed at project appraisal of RDPP2 in June 2001, and their status at the project closing on June 30, 2008 was as follows:

APL Phases	Financing and Implementation Period at Appraisal			Actual Financing and Implementation Period at Closing		
	Amount (US$ m)	Start Date	Completion Date	Amount (US$ m)	Effective Date	Completion Date
Phase I	90.98	Nov. 1999	June 2004	90.98	Feb 1, 2000	June 30, 2008
Phase II	64.52	July 2001	June 2006	64.52	April 11, 2002	June 30, 2008
Phase III	100.40	Oct. 2002	June 2007	107.60	June 23, 2005	Dec 31, 2009
Phase IV*	26.25	June 2003	Dec. 2007	N/A	N/A	N/A
Total	282.15			263.10		

* The phase IV of the APL was planned to finance District Roads. While the RDPP1 credit helped to update the country's rural road strategy, it has been agreed in the meantime between GOU and DP that District Roads are being financed through the budget while DP finance should focus on the upgrading of the primary trunk roads. Therefore the phase IV of the APL will not be necessary.

1.2 Original Project Development Objectives (PDO) and Key Indicators (*as approved*)

3. The overall development objective of the RDPP2 was to improve access to rural and economically productive areas and to progressively build up sustainable road sector planning, design and program management capability, as well as road safety management. The project comprised: (i) upgrading and strengthening of two high priority national roads; (ii) improvement of safety at selected road accident black spots and the associated road safety enforcement and management; (iii) pilot studies of innovative technologies and non-conventional materials in construction of low-traffic volume roads; (iv) consultancy services for the design and construction supervision of a future proposed Road Agency headquarter building (both (iii) and (iv) above financed by NDF); and (v) preparation of a National Transport Master Plan (NTMP).

4. The key performance indicators were (i) increased industrial and agricultural activity; (ii) increased traffic growth; (iii) reduced travel time; and (iv) reduced transport rates and vehicle operating costs over the national road network.

5. The following triggers agreed for RDPP2 were successfully met:

(i) RAFU key personnel in place and effectively handling the implementation process;
(ii) the monitoring and evaluation system permits follow up of project implementation and assessment of project objectives' achievements;
(iii) studies for updating of transport sector and district (feeder) roads strategies and financing completed;
(iv) transport Sector Investment and Recurrent Expenditure Plan (TSIREP) for 3-years rolling period adequately covers sector requirements;
(v) procurement specialist in place and procurement unit established within RAFU;
(vi) design documentation prepared and contract documents ready for bidding.

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and Reasons/Justification

6. There was no change in the PDO or in the key indicators.

1.4 Main Beneficiaries

7. The primary target group or main beneficiaries of the project were the road users as the travel time and VOC were reduced with the improvement of main roads. In addition, the project also benefitted MOWT, former RAFU (now UNRA), and local governments. RDPP2 supported upgrading of gravel roads to paved standard, strengthening of paved roads, and improved the road safety black spots. These activities led to substantial traffic safety improvements and declining road accident fatalities on the concerned national roads. RDPP2 also supported the preparation of NTMP, which is being used as guiding principles for making decisions relating to planning and development of transport projects in the country and in the greater Kampala metropolitan area.

8. Since the improved road projects were part of a comprehensive countrywide road investment strategy, RDPP2 contributed to foster economic growth and poverty alleviation through improvement in market integration and accessibility. Through the Nordic Development Fund (NDF) funded component, a study on innovative technologies for the management of low volume roads has been completed and will be tested on 41 km of the Matuuga-Sumuto-Kapeka road in central Uganda. It is likely to benefit in updating the government's ten-year district, urban and community access roads investment plan (DUCARIP) which targets the use innovative technologies for low cost sealed roads.

1.5 Original Components (as approved)

9. The Project comprised of the following components:

Component 1: Upgrading and Strengthening of National Roads: (a) upgrading of 108 km from gravel to paved (bitumen) standard of: (i) about 46 km of the Karuma-Olwiyo gravel road; and (ii) about 62 km of the Olwiyo-Pakwach gravel road; and (b) strengthening of 163 km of the following paved roads: (i) Katunguru-Kasese-Fort Portal road; (ii) the Kasese-Mpondwe (Equator) road, and (iii) the Kasese-Kilembe road.

Component 2: Road Safety Improvement Action Plan: this component was divided into the following two sub-components: (i) design and construction of black-spots improvements along the Kampala-Jinja and Kampala-Entebbe roads; and (ii) institutional support and capacity building, comprising: (a) carrying out of a comprehensive revision of the road safety sections of the roads design manual and the general specifications for road works; development of a manual for traffic signs and road markings; development of a manual for safety when working on the road; (b) the provision of training and/or workshops for MOWT/RAFU staff in the use and application of the above manuals and database system; (c) TA to the National Road Safety Council (NRSC); (d) provision of enforcement equipment for speed control and breath alcohol measurement, and training for the Traffic Highway Patrol Unit; (e) review and update of the Highway Code and development of a curriculum for driving instructors and driving schools; development of road safety as a subject within the primary school curriculum; and (f) provision

of TA to the Ministry of Health in research of the epidemiology of road traffic injury trauma and for identification of interventions required to reduce its impact as a public health problem.

Component 3: Preparation of National Transport Master Plan (NTMP) and Plan for Greater Kampala Metropolitan Area: the provision of technical advisory services for the preparation and implementation of a NTMP inclusive of the greater Kampala metropolitan area.

Component 4: Pilot Project for Demonstration of Use of Innovative Technologies for Construction of Low-Volume Traffic Roads: The provision of technical advisory services and civil works (related to the Matugga-Semuto-Kapeeka road) for the preparation of: (i) a feasibility study, including socioeconomic and environmental impact assessment, costs and potential cost benefits, and detailed project monitoring program during and after construction; (ii) designs for all proposed methods of construction; (iii) construction; (iv) supervision during construction; (v) monitoring program during and after construction; and (vi) design manuals, specifications, and guidelines, based on detailed analysis of data obtained through the monitoring program. The activities under this component were financed by NDF.

Component 5: Feasibility Study and Design of a National Road Agency Building: the carrying out of a feasibility study, detailed design, and supervision of construction of the National Road Agency building. The activities under this component were financed by NDF.

Component 6: Consulting Services for the Supervision of Civil Works: The provision of technical advisory services for the supervision of civil works to be carried out under the Project.

1.5 Revised Components

10. Project components were not substantially revised. However, there was a modification under Component 4 as the feasibility study and design of the road agency building was carried out as planned under RDPP2. But due to lack of funding, construction of the building was deferred and as such, the consultant's contract was amended and the supervision of the Agency building taken out of the RDPP2 Credit.

1.7 Other Significant Changes

11. An amendment to Development Credit Agreement (DCA) was signed on April 10, 2002 to exclude one of the existing effectiveness condition of *"furnishing the revised resettlement action plan (RAP) for the civil work under component 1 and 2"* and to include it as a disbursement condition for the component A only. This amendment was required for the following two reasons: (i) to gain more time for the preparation of RAP for the first year civil work contracts, which were not possible to prepare before July 31, 2002; and (ii) this was blocking the progress in the implementation of other project activities. Finally the project was declared effective on April 11, 2002.

12. *Implementation Schedule*: The original project closing date was June 30, 2006. On March 23, 2006, the government requested an extension of two years and the IDA agreed to extend until June 30, 2008. The time extension was approved by the office of regional vice

president (RVP) and the main reason for the extension was to allow the completion of two large civil work contracts: (i) upgrading of Olwiyo-Packwach gravel road; and (ii) strengthening of Fort Portal-Hima. Prior to granting extension, the Bank team and management considered two options: (i) extending the credit for one year to allow for substantial completion of work and use Bank guarantee to cover defect liability period (DLP); and (ii) extending the credit for two years to allow full completion including DLP. It was concluded that 2 years extension would be the preferred option.

13. *Funding Reallocation*: There was no funding reallocation during the implementation period.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

14. The project design was appropriate and addressed the following key issues: (i) continuing dialogue to support policy and institutional reforms for setting up UNRA and Road Fund (RF); (ii) enhancing road sector management through carrying out NTMP studies; (iii) implementing road safety action plan; and (iv) carrying out innovative technology on low volume roads. During the preparation phase, the project reviewed the following strategic choices: (i) proceeding with the sector investment project or to phase IDA assistance under successive operations. Taking into account the large size of RSDP that required increasing absorptive capacity, the selected choice of following up with RDP Phase 2 was found appropriate; and (ii) supporting implementation of overall trunk and feeder roads under APL or consider feeder road program separate recognizing their unique characteristics and management requirement at the district level. Taking into account that the government under its decentralization strategy introduced direct allocation of funding for district roads through conditional grants, the decision to support main roads under the APL phase 1, 2 and 3 and district roads under the APL phase 4 was found valid and realistic.

15. The project design was also consistent with the government's Poverty Eradication Action Plan (PEAP), which identified six critical areas that required substantial expenditures. The RDP Phase 2 supported main roads, road safety and low volume roads as being directly concerned with increasing rural income and supporting the private sector. The following lessons drawn from the experience of earlier transport operations in Uganda were reflected in the design of RDPP2: (i) limited capacity of the implementation agency to address the problems related to procurement documentation, contract management, and technical monitoring; (ii) substantial delays in the processing and awarding of contracts, which led to delayed completion and cost overruns; and (iii) the need for first undertaking the main institutional and policy changes including restructuring of road administrations prior to committing any road investments in the sector.

16. A risk analysis was carried out and mitigation measures were identified. The key risks from outputs to objective assumed to be: (i) projected level of agricultural and industrial production will not be increased; (ii) Uganda road agency will not be established and fully operational as scheduled; (iii) adequate budgets will not be released; (iv) appropriate financing

arrangements will not be approved by GOU and agreed with road users; and (v) annual main road maintenance program will not be implemented as scheduled. Mitigation measures were defined, but were not linked to concrete milestones or taken up as triggers for subsequent phases of the APL. Overall risk rating was assessed as "modest", which in hindsight seems too low.

17. The project was not subjected to a Quality Assurance Group (QAG) review at entry.

2.2 Implementation

18. The Bank approved the project on July 3, 2001, the DCA was signed on August 16, 2001, and the credit became effective on April 11, 2002 after a delay of five months. The credit was scheduled to be effective within 90 days of credit signing by November 16, 2001 but by that date the government could not meet the effectiveness condition of furnishing a RAP for the implementation of first year road contracts under component 1 for the upgrading and strengthening of priority national roads. Taking into account that the preparation of a RAP would take more time than expected, the Bank agreed to make this a disbursement instead of an effectiveness condition. The other reason for delay in effectiveness was the government's need to obtain approval of the project by parliament, and parliament was dissolved until October 30, 2001 due to election in that year.

19. The components on road safety transport master plan, innovative technologies of low traffic volume roads, and feasibility study of national road agency building respectively made good progress and were completed on schedule. Progress on the implementation of component 1 for upgrading and strengthening of national roads, and component 6 (works supervision) was uneven. In all, there were five large civil works contracts and despite initial delays, contract C004 mostly remained on track; contract C003 was completed with minor delays (4 months) and contracts C007, C008 and C009 completed with substantial delays (12, 9 and 8 months respectively). Contract C003 had some problems on source of materials while performance of contracts C007, C008 and C009 was affected by the poor design which required variations for improvement. Performance of contract C007 was further affected by poor contract management. Implementation only improved after the client followed the Bank's advice to ensure that the contractor appointed a contracts manager. In general, the civil work contracts had implementation delays that varied from 0 percent to 100 percent of the contractual scheduled time. The financial performance varied from savings of 8.9 percent to cost overruns of 29.3 percent (see Annex 2, Table 5 and 6).

20. A mid-term review (MTR) took place on February 14, 2005. The mid-term review identified the need to extend the closing date of the credit due to delays experienced in implementation of the project.

21. The project was not subjected to a QAG review during supervision.

2.2.1 Major Factors Affecting Implementation

Factors Outside the Control of the GOU or Implementing Agencies:

22. *Shortage in the supply of fuel:* this was due to temporary closure of the refinery at Mombasa, followed by an intermittent break down of operations of the oil pipeline from Mombasa to Eldoret, as well the political crisis in Kenya end 2007 to early 2008. This affected the civil works contracts both in completion delays and cost overruns.

Factors Generally Subject to Government Control

23. *Lack of Counterpart Funding*: the project was designed to provide for 25 percent counterpart funding on the civil works component and 20 percent on consultants' services. However, government had difficulties in realizing the counterpart funding and this affected the performance of contractors. While government requested for amendment of the credit, this could not be done due to over commitment under RDPP2. As such, the credit was not amended. At closure, there were outstanding payments on completed works, payments of which GOU has informed the bank that it will meet as the credit was fully disbursed.

Factors Generally Subject to the Implementing Agency's Control

24. *Weak monitoring capacity:* the project included key output and outcome indicators for monitoring and evaluation. However the long decision-making process in RAFU, lack of follow up on the agreed performance indicators and incomplete design of the monitoring and evaluation framework contributed to implementation delays of some project activities.

25. *Lack of comprehensive progress reporting:* RAFU prepared progress reports on individual project activities, but paid little attention to produce more comprehensive and consolidated progress reports for the information of all stakeholders interested in the road sector. Such more comprehensive reporting could have indicated systemic management weaknesses earlier on, which then could have been remedied, leading to improved project implementation.

2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization

26. *M&E Design*: At project appraisal, the key performance indicators were designed as part of project design summary to monitor the project performance at several levels at CAS goal, program purpose, PDO for RDPP2, and outputs from each component. In addition, the project also included key performance indicators and trigger indicators, which all made the M&E framework a complex process. No specific indicators were designed to assess the achievement of each of three PDOs. A matrix providing comparison of performance indicators agreed at the project appraisal and achieved at project completion are given in Annex 2, Table 2. No comprehensive M&E framework clearly specifying the role and responsibility of the staff and type of reports to be produced was designed and agreed at project appraisal.

27. *M&E Implementation*: During project implementation, the performance indicators were modified as necessary (see paragraph 8) specifically to measure the progress of achieving development objectives. The project design summary prepared at project appraisal was not modified during project implementation to take into account the project extension approved for two years. RAFU had a monitoring officer but no comprehensive evaluations were carried out.

28. *M&E Utilization*: In hindsight it is felt that the M&E system was not adequately used to monitor project implementation delays and to act on such delays.

2.4 Safeguard and Fiduciary Compliance

29. *Procurement:* At project appraisal, all procurement arrangements including procurement plan and procurement methods were discussed and agreed consistent with the World Bank (WB) guidelines. The project included mainly procurement of large civil works contracts that needed pre-qualification for upgrading/strengthening of major roads. Other contracts were for improvement of road safety black spots, consulting services for the supervision of the civil works contracts, carrying out studies on low traffic volume roads, preparation of transport master plan, feasibility study and design of the national road agency building. Despite RAFU's efforts to follow procurement plans, delays occurred. On some occasions the quality of procurement documentation was not up to standard at the initial stages of the project.

30. *Financial Management*: There was a dedicated Finance and Administration Division, in RAFU, that was responsible for all aspects of financial management. A well documented Financial Management Manual was developed. The manual outlines internal control procedures as well as financial reporting arrangements for the funding received from the GOU budget, WB and other donors. Effective July 2001, the accounting system was fully computerized based on a double entry accounting system. The ratings of the Financial Management (FM) in the implementation status report (ISR) were satisfactory. The quality of the financial management reports in general was good. Satisfactory audit reports were received on a timely basis, which were reviewed by the Bank and the comments sent to the Borrower. FM issues were identified and appropriate recommendations made. The absence of an internal audit unit had been a theme for a long time and it is now being established under UNRA. Consistent with the DCA, the following financial covenants were complied with: (i) carrying out audits of the special account in accordance with appropriate auditing principles by independent auditors; (ii) implementing a time bound action plan for strengthening financial management system; and (iii) furnishing quarterly project management reports.

31. *Environment*: Considering that the improvement works would have followed the existing alignments it was initially classified under category "B", however on realizing that the road sections are passing through national parks and will have a potential impact on wildlife, the category was changed from "B" to "A". Accordingly at appraisal the project was considered under Category "A". Environmental impact assessment (EIA) was carried out for each road project as part of the detailed feasibility studies for the following purposes: (i) to prepare a comprehensive investigation delineating any environmental impacts of the proposed road works; (ii) to describe and quantify these impacts; (iii) to draw up feasible mitigation measures for minimizing, eliminating or offsetting any adverse effects; and (iv) to recommend the most appropriate mitigation and/or enhancement measures. An environmental liaison unit (ELU) was established in MOWT to monitor the activities of not only road projects but all environmental issues relating to infrastructure projects under the jurisdiction of the ministry. ELU works in collaboration with the Uganda Wildlife Authority (UWA) and the National Environmental Management Authority (NEMA) and follows the recommendations of the road sector environmental policy and management study report completed earlier under RDPP1.

32. *Social Assessment:* Social Assessment for the physical components was conducted prior to appraisal in conjunction with EIA for the roads selected for upgrading and strengthening. The EIA team included social and environmental scientists providing a multi-disciplinary approach to preparing the EIA. Socioeconomic data were collected and analyzed from each of the areas where the roads were planned to be improved. It included analysis of the temporary and localized microeconomic impacts resulting from construction activities. Project also addressed the social impact on human settlements such as HIV/AIDS prevention and to reduce number of road accidents. During the project implementation a social assessment was carried out and its recommendations were as follows: (i) appoint a social coordinator within UNRA; (ii) ensure HIV programs are integrated within the National HIV response; and (iii) capacity building amongst management and staff on the importance of addressing issues relating to HIV/AIDS.

2.5 Post-completion Operation/Next Phase

33. **Road Development Program Phase 3 (RDPP3):** The size of the credit/grant is US$107 million. It was approved by the Board on September 2, 2004, declared effective on June 23, 2005, and scheduled for completion by December 31, 2009. The key trigger indicators for RDPP3 were successfully achieved as follows: (i) RAFU key personnel in place and effectively handling the implementation process; (ii) The monitoring and evaluation system permits follow up of project implementation and assessment of project objectives' achievements; (iii) TSIREP for 3-years rolling period adequately covers sector requirements; and (iv) design documentation prepared and contract documents ready for bidding. The key objectives of RDPP3 are to improve access to rural areas and economically productive areas and to progressively continue to build up sustainable road sector planning, design and program management capability including road safety management. The RDPP3 is implementing the construction of Soroti-Dokolo-Lira road (123 km) and Kampala-Gayaza-Zirobwe road (42 km). The project also supports feasibility and detailed design for the main roads (Gulu-Atiak-Nimule and the Vura-Arua-Oraba roads) and the detailed design of 300 km of district roads, reclassified to the national roads standard, and implementation of a capacity building program in RAFU/UNRA.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

34. The project design was relevant to the country's development priorities and the circumstances prevailing in the road sector. Given that the previous projects RSISTAP laid a good foundation in kicking off much needed institutional reforms, completed engineering design and bidding documents, RDPP2 correctly provided emphasis on the following: (i) continuing dialogue with the government to move forward the implementation of agreed institutional reforms; (ii) awarding civil works contracts; (iii) carrying out road safety audits; (iv) improving road safety black spots; and (v) preparing NTMP. Through NDF funding, RDPP2 also supported innovative technologies of low traffic volume roads. The project preparation was timely and responsive to the country's needs for promoting road safety, introducing innovative technologies, and carrying out feasibility study of the UNRA building in addition to upgrading and strengthening of national roads.

35. The project objectives were clear, relevant and important to improve sector policy and strengthening road management. The project components had a good linkage with the project objectives. The project also contributed to the Bank's CAS strategic outcomes of improving reliability of access to infrastructure services and poverty reduction through medium term strategy focused on private investment led growth. The project objectives were also in line with the country's 1998 PEAP through facilitating the efficient and reliable provision of transport services, increasing agricultural production, enhancing linkages with neighboring countries, stimulating economic growth and promoting security in the country.

3.2 Achievement of Project Development Objectives

36. The Project's overriding objective of improving accesses to rural and economically productive areas through upgrading selected priority road links and further strengthening road sector management was substantially achieved on account of the following accomplishments: (i) the road Karuma-Olwiyo-Packwach (108 km) was upgraded from gravel to paved (bituminous) standard; (ii) the Katunguru-Kasese-Fort Portal, Equator and Kilembe roads (163 km) strengthened; (iii) first phase of NRSAP implemented; (iv) NTMP including transport plan of greater Kampala metropolitan area prepared and (e) innovative technologies study for the management of low volume traffic roads completed. The outcome of all these technical assistance studies is provided in Annex 2, Table 3. In addition, the project had three specific objectives and the status of their achievement is as follows:

37. The first specific objective of upgrading and strengthening two main roads, on which 90 percent of the project resources were spent, has been substantially achieved. There were five civil works contracts, one completed on time, two with minor delays and two with substantial delays of more than one year (see Annex 2 Table 5). It included the following works:

(a) Upgrading of National Road Karuma-Olwiyo-Packwach (108 km) from gravel to bitumen standards in two packages: (i) Contract number C003 for the section from Olwiyo to Packwach (62.4km) and (ii) contract number C004 for the section from Karuma to Olwiyo (45.6 km). Contract C004 made good progress and was completed ahead of time; contract C003 had some problems on source of materials and was completed with a delay of 4 months. This road had a positive impact through increasing trading with the neighboring countries. It improved the trunk road system in Northwest Uganda and links to outlets to Sudan and north-eastern Democratic Republic of Congo.

(b) Strengthening of paved road Katunguru-Kasese-Fort Portal, Equator and Kilembe (163 km). This comprised of the following three contracts: (i) Contract C007 Fort Portal Hima (55 Km): the work completed with delays of 12 months; (ii) Contract C008, Hima-Kasese-Kikorongo-Kilembe (53km); the work completed with delays of 9 months; and (iii) Contract C009 Kikorongo-Katunguru and Equator; the work completed with delays of 8 months. The economic activities in the area where roads were improved were connected with agriculture, industry and tourism. It had greater agriculture potential and 75 percent of the population depended upon the agricultural produce both for subsistence and surplus for sale. The road

improvement promoted number of tourists to visit Queen Elizabeth National Park, and other game reserves in the area.

38. On the second specific objective of the project namely the development and implementation of the NRSAP seven percent of project resources were spent and the objective was partially achieved. Production of engineering manuals, curricula for driving instructors and driving schools were developed; trauma care training manuals prepared for the Ministry of Health (MOH); Accident Report Forms developed for Uganda Police; procurement of police enforcement equipment (first aid kits, speed measuring instruments and breathalyzers) was completed; a 3-day training for twenty RAFU, MOWHC and KCC staff in road safety auditing was completed on 1 September 2004; the Road Safety Audit Manual was approved on December2, 2004 and is already in use on new RAFU (now UNRA) projects. However, in terms of black spot improvements, less was achieved than originally planned, as is explained in the next paragraph.

39. The road safety study carried out under RSISTAP identified 33 black spots on highly trafficked roads in Kampala area and recommended to improve 25 black spots on two roads Kampala-Jinja and Kampala-Entebbe. Considering financial constraints a contract for improving 16 black spots (12 on Kampala Jinja and 4 on Kampala Entebbe) was eventually signed. Twelve black spots on Kampala Jinja were improved; however 4 on Kampala Entebbe road were cancelled to avoid conflict with the highly sensitive resealing works being done simultaneously on this road in preparation for the Commonwealth Heads of Government Meeting. The work on Kampala-Jinja contract was delayed by one year due to investigation of a complaint received prior to award of contract.

40. Overall the investment in road safety appears to be yielding results given that there has been a reduction in the number of road accidents and road accident fatalities. The end FY07/08 report by the Uganda Police indicates that the number of traffic accidents reduced from 17,428 in FY 06/07 to 11,758 in FY07/08, representing a reduction of 33 %; the number of causalities reduced from 14,894 in FY06/07 to 13,432 in FY07/08, representing a reduction of 9.8%; fatal crashes reduced from 1,737 in 2006/7 to 905 in 2007/8, representing a reduction of 48%; and the fatalities (deaths) reduced from 2,383 in FY06/07 to 2,035 in 2007/8, representing a reduction of 14%.

41. On the third specific objective of the project namely the preparation of NTMP about three percent of the project resources were spent and the objective was substantially achieved. The study produced a comprehensive NTMP. The NTMP is now the basis of the future road sector development. It also included the transport master plan for greater Kampala.

3.3 Efficiency

42. At project appraisal an economic analysis for investment on all project roads was carried out using the Highway Design and Maintenance Model (HDM III) and the consolidated EIRR was observed to be above 12 percent. The project also carried out a sensitivity analysis based on economic costs (+20 percent) and average daily traffic (-20 percent). The economic analysis was also subjected to stochastic risk analysis. At project completion the NPV and the EIRR were reevaluated using Highway Development and Management Model (HDM IV) and a consolidated

NPV was US$ 12.34 million which is higher than the estimated NPV at appraisal of US US$ 9.1 million. The consolidated EIRR on completion was observed to be 18.4 percent which falls within the range of estimated EIRRs at appraisal of 12.5%-21.3% (See Annex 3).

3.4 Justification of Overall Outcome Rating

Rating: *Satisfactory*

43. The primary objective of project was to improve access to rural and economically productive areas and to build up road sector planning and management capability in the country. This was successfully achieved by improving 271 kilometers of primary roads on which traffic volumes increased by more than 500 percent on average (see Annex 3, Table 1 (b): Key Economic Re-estimation Parameters for RDPP2 Projects). The average travel time decreased by more than 30 percent and vehicle operating cost decreased by 36 percent. Seventy five percent of the planned road accident black spot improvements have been carried out, the innovative road designs developed under this project are now being implemented, and the National Transport Master Plan including the Greater Kampala Metropolitan Area transport Master Plan are now the blueprint for sector development. Despite the extension of the project closing date by two years, the outcome of the project is rated as satisfactory.

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

44. With NDF support the RDPP2 carried out a study on innovative technologies for improving the conditions of low traffic volume roads. In addition, RAFU carried out socioeconomic studies on improved roads. The key findings in terms of poverty aspects, gender aspects and social developments were as follows:

(i) *Poverty Impact*: The project area corridors in which the roads were improved were known for agriculture production, diary and poultry farming, timber and fish production and tourism to national parks. The development of all these activities prompted local economy and reduced rural poverty through creating job opportunities, increasing farm production and promoting tourism.

(ii) *Gender Aspects:* The policy and strategy paper on feeder roads also provided equal employment opportunities for male and female workers on road rehabilitation works.

(iii) *Social Development:* The project provided improved access to schools, health centers, village markets, social services and facilitated business development activities. Since the roads were improved on existing alignments, the project did not have any negative impact on human resettlements.

(b) Institutional Change/Strengthening

45. During the implementation phase the following institutional changes were made:

(i) An ELU was established in April 2001 within MOWT and its objective was to provide coordination with NEMA.

(ii) Parliament passed the UNRA Bill in May 2006. UNRA Board was appointed in January 2007. UNRA was formally established on November 1, 2007 though appointment of its Chief Executive Officer and senior managers, and it became fully operational on July 1, 2008.

(c) Other Unintended Outcomes and Impacts (positive or negative)

46. At project appraisal in March 2001, the establishment of the RF had not been planned for. During the implementation of RDPP2 the creation of a RF was discussed with GOU. Parliament approved the RF bill in June 2008 and it is expected to be operational in July 2009. This change will be a positive step towards ensuring adequate and stable flow of maintenance funding and sustainability of the project outcomes.

47. With support of Public Private Infrastructure Advisory Facility (PPIAF), MOWT carried out a study aimed at outsourcing MOWT's regulatory function to a Multi-Sectoral Transport Regulatory Authority (MTRA) and to promote private sector participation in the delivery of services and ownership of infrastructure. The objective of the study was to prepare a policy and strategy on the establishment of MTRA for the land and water transport subsectors, including road, rail, river and lake, and pipeline transport. The consultant's draft report was discussed in two stakeholder workshops and the final report taking into account the workshop comments and recommendations was produced in August 2006. GOU is now preparing a respective policy paper and plans to establish MTRA in 2009.

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops

48. During the project preparation and implementation, the following workshops were organized:

(i) on March 3, 2002 a stakeholder's workshop was held in Kampala to discuss the road agency study (RAS).

(ii) on April 23-24, 2002 a stakeholder's workshop was held in Kampala to discuss an update of the GOU 10-year (1996-2006) road program.

(iii) on June 28, 2005, a stakeholder's workshop was held in Kampala to review the performance of the transport sector.

(iv) on October 16-19, 2006 a joint transport sector review (JTSR) meeting was held in Kampala to review performance of the sector.

(v) on October 30, 2007, a stakeholder workshop was held in Kampala to discuss the findings and recommendations of a study aimed at promoting Public Private Partnership (PPP) through

using the concept of Output Performance-based Road Contracts (OPRC) for the maintenance and management of roads in the country.

4. Assessment of Risk to Development Outcome

Rating: *Moderate*

49. Given that UNRA is now fully operational and the Road Fund is being created, the risks to the development outcomes are considered moderate. UNRA has taken over the maintenance function on national roads from MOWT with speed and efficiency. Though UNRA is a new agency, it has experienced and professional staff recruited through competitive selection mostly from its predecessor RAFU. It also was in a position to take over existing and well tested management systems from RAFU. Even though, as has been experienced in many other countries, policy reversals are possible and sector stakeholders need to remain vigilant. UNRA and the RF need to keep building capacity, adopt new ways of managing road networks (for example output based approaches), and need to be in a position to retain high quality staff. For example, it will be important that both UNRA and the RF will become members of the African Associations of Road Agencies and Road Funds, in order to participate in such regional and international knowledge exchange.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: *Moderately Satisfactory*

50. The project design was relevant, appropriate and responsive to the client's needs as it supported the government's 10-year (1997-2006) RSDP. The preparation of Phase 2 was valid and legitimate as the GOU succeeded to fulfill the progress on the following key triggers for moving from Phase 1 to 2: (i) RAFU strategy for recruitment of technical staff implemented; (ii) PIP prepared; (iii) detailed design and bidding documents accepted; and (iv) pre-qualification of contractors commenced. During project preparation, an intense process of information sharing and consultation took place with the donor community, who also supported the project. The Bank added value through providing experience gained through the Road Maintenance Initiative (RMI) in Africa. The GOU and donor community acknowledged the Bank's leadership role during preparation of the RSDP. However, as was concluded in the ICR for RDPP1, while the use of APL instrument provided flexibility in adapting project design and financing to evolving client needs, the triggers for this and subsequent phases were not specifically linked to the achievement of road sector reform goals, nor able to fully benefit from lessons by not forcing sequencing of the APLs. (This is reflected in the rating for quality at entry for RDPP1.)

51. The overall risk at project appraisal was assessed as "moderate" and mitigation measures were adequate, though a comprehensive risk mitigation plan to follow during project implementation was not designed and discussed with the borrower. Taking into account the weaknesses in procurement management observed through the implementation of the two

previous projects RSISTAP and RDPP1, the team could have been more proactive in assessing the contract management capacity of the implementing agency during project appraisal and strengthened it adequately in order to avoid the completion delay that also occurred under RDPP2. In order to avoid delay in project effectiveness, the team should have been more pro-active in managing safeguard issues by timely preparing a RAP because during the project implementation it was prompted to change the related effectiveness condition to a disbursement condition (see paragraph 13).

(b) Quality of Supervision

Rating: *Moderately Satisfactory*

52. RDPP2 began implementation soon after RDPP1 and thus there was little scope to apply lessons of the first phase to the second phase but this is attributable to the design of RDPP1, rather than a shortcoming in RDPP2. In any event, a Project Implementation Plan (PIP) was prepared, which provided a good basis for the project supervision. The skills mix of the Bank supervision team was well balanced. The Bank team maintained a strategic vision not only on institutional development, but provided a good advice on other cross cutting issues such as road safety, transport master plan, and engineering research on innovative methods for construction of low traffic volume roads. There was significant involvement of the Bank's team to resolve day to day problems. The quality of the financial management reviews was found to be satisfactory and consistent with the Bank guidelines. The supervision aide-memoires for the implementation phase were extensive and provided highlights on the key issues thus providing prompt information to the client and Bank management.

53. Three large contracts (Contracts C007, C008 and C009) were substantially delayed due to poor design and poor contracts management in the case of contract C007 and delay in releasing counterpart funding. Despite of these delays, the Bank team continued to provide "satisfactory" rating throughout the implementation period. Eventually, the project did complete all the civil works contracts, but with an overall delay of two years. Considering that the completion of civil work contracts took longer than planned, and timely counterpart funding was not provided, the team should have demonstrated realism by reflecting ratings less than satisfactory. From a strategic standpoint, however, the Bank was responsive in recognizing the problems and providing space and time for their resolution. The actions taken by the Bank to resolve implementation bottlenecks were adequate but the Bank's efforts to strengthen M&E did not much improve the situation due to weak institutional capacity for M&E in RAFU.

(c) Justification of Rating for Overall Bank Performance

Rating: *Moderately Satisfactory*

54. Taking into account the role played by the Bank at entry and at supervision, the overall rating for Bank's performance is assessed as moderately satisfactory.

5.2 Borrower Performance

(a) Government Performance

Rating: *Moderately Satisfactory*

55. The government showed commitment in implementing institutional reforms; UNRA became fully operational in July 2008 though it took ten years. As recommended by the sector financing and management study and after a consistent dialogue with the Bank, the government finally decided to set up a RF to enhance financial sustainability of road maintenance. The RF Bill was passed by the Cabinet on May 17, 2007 and was approved by the Parliament on June 19, 2008. In order to monitor performance of the transport sector, government convened, on an annual basis, a JTSR workshop, the last of which was held on October 28 to 31, 2008. Despite the government commitment shown in the 1996 donor's conference of providing funding for road maintenance, the government imposed budget cuts in 2003/4 and the allocation for the road sector was reduced by 19 percent. This had an adverse impact on the sustainability of road investments in terms of delayed maintenance and less budget for rural and urban roads. Furthermore, there have been delays in releasing of counterparts funds during the years 2002/3, 2003/4 and 2004/5 as a result the payment to contractors were delayed and the government owed contractors UGsh 10.6 billion (equivalent of US$ 5.92 million) in the year 2006. Finally a large part of the arrear payments to contractors were cleared prior to project closing. Taking into account that agreed road budget was not allocated, resulting in delays in providing counterpart funds; the Borrower's performance is rated as moderately satisfactory.

(b) Implementing Agency or Agencies Performance

Rating: *Moderately Satisfactory*

56. RAFU was the key implementing agency for RDPP2 and its Management Committee (MC) was responsible for monitoring and providing advisory services. The MC comprised the Minister, MOWT (Chairman), the Permanent Secretary, Engineer-in-Chief/Director of Engineering and the Director of RAFU. The head of the RAFU desk in MOWT, financed by DANIDA, served as a secretary to the MC and acted in a liaison role between RAFU and MOWT. To ensure efficiency, RAFU appointed highly qualified core staff in the engineering, finance and administration divisions. The staff was engaged on one-year renewable performance based contracts, though it was a big challenge for RAFU to recruit experience and qualified staff due to scarcity of skilled personnel in the country. Lack of qualified and experienced staff in contract management was one of the main reasons for delay in monitoring the performance of consultants and contractors.

57. Award of two large civil works contracts (C003 and C007) under component one for upgrading and strengthening main roads were delayed by 14 months and 10 months respectively due to insistence by MOWT/RAFU not to award both contracts to the lowest qualified bidder. Although in the Bank approved prequalification evaluation report, this bidder was pre-qualified for both contracts and the consultants who prepared the bid evaluation report also recommended award. MOWT did not support these recommendations based on the reason that the bidder would not be able to perform well on both the contracts. Taking into account that the MOWT recommendations were not consistent with the Bank procurement guidelines, Bank rejected the GOU recommendations. Finally GOU changed the recommendations and as advised by the Bank

recommended award of both contracts as required. Accordingly, the Bank provided its no-objection. However, the delay in commencement resulted in higher contract price adjustment figures.

58. The contract for improvement of road safety black spots also suffered delays due to a complaint raised by one of the bidders. The matter was referred for an administrative review with a time loss of about 8 months. To monitor the achievement of PDOs, despite Bank's advice, RAFU took a long time to update the information on monitoring indicators of growth in traffic volume, reducing travel time and savings in VOC until the Bank showed rating for M & E as "unsatisfactory" in the ISR. Regarding weak contract management, the Bank expressed its concerns in July 2005 and urged RAFU management to streamline and centralize the operation by introducing tight quality control measures in handling procurement and contract management functions. Subsequently, the formation of teams comprising of foreign and national professionals improved the situation in management of procurement functions.

(c) Justification of Rating for Overall Borrower Performance

Rating: *Moderately Satisfactory*

59. Taking into account that government delayed payment of counterpart funding, which affected the contractors' performance and delayed the implementation of civil work contracts, and the relatively slow procurement decisions of the implementing agency the overall performance of the government and the implementing agency is rated as "moderately satisfactory".

6. Lessons Learned[1]

60. *APL Instrument*: This was the second phase of the 4-phased APL program. Although it commenced two years after the first phase, they were implemented in parallel and they closed on the same date. The ICR team feels that the APL instrument was not optimally used in this case, as is explained in the box below.

Box 1: Early Lessons of Experience with the APL Instrument

Principles of APL:

APL provide phased support for long-term development programs. They involve a series of loans (credits) that build on the lessons learnt from the previous loans in the series.

Special Design Feature: An APL involves agreement on (i) the phased long-term development program supported by the credit: (ii) sector policies relevant to the phase being supported; (iii) priorities for sector investments and recurrent expenditures. Triggers define when to move to the next phase. Subsequent credits are phased on the basis of satisfactory progress in meeting the defined triggers.

[1] It should be noted that the lessons learnt are generally the same for RDPP1 and RDPP2 since although they started two years apart, they closed on the same date.

Key Advantages of APLs: (i) realism*:* less front-loading of policy conditionality. Realistic phasing of reforms; (ii) continuity: encourages long-term planning and sustainable institution building; (iii) lower financial charges.

Lessons Learnt from the Implementation of the Uganda Roads APL (phase 1 and 2)

From the above it is clear that the design of the RDP had design flaws. The core problem was that the RDP phases were designed to be implemented in parallel (originally phases one to three were to be committed within one year), hence the option of learning from one phase before commencing the next one was not possible.

Second, the triggers were not clearly linked to the sector reform program. Intermediate triggers could have been defined related to the steps needed to be taken to implement the reform program.

Thirdly, and more fundamentally, it seems difficult to agree with government on a comprehensive long term reform program and set intermediate targets for the achievement of reform steps. Views as to how sectors should optimally develop also are evolving and can hardly be predicted over a very long time span. It may therefore be possible to equally well support reform programs with a series of traditional SILs each of which covers a shorter time span as compared to an APL.

61. *Policy and institutional reforms: UNRA took long to implement. It would have been advisable to set intermediate triggers in the APL to help accelerate the creation of UNRA.* The policy and institutional reforms to transform the ministry's road agency (RAFU) to an autonomous road authority (UNRA) have taken much more time than the anticipated three and half years at project appraisal. While the time needed for the societal decision making process to create UNRA clearly has been underestimated, it also seems that, having created RAFU (whose salaries were paid from the RSISTAP technical assistance credit), was a disincentive to rapidly move towards the more comprehensive and autonomous UNRA. The existence of UNRA was a trigger only for phase 4 of the APL. At least one could have set intermediate triggers, such as the preparation of an acceptable bill, towards the establishment of UNRA, for phases two and three of the APL.

62. *Technical Assistance: Future TAs should have clear objectives of building local capacity with measurable outputs in a specified time.* When RAFU was created in 1998, its head and other key staff were expatriate staff appointed under the project funded TA program. The involvement of the TAs was slowly phased out as the capability of national professionals was developed to manage the activities of the sector. In 2004 a Ugandan national professional with a good performance record was appointed as the Director of RAFU, thus replacing an expatriate staff and this has proven to be effective. However, the skill transfer to local staff was not very effective and took a long time. In designing a technical assistance program, it is critical to evaluate the knowledge, skills, talents and competencies of national professionals so as to appoint them to senior positions. Future TAs should have clear objectives of building local capacity with measurable outputs in a specified time.

63. *Review of Design and Contracts Documents*: *The application of lime stabilized sub-base needs to be carefully reviewed.* For the first phase of the APL instrument, independent consultant was engaged to review the performance of mechanical modification of the sub-base on contract C005 as proposed by the contractor and accepted by the engineer. This was a fairly new area for the implementing agency and, as such, they needed some re-assurance. Based on the consultant's findings and recommendations, this technology was successfully adopted for construction of the sub-base on contract C007 where the designed lime stabilization could not work as the lime meeting the specifications could not react properly with natural gravel available in the project area. The on-going RDPP3 also draws lessons from reviews carried out under the RDPP2 project where some contractors preferred to substitute lime stabilized sub-base with crushed stone for sub-base, although the latter was more expensive but better in quality than lime stabilized sub-base. Already, a request has been made by one of the RDPP3 contractors in that regard.

64. *Lack of Counterpart Funding: Capacity of Borrower to finance counterpart funding must be carefully assessed during project preparation.* Non-payment of counterpart funding had dire consequences on performance of the RDPP2 contracts. While government requested for amendment of the credit to 100% financing of all the components, the available funds on the project would not have been sufficient to meet all the commitments. Hence, the credit was not amended. The end result was that the outstanding counterpart funding rose as high as US$ 8 million. This resulted in reduction of the output of contractors, and led to time extensions. Non-payment of counterpart funding tends to discourage contractors from competing for jobs and may result in collusion of bidders. It is therefore important to realistically analyze the Borrower's capacity to finance counterpart funding, and to decide to either finance 100% of all components (this, however, was not an option at the time of the preparation of this credit due to the unwillingness of the Bank to finance taxes) or to move to a sector wide program whereby co-financiers (government and other DP) each finance part of the overall program.

65. *Risk Assessment and Results Framework: Well designed risk assessment and results frameworks are crucial for project success.* Both risk assessment and results framework of the project lacked depth and stringency. As a result, the monitoring of the achievement of the development objectives and implementation progress was less than satisfactory. It is for good measure that the Bank nowadays puts much more emphasis on the establishment of a thorough risk assessment and a coherent results framework with baselines and measurable indicators.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

(a) Borrower/implementing agencies N/A

(b) Co-financiers N/A

(c) Other partners and stakeholders N/A
(e.g. NGOs/private sector/civil society)

Annex 1. Project Costs and Financing

(a) Project Cost by Component (in USD Million equivalent)

Components	Appraisal Estimate (USD millions)	Actual (USD millions)	Percentage of Appraisal
1.Upgrading and Strengthening of National Roads	72.47	84.63	117%
2. Road Safety Improvement Action Plan	5.08	10.51	207%
3. National Transport Master Plan	2.66	3.05	115%
4. Pilot Project for the Demonstration of the Use of Innovative Technologies for Construction of Low Volume Traffic Roads (100% NDF financed)	10.79	0.82	8%
5. Feasibility Study and Design of a Building for the National Roads Agency (100% NDF financed)	0.92	0.36	39%
6. Consulting Services for Supervision of Civil Works	5.08	6.96	137%
Total Project Cost	**97.00**	**106.33**	**110%**

(b) Financing

Source of Funds	Appraisal Estimate (USD millions)	Actual (USD millions)	Percentage of Appraisal
Borrower	23.58	27.63	117%
International Development Association (IDA)	64.52	77.52	120%
Nordic Development Fund (NDF)	8.90	1.18	13%
Total Project Cost	**97.00**	**106.33**	**110%**

Annex 2. Outputs by Component

Table 1: Comparison of Activities Proposed at Appraisal and Outputs Achieved at Project Completion

Component	Name of Component	Activities Agreed at Appraisal/through Amendments	Output Achieved at Project Completion	Percent	Remarks
1.	Upgrading and Strengthening of National Roads	Olwiyo-Pakwach (62km)	Olwiyo-Pakwach (62.5 km)	100%	Substantial completion attained on July 26, 2007. Issuance of the DLP certificate is due end of October following completion of repairs to defects.
		Karuma-Olwiyo (46km)	Karuma-Olwiyo (45.55 km)	100%	Project completed a month ahead of intended completion date on September 11, 2006. Defects Liability Certificate issued on July 16, 2007.
		Fort Portal-Hima	Fort Portal- Hima (55.2km)	100%	Works completed on 27 June 2008.
		Hima-Kasese-Kikorongo & Kirembe-Kasese	Hima-Kasese-Kikorongo (41.15km) & Kasese- Kirembe (11.6km)	100%	Substantial Completion attained on March 31, 2007.
		Kikorongo-Katunguru & Equator	Kikorongo-Katunguru (15.47km) & Equator Road (38.22km)	100%	Substantial completion attained on December 13, 2006 some 8 months beyond completion date. Final Completion was on March 18, 2007.
2.	Road Safety Improvement and Action Plan	Civil Works Construction of safety improvements at identified black spot locations on sections of	Physical Road safety improvements to 12 identified black spot locations along Kampala-Jinja	75%	100% of the black spots (12) on Kampala-Jinja road were improved; 4 locations along Kampala-Entebbe

Component	Name of Component	Activities Agreed at Appraisal/through Amendments	Output Achieved at Project Completion	Percent	Remarks
		Kampala- Jinja road (71km) and Kampala - Entebbe road (37km).	road		road cancelled due to then ongoing resealing contracts on the section in preparation for CHOGM[2].
		2 (i) Design and Construction Supervision of civil works black spots improvements.	Design and construction supervision services	97.5%*	Value of services as at end of June 2008.
		2 (ii) Institutional Support:			
		(a) Complete revision of road safety sections of the Road Design Manual (sections 4,5 & 6) and the General spec's for road works , development of manual for traffic signs and road markings;	Revised sections of relevant sections of the Road Design Manual (sections 4,5 & 6) and the General spec's for road works , A manual for traffic signs and road markings	100%	Completed satisfactorily
		(b) Training and/or workshops for MOWT and RAFU staff in use and application of above manuals;	MOWT and RAFU staff trained in use and application of above manuals.	100%	Completed satisfactorily
		(c) Technical assistance to the National Road Safety Council.	Technical assistance to the National Road Safety Council.	100%	Completed satisfactorily
		(d) Police: Provision of enforcement equipment for speed control and breath alcohol measurement, and training for the establishment of the Traffic Highway Patrol Unit;	Handing over to police of enforcement equipment and training for the establishment of the Traffic Highway Patrol Unit.	100%	Completed satisfactorily

[2] Commonwealth Heads of Government Meeting

Component	Name of Component	Activities Agreed at Appraisal/through Amendments	Output Achieved at Project Completion	Percent	Remarks
		(e) Education: Development of a Road Code, curriculum for Driving Instructors and Driving Schools, development of road safety as a subject within the Primary School curriculum;	Highway Code developed, Curriculum for Driving Instructors and Driving Schools developed and is being implemented. Road safety curriculum for primary schools (P1-P4) developed and distributed to schools	100%	Completed satisfactorily
		(f) Technical assistance to the Ministry of Health in research of the epidemiology of road traffic injury trauma and identification of interventions required to reduce its impact as a public health problem.	Technical assistance provided to the Ministry of Health in research of the epidemiology of road traffic injury trauma. Interventions to reduce impact as a public health problem identified.	100%	Completed satisfactorily
3.	Preparation of the NTMP and TMP for Greater Kampala (GK)	Preparation of the NTMP and TMP for GK	NTMP and TMP	100%	Completed satisfactorily
4.	Innovative Technologies for Construction of Low-Volume Traffic Roads for 1) Matugga-Semuto - Semuto-Kapeeka (41 km).	(i) Feasibility Study;	Feasibility Study, completed in March 2005.	100%	Procurement of the design Consultant was delayed by the need to procure TA to prepare the consultancy service RFP.

Component	Name of Component	Activities Agreed at Appraisal/through Amendments	Output Achieved at Project Completion	Percent	Remarks
		(ii) Detailed Designs & bidding documents:	Detailed Designs & bidding documents, completed in January 2007.	100%	NDF approval has been secured
		(iii) Construction supervision (iv) Monitoring Program during and after construction iv Preparation of Design manuals.	Not achieved	0%	Contract awarded and works scheduled to commence in December 2008
5.	National Road Agency Building	1) Feasibility Study	1) Feasibility Study	100%	Completed
		2) Detailed Architectural and Engineering Design	2) Detailed Architectural and Engineering Design	100%	Completed with submission of design calculations in June 2008
		3) Construction Supervision	3) Not achieved	0%	NDF funding provision for construction supervision has been reallocated as there are no funds to construct the building
6.	Consultants' Services for Supervision of civil works.	Olwiyo-Pakwach (62km) Construction Supervision including environmental management and social adverse impact mitigation measures.	Pre-construction services, Construction Supervision and services during DLP	100%	Substantial completion granted to Contractor on July 26, 2007 and DLP was scheduled to end on July 26, 2008
		Karuma-Olwiyo (46km) as above	Pre-construction services, Construction Supervision and services during	100%	Completed with end of DLP on July 16, 2007

Component	Name of Component	Activities Agreed at Appraisal/through Amendments	Output Achieved at Project Completion	Percent	Remarks
			DLP		
		Fort Portal-Hima (55.2km) as above	Pre-construction services Construction Supervision and services during DLP	100%	Works substantially completed on June 16, 2008
		Hima-Kasese-Kikorongo & Kirembe-Kasese (41.15km) & Kasese- Kirembe (11.6km)	Pre-construction services Construction Supervision and services during DLP	100%	Services satisfactory and final completion certificate issued March 31, 2007. No outstanding activities.
		Kikorongo-Katunguru 15.47km) & Equator Road (38.22km	Pre-construction services Construction Supervision and services during DLP	100%	Final Completion Report submitted in July 2008

Table 2: Comparison of Performance Indicators at Project Appraisal and Project Completion

Hierarchy of Objectives	Planned Outputs at Appraisal and/or as amended	Achieved Outputs at Project Completion (June 2008)	Remarks	Percent Achieved

Hierarchy of Objectives	Planned Outputs at Appraisal and/or as amended	Achieved Outputs at Project Completion (June 2008)	Remarks	Percent Achieved
Project Development Objectives To widen sector and institutional reforms, and upgrade the condition of the main roads between major urban areas, and improve low traffic road designs and road safety management	1. Increased agricultural and industrial activity measured in increased traffic growth	Traffic (ADT) increased by an average of five times the base value at the revised closing date, as compared to the planned two fold increase at the original closing date.	Not all the increase in traffic can be attributed to the improved road condition. It reflects also the improved business environment in Uganda.	100%
	2. Reduction in average travel time on national roads compared to baseline	Approx. 1.6 hours travelling on the Karuma-Pakwach and approx. 2.1 hours on Katunguru-Fort Portal roads. This has reduced travelled time by 68% and 48% respectively	Travel time before project was about 5 hours on the Karuma-Pakwach and about 4 hours on Katunguru-Fort Portal roads.	100%
	3. Reduction in transport and vehicle operating costs compared to baseline;	US$0.224/veh-km on Karuma-Pakwach, Katunguru-Fort Portal and Equator roads	VOC reduced by 36% on both roads.	100%
Existing national roads upgraded to paved (bitumen) standard or strengthened; construction well supervised	108 km of gravel roads upgraded; and 163 km of paved road strengthened by June 2005	108 km of gravel roads upgraded; and 163 km of paved road strengthened by June 2008	All roads were completed by the revised closing date	100%
Road Safety Action Plan, Phase I implemented	Road black spots on two major trunk roads identified and reconstructed by June 2004	Twelve black spots improved along Kampala-Jinja Road	Four locations along Kampala-Entebbe Road cancelled to avoid conflicting with ongoing simultaneous resealing	75%
National and Greater Kampala Area Transport Plans approved and agreed	National and Greater Kampala Area Transport Plans approved and agreed by June 2004	National and Greater Kampala Area Transport Plans completed in March 2005	A draft GOU position paper had been prepared by another Consultant in May 2007 and was being refined by project closing	100%
Innovative low-traffic roads designs identified and adopted	Innovative design prepared, constructed and tested by June 2006	Designs completed and agreed but not tested	Doubling of costs of the works caused a funding shortfall and time loss of award as GOU tried to secure additional funding	100% for designs and bidding documents only
Road Agency building designs completed and adopted	Road Agency Study completed under NDF	HQ designs completed	NDF funding for construction supervision was however not used due to lack of funding	100%

Hierarchy of Objectives	Planned Outputs at Appraisal and/or as amended	Achieved Outputs at Project Completion (June 2008)	Remarks	Percent Achieved
			due to lack of funding from RDDP3 for the works execution	

Table 3: Status of Action taken on Completion of Technical studies

Title of the Study	Objective of the Study	Key finding of the Study	Recommendation of the Study	Action taken by the Government	Comments
Preparation of National Transport Master Plan (NTMP)	Preparation of NTMP and GKTMP Proposal of organizational set-up to implement the NTMP	Identified necessary infrastructure improvements for road, rail, water and air for 15 years starting 2004/5 Identified institutional gaps at National and Kampala Metropolitan levels	Recommended infrastructure investment priorities in all transport modes Recommended NTMP Office and Metropolitan Transport Authority to be created	A draft GOU position paper had been prepared by another Consultant in May 2007 and was being refined by project closure	GOU Position paper expected to be finalized in November 2008
Innovative Technologies for Construction of Low-Volume Traffic Roads (LVRs)	Demonstrate the suitability of selected innovative construction technologies used for LVRs Preparation with related design manuals and specifications and designs	16 model LVR Pavement structures were developed for testing	Awaiting implementation and monitoring of the designs	Government has decided to test the proposed designs. Works tendered in Jan 2008 and awards expected in Nov 2008	Monitoring of trial model pavements will take up to 5 years
National Road Agency Building	Preparation of Feasibility Study, detailed design and construction supervision services	Project site at Plot 63 Jinja Road found feasible Six concept models proposed	10 storey twin tower building model selected and designed	GOU requested further modification of the Detailed design and updating of bidding docs	Modification detailed design and updated bidding documents

Table 4: Comparison of Cost & Duration of Civil Works Contract at Project Start and Completion

No	Project	Len-gth (km)	Original Contract Price USD m	Actual Contract Price USD m	Cost Incr. %	Start Date	Original comple-tion date	Actual comple-tion date	% delay	Remarks
1	Olwiyo-Pakwach	62.5	14.20	17.53	30	Mar - 12-04	Mar -9-07	Jul- 26-07	13	Delay caused by the need to issue an extension of time due to change of source of crushed stone and resultant long haulage of crushed stone.
2	Karuma-Olwiyo	45.55	16.73	18.48	16	Dec 15 03	Dec 14 06	Aug 11 06	0	Revised completion was Sept 11 06. Early completion was due to change from lime stabilized to crushed stone sub- base.
3	Fort Portal-Hima	55.2	13.14	15.84	21	Jul-22-04	Jul -21-06	Jun- 27-08	100	Revised scope of works due to poor design. Adverse weather and poor management of contractor/consultant led to the delay.
4	Hima-Kasese-Kikorongo & Kirembe-Kasese	53	13.15	16.86	28	Jul-21-04	Jul-20-06	Mar - 31-07	38	Delay due to the variation of changing stabilizing agent from lime to cement and additional works that were not anticipated.
5	Kikorongo-Katunguru & Equator	53.69	15.25	15.92	4	Apr-14 - 04	Apr-14-06	Dec 13 06	33	An EOT of 8 months was granted due to increased scope plus inclement weather.
6	Physical Road Safety Improvmts. at identified black spot locations	15.5	2.78	7.56	172	Jan - 15 - 07	Jan -14 - 08	Nov - 30-08[3]	83	Revised completion date was April 17, 2008.Attainment of substantial completion has been delayed by defective asphalt that required replacement.
7	Construction of Low-Volume Traffic Roads	41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Bids received in Jan 2008. Contracts were yet to be awarded by closing date of the project.

[3] Anticipated date for substantial completion

Table 5: Comparison of Cost & Duration of Consultancy Services Contract at Project Start and Completion

No.	Project	Length (km)	Original Contract Price M USD	Actual Contract Price USD	Expected Cost Increase %	Start Date	Original completion date	Actual comp-letion date	Percent delayed	Remarks
A. Supervision Services for Civil Works Contract										
1	Olwiyo-Pakwach	62.5	0.95	1.42	48	May 02	Aug 06	Aug 08	40	There was delayed procurement of Contractor and execution of works
2	Karuma-Olwiyo	45.55	0.86	1.36	58	May 02	Aug 06	Dec 08	40	There was delayed procurement of Contractor
3	Fort Portal-Hima	55.2	0.78	1.53	78	Jul-22-04	Jul-21-06	Jul-26-08	100	Revised scope of works, adverse weather, and other Conditions beyond Contractor's control led to the delay
4	Hima-Kasese-Kikorongo & Kirembe-Kasese	53	1.31	1.39	17	Jul-21-04	Jul-20-07	Mar-31-08	37.5	Delay caused by increased scope on works
5	Kikorongo-Katunguru & Equator	15.5	1.18	1.26	7	Jul-17-03	Apr-13-06	Dec-13-06	23.5	There was delayed procurement of Contractor and Contractor's execution of works
6	Feasibility/ Design and Construction Supervision of physical Improvement to black spots	15.5	0.30	0.89	197	Apr-6-03	Oct-3-06	Nov-30-08[4]	57	Delay due to Procurement of Contractor and execution of works

[4] Expected end of DLP

B. Technical Studies										
1	Preparation of National Transport Master Plan (NTMP)	N/A	2.66	3.05	0	Dec 02		Apr 05		
2	Innovative Technologies for Construction of Low-Volume Traffic Roads	41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Award of contracts expected in Nov 2008
3	National Road Agency Building	N/A	0.92	0.36	(30)	Jan 04	Feb 08	Dec 10	70	Const. supervision component was not implemented

Annex 3. Economic and Financial Analysis

ECONOMIC RE-ESTIMATION FOR RDPP2 PROJECTS

1. Introduction

1. Economic re-estimation was carried out by comparing the costs and benefits of the "with project" and "without project" cases. In the "without project" case, the 162 kilometer (km) roads comprising of Fort Portal-Hima, Hima-Kasese-Kikorongo, Kasese- Kilembe and Equator paved road sections would have remained in a poor condition. In addition, the gravel roads sections of Karuma-Olwiyo and Olwiyo-Pakwach would not have been paved, resulting in high vehicle operating costs (VOC) and relatively lower speeds. “With the Project”, the first road sections of 162 km long were rehabilitated, while 109 km long gravel roads were upgraded to bitumen standard, resulting in improved road condition, reduced VOC, and higher speeds.

2. The re-estimation compared the annual streams of economic capital and operating costs and benefits using the Highway Development and Management Model Version 4 (HDM4), adjusted for the conditions of the RDPP2 project areas. The analysis period is 20 years; covering the construction period and post construction period. Costs include: construction costs, construction supervision costs and post construction maintenance costs. Benefits include: reduction in VOC, travel time savings and boosting of agricultural potential in the project areas. The analysis used economic figures adjusted to exclude taxes/duties using the same Standard Conversion Factors (0.80 and 0.83) used at appraisal.

2. Objective of the Re-assessment

3. The main objective of this economic re-estimation is to determine the extent to which the economic indicators (NPV and EIRR) estimated at appraisal stage have been realised at project completion for all the five RDDP2 roads.

4. Re-estimation for Karuma-Olwiyo and Olwiyo-Pakwach has used Traffic from Traffic counts results from the surveys carried out by consultants engaged by the Ministry of Works and Transport (MOWT) in the second quarter of 2008. For Fort Portal-Hima, Hima-Kasese-Kikorongo, Kasese- Kilembe and Equator Roads (the rehabilitated roads in Western Uganda, traffic data was got from the Traffic Counts conducted in June 2007 by the Supervision Consultant for Hima-Kasese-Kikorongo and Kasese-Kilembe Roads rehabilitation project. The traffic results used were carried out for 7 days i.e. 12 – hour traffic counts, with some days of 24 – hour traffic counts on the project roads. The traffic data is summarized in Table Annex 3.1 as part of key economic appraisal parameters.

3. Input Parameters for the Economic Re-estimation

5. This re-estimation has used Highway Development and Management (HDM-4), HDM-3 was used at appraisal stage. Major inputs used in the re-estimation are briefly described.

3.1 Costs

The investment costs of the project roads were based on actual costs for construction and construction supervision at the completion of each road. With the Project, routine and periodic maintenance costs were estimated on the basis of maintaining an international roughness index (IRI) value of less than four over the remainder of the analysis period. This would require routine maintenance of $1,000 (financial cost) per km every year and periodic maintenance of $10,500 per km every 7 years. Table 1 provides the key economic re-estimation parameters used by this analysis for RDPP2 Projects:

Table 1(a): Key Economic Re-estimation Parameters for RDPP2 Projects

A. PROJECTS COSTS						
Project Cost on Completion Length (km)		Economic Cost (US$/km) 1998 - 2008		Financial Cost (US$/km 2008	SCF	Project Period
1. Katunguru-Kasese-Fort Portal	112.6	222,000	266,086	332,607	0.80	2004-2008
2. Kasese- Kilembe	12	112,000	294,994	368,742	0.80	2004-2007
3. Equator Road	38	140,000	248,444	310,556	0.80	2004-2007
4. Karuma-Olwiyo	45.6	264,000	359,992	433,725	0.83	2003-2006
5. Olwiyo-Pakwach	62.5	237,000	280,771	338,278	0.83	2004-2007

Table 1(b): Key Economic Re-estimation Parameters for RDPP2 Projects

Annual Cost Stream (%)	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
1. Katunguru-Kasese-Fort Portal	28	26	29	16	
2. Kasese- Kilembe	14	19	35	32	
3. Equator Road	14	19	35	32	
4. Karuma-Olwiyo	10	25	26	30	10
5. Olwiyo-Pakwach	27	34	27	12	
Start Years	2003 and 2004				
Analysis Period	20 yrs				
Discount Rate	12%				
Salvage value	10%				
Base Options: Do Minimum (i)	Maintain Gravel Road (Road numbers 4 & 5) ◎ Regravelling when gravel thickness less than				

(ii)		equal 50mm ⊙ Grading every 365 days ⊙ Routine maintenance Maintain Paved Road (Road numbers 1-3) ⊙ Patching once a year, 100% potholes ⊙ Crack sealing once a year, 100% transverse thermal cracks ⊙ Routine Maintenance	
Alternative Options		⊙ Upgrading of Karuma-Olwiyo and Olwiyo-Pakwach Roads to bitumen standard in 2004; ⊙ Strengthening/rehabilitation of Katunguru-Kasese-Fort Portal, Kasese-Kilembe and Equator Roads in 2004; and ⊙ Maintain Paved/ Rehabilitated Roads from 2013 onwards.	
B. TRAFFIC			
Traffic growth rates:		10 %: for the first 10 years, and 7.5 % thereafter.	Taken into consideration forecasts at appraisal and actual growth rates between appraisal and completion.
Motorized Traffic in 2007 & 2008 (weighted average ADT) Year		Motorized Traffic (ADT) Project Completion	Motorized Traffic (ADT) – at Appraisal (1998)
1. Katunguru-Kasese-Fort Portal	2007	2,525	562
2. Kasese- Kilembe	2007	1,972	444
3. Equator Road	2007	964	301
4. Karuma-Olwiyo	2008	490	82
5. Olwiyo-Pakwach	2008	567	87
		Note: Increase in Traffic in % is in Table Annex 2.4 of this report	

Table 1(c): Key Economic Re-estimation parameters for RDPP2 Projects

Generated Traffic	Some of the Assumptions used during the feasibility studies have been applied as follows: (i) Generated traffic: Actual generated traffic based on traffic counts carried out in 2007 and 2008 has been used.

6. The traffic composition in percentage terms derived from the 2007 and 2008 traffic counts that were used in this economic re-estimation are indicated in the table 2 below:

Table 2: Traffic Composition in Percentage (RDPP2 Projects)

Vehicle	**Karuma-Olwiyo - Pakwach**		**Katunguru- Kasese- Fort Portal, Kasese-Kilembe & Equator Road**		
Road No.	4	5	1	2	3
Cars Special Hire Taxis	6	5	30	13.1	33.1
Pickups / Vans / 4WD	17	20	14	10.1	8.8
Minibuses	2	1	7	1.8	10.6
Medium Buses / Coasters	1	1	1	0.3	0.0
Buses	7	7	1	0.1	1.0
Single Unit Truck (Dynas / Tractors)	10	13	9	0.7	5.4
Single Unit Truck (Medium)	33	16	4	0.5	3.1
Truck Trailers and Semi Trailers	22	28	3	0.0	2.1
Motorcycles	2	10	32	73.4	35.9

4. Analytical Approaches

7. The analytical method used in this evaluation:

- **Analysis by Section:** where individual road sections are analyzed separately based on unit costs for each.

- **The above analysis considered:** Motorized Traffic, Non – Motorized Transport (NMT) and Induced Agricultural Benefits (exogenous benefits).

5. Outputs of the HDM-4 Economic Re-estimation

8. Table 3 below provides a tabulation of the results obtained for each of the road section under RDPP1.

Table 3: Output Economic Indicators from Re-estimation compared to Economic Indicators at Appraisal (1998)

Output Economic Indicators	**Road Development Project Phase 2 (RDPP2)**	
	1998	**2008**
NPV (m US$)	9.1	12.34
EIRR (%)	12.5-21.3	18.4

6. Conclusion

9. The Economic re-estimation was carried out to establish the extent to which economic indicators (NPV and EIRR) of the project roads under RDPP2 compare with the economic indicators at appraisal. Re-estimation results as shown in Table 3 above indicate that the Net Present Value (NPV) for all RDPP2 roads combined at project completion in 2008 is (US$ 12.34 million) which is greater than the NPV of (US$ 9.1 million) at appraisal in 1998. Similarly, the Economic Internal Rate of Return (EIRR) at completion is 18.4% which falls within the range of EIRRs at appraisal of 12.5%-21.3%

10. Overall, from the re-estimation results, the projected positive economic results arising out of rehabilitating 163 km of paved roads and upgrading 108 km of roads to bitumen standard have been realized and are even higher than estimated at appraisal. Timely maintenance of the rehabilitated and upgraded roads coupled with effective axle load control will ensure that economic benefits are maintained during the remaining life of RDPP2

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a)Task Team members

Names	Title	Unit	Responsibility/Specialty
Yitzhak A. Kamhi	Consultant	AFTTR	TTL from 04/1997-11/2003
Stephen J. Brushett	Lead Transport Specialist	LCSTR	TTL from 11/2003-03/2005
Supee Teravaninthorn	Program Coordinator	AFTTR	TTL from 03/2005-08/2006
Dieter E. Schelling	Lead Transport Specialist	AFTTR	TTL from 08/2006-05/2007
Labite Victorio Ocaya	Senior Highway Engineer	AFTTR	TTL since 05/2007
C. Sanjivi Rajasingham	Sector Manager	AFTTR	Sector Manager
Anil S. Bhandari	Sr. Adviser	AFTTR	Country Management Team
Nina Chee	Sr. Environmental Spec.	AFTEN	Environment
Jocelyne O. Do Sacramento	Operations Analyst	AFTTR	HIV/AIDS
Olav E. Ellevset	Sr. Transport. Specialist	AFTTR	Road Management
Jonas Per Hermanson	Transport. Specialist.	AFTTR	Assistance with ICR
Nina Jones	Program Assistant	AFTTR	Team Assistant HQ
Mustapha Benmaamar	Sr. Transport. Specialist	AFTTR	Assistance with ICR
Agnes Kaye	Program Assistant	AFMUG	Team Assistant UG
Antoine V. Lema	Consultant	AFTTR	Safeguard
Mary Consolate Muduuli	Operations Officer	AFMUG	Assistance with ICR
Grace Nakuya Musoke Munanura	Procurement Specialist	AFTPC	Procurement
Harriet Nannyonjo	Sr. Education Spec.	AFTH1	Assistance with ICR
Elizabeth Ninan	Young Professional	YPP	Assistance with ICR
Labite Victorio Ocaya	Highway Engineer	AFTTR	TTL since 05/2007
Peter Okwero	Sr. Health Spec.	AFTH1	Social Aspects
Richard Olowo	Sr. Procurement Spec.	AFTPC	Procurement
Kristine Schwebach	Operations Analyst	AFTCS	Environment
Farida Khan	Operational Analyst	AFTTR	Portfolio
Subhash C. Seth	Consultant	AFTTR	ICR Primary Author
Fang Xu	Economist	AFTTR	Assistance with ICR
Patrick Piker Umah Tete	Sr. Financial Management Sp.	AFTFM	Financial Management
Desta Wolde Woldeargey	Temporary	AFTTR	Assistance with ICR

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Lending		
FY00	9	25.23
FY01	32	92.81
FY02	7	28.76
Total:	48	146.80
Supervision/ICR		
FY02	14	57.44
FY03	22	83.26
FY04	18	74.16
FY05	18	85.83
FY06	19	86.91
FY07	12	43.74
FY08	14	41.23
Total:	117	472.57

Annex 5. Summary of Borrower's ICR

7.1 INTRODUCTION

1. A key element in the implementation of government's sector strategy is the Road Sector Development Program (RSDP) for the national road network which was endorsed at a donor's conference held in Paris on November 10, 1996. The primary aims of the RSDP were to provide an efficient, safe and sustainable roads network in support of market integration and poverty alleviation; to improve the managerial and operational efficiency of road administration; and to develop the domestic construction industry. Overall, a projected total expenditure level under the RSDP was estimated at US$1.5 billion for the national road network for the period 1996 to 2007 and US$380 million for the District Roads over the same period. IDA's contribution to the RSDP has been channeled through the Road Development Program (RDP).

2. IDA agreed to support RSDP in cooperation with other development partners through the Road Development Program (RDP) with an implementation period of eight years, from November 1999 to December 2007. Of the projected RSDP financing of US$1.5 billion over the 10 year period as mentioned above, GOU planned to contribute US$700 million; EU (US$223 million); and IDA US$356 million (of which US$282 million was under an APL and the remainder under the then ongoing Bank's Transport Rehabilitation Project (TRP - Cr. 2587-UG), RSISTAP (Cr. 2987-UG), and El Nino Emergency Road Repair Project (Cr. 3064-UG).

3. The indicative size and the implementation period for all the four phases as agreed at project appraisal of RDPP2 in June 2001 and their status at the project closing on June 30, 2008 was as follows.

Table 1: Financing Plans at Project Appraisal and Closing

RDP Phases	Indicative Financing Plan and implementation period At project Appraisal			Actual Financing Plan and implementation period at Project Closing		
	Amount (US$ m)	Start Date	Completion Date	Amount (US$ m)	Effective Date	Completion Date
Phase I	90.98	Nov. 1999	June 2004	90.98	Feb 1, 2000	June 30, 2008
Phase II	64.52	July 2001	June 2006	64.52	April 11, 2002	June 30, 2008
Phase III	100.40	Oct. 2002	June 2007	107.60	June 23, 2005	Dec 31. 2009
Phase IV	26.25	June 2003	Dec. 2007	100.00*	July 1, 2009*	June 30, 2012*

** expected*

7.2 PROJECT OBJECTIVES

4. The overall development objective of the RDPP2 was to improve access to rural and economically productive areas by removing major constraints to transport services on the country's road network through rehabilitation and upgrading of the selected road links and to support actions aimed at further strengthening of road sector management. This was to be achieved by: (i) upgrading and strengthening of two main road routes; (ii) implementation of the

first phase of a National Road Safety Action Plan (NRSAP); and (iii) preparation of a National Transport Master Plan (NTMP).

5. The key performance indicators included increased industrial and agricultural activity; increased traffic growth; reduced travel time; and reduced transport rates and vehicle operating costs over the national road network.

7.3 Project Design

7.3.1 Original Project Scope

6. The projects objectives were originally to be achieved through the following 5 (five) components:

A: ***Upgrading and Strengthening of National Roads****:* This component aimed at upgrading from gravel to paved standard about 108 km of Karuma-Olwiyo-Pakwach Road and strengthening of 163 km of Katunguru-Kasese-Fort Portal Road, Kasese-Mpondwe Road and Kasese-Kilembe Road.

B: ***Road Safety Improvement and Audit Study Action Plan****:* This aimed 1) carrying out design, construction and monitoring of safety improvements on identified black-spots along the Kampala-Jinja and Kampala-Entebbe Roads; 2) a) Carrying out of a comprehensive revision of the road safety sections of the roads design manual and the general specification for road works; b) Development of a manual for traffic signs and road markings and a manual to prevent hazards at road construction and rehabilitation sites; c) Training in the use and application of relevant manuals and the database system to the staff of MOWT and RAFU; and d) Provision of technical advisory services to the staff of the National Road Safety Council; 3) a) Acquisition of enforcement equipment for speed control and breath alcohol measurement for use by the police and provision of training; b) Reviewing and updating the Highway Code and development of a curriculum for Driving Instructors and Driving Schools, and development of road safety as a subject to be included in the curriculum of schools; and c) Provision of technical advisory services to the Borrower' Ministry of Health to research the epidemiology of road traffic injury trauma and for identification of interventions required to reduce its impact on public health in the Borrower's territory.

C: ***Consultancy services for Civil Works Supervision****:* This included the provision of technical advisory services for the supervision of the civil works to be carried out under components A and B above.

D: ***Preparation of the Transport Master Plan****:* This provided for the technical advisory services for the preparation and implementation of a national transport master plan inclusive on the Greater Kampala metropolitan area.

E: ***Innovative Technologies for Construction of Low Volume Roads*****;** Provision of advisory services and civil works related to the Mattuga-Semuto-Kapeeka road for the preparation of (i) a feasibility study, including socioeconomic and environmental impact

assessment, costs of potential cost and benefits and detailed project monitoring program during and after construction; (ii) construction; (iii) supervision during construction; (iv) monitoring program during and after construction; and (v) design manual , specification and guidelines based on detailed analysis of data obtained through the monitoring program.

F: ***National Road Agency Building***; Aimed at carrying out of a feasibility study, detailed design, and supervision of construction of the National Road Agency Building.

7.3.2 Changes in the Project Scope

7. No amendments were made with respect to the project scope

7.4 Project Costs

7.4.1 Original IDA Financing Allocations

8. The Development Credit Agreement (DCA) for RDPP2 signed on August 16, 2001 provided for the following allocation of the SDR 50,900,000 credit proceeds:

Category 1: Civil Works (SDR 40,720,000) being 75 percent funding for the category;
Category 2: Goods (SDR 230,000) being 100% for the category;
Category 3: Consultants' Services, Training and Audit Fees (SDR 5,840,000) being 80 percent funding for the category; and
Category 4: Unallocated (SDR 4,110,000).

7.4.2 Amendments and Re-allocations

There were no formal amendments to the allocations in 7.4.1. However, the World Bank client connection indicates that the IDA funded amounts have been disbursed as follows:

Table 2: Disbursements

Category Description		Allocated	Disbursed	Un-disbursed	Undisbursed	Disbursed Historical
		XDR	XDR	XDR	USD	USD
Totals		48,492,996.05	48,492,996.05	0.00	0.00	71,894,629.45
1	Civil Works	40,720,000.00	44,333,990.02	-3,613,990.02	-5,600,997.87	66,326,538.59
2	Goods	230,000.00	122,679.17	107,320.83	166,326.90	184,358.26
3	Consu. SRVS + TRG/AUD	5,840,000.00	4,995,423.35	844,576.65	1,308,933.34	7,381,643.85
DA-A	Designated Account	0.00	104,947.49	-104,947.49	-162,648.67	104,947.49
DA-B	Designated Account	0.00	1,342,959.97	-1,342,959.97	-2,081,332.79	1,342,959.97
MDRI	MDRI split	-2,407,003.95	-2,407,003.95	0.00	0.00	-3,445,818.71
Unallocated	UNALLOCATED	4,110,000.00	0.00	4,110,000.00	6,369,719.10	0.00

7.5 Project Implementation

7.5.1 Implementation Schedule

9. The Credit became effective on April 11, 2002 with an original closing date of June 31, 2006. Due to delays in achieving one of the critical development objectives of the credit, for example upgrading and strengthening of national roads, the credit was extended once to the current closing date of 30 June 2008 as follows:

- Extension to June 30, 2008 was sought on March 23, 2006 and approval was given on May 12, 2006.
- The extension was asked for by the government and approved by the World Bank to enable the credit support the completion of the lagging civil work contracts, which had taken much longer to complete than had been envisaged when the project was appraised.

7.5.2 Financial Performance

10. A summary of the financial status at project closure is shown in the table below. From the table, the percentage utilization of the credit is 123%. The difference in percentages is due to depreciation of the dollar against the SDR over the years.

11. Details of the financial performance for the individual projects are given in Table 3 below.

Table 3: Financial Status at Closure

COMPONENTS COSTS (M US $)	At Appraisal				Actual			
	IDA	**NDF**	**GOU**	**TOTAL**	**IDA**	**NDF**	**GOU**	**TOTAL**
IDA/GOU Funded								
Upgrading and Strengthening of National Roads								
Civil Works	54.35	0	18.12	**72.47**	63.47		21.16	**84.63**
Construction Supervision	4.06	0	1.02	**5.08**	5.22		1.74	**6.96**
Road Safety Improvement Action Plan								
Black spots Improvement; Civil Works	2.08	0	0.70	**2.78**	4.74		2.82	**7.56**
Black spots Design and Const. Supervision.	0.24	0	0.06	**0.30**	0.31		0.58	**0.89**
Institutional Support	1.36	0	0.34	**1.70**	1.40		0.39	**1.79**
Equipment	0.30	0	0.00	**0.30**	0.09		0.18	**0.27**
National Transport Master Plan								
Consulting Services	2.13	0	0.53	**2.66**	2.29		0.76	**3.05**
SUB-TOTAL	**64.52**	**0**	**20.75**	**85.29**	**77.52**		**27.63**	**105.15**
NDF Funded								
Pilot Project for the Demonstration of the Use of Innovative Technologies for Construction of Low Volume Traffic Roads		8.16	2.63	10.79		0.82		**0.82**
Feasibility Study and Design of a National Road Agency Building		0.74	0.18	0.92		0.36		**0.36**
SUB-TOTAL		**8.90**	**2.81**	**11.71**		**1.18**		**1.18**
TOTAL	**64.52**	**8.90**	**23.57**	**97.00**	**77.52**	**1.18**	**27.63**	**106.33**

Note: At Appraisal SDR 1 = US$ 1.355

Table 4: Detailed Financial Performance for Components

Project Cost By Component	Appraisal Estimate US$M	Actual Cost US$M	Increase
IDA/GOU FUNDED COMPONENTS			
Upgrading and Strengthening of National Roads			
A. Civil Works: (including physical contingencies 10%)			
i) Olwiyo-Pakwach (62 km) – C003	31.86	17.53	23%
ii) Karuma-Olwiyo (46 km) – C004		18.48	
iii) Fort Portal-Hima (55 km) – C007		15.84	
iv) Hima-Kasese-Kikorongo & Kilembe (53 km) – C008		16.86	17%
v) Kikorongo-Katunguru & Equator (54 km) – C009	40.61	15.92	
Sub-total	**72.47**	**84.63**	**17%**
Construction Services for the Supervision of Civil Works			
i) Olwiyo-Pakwach (62 km	5.08	1.42	
ii) Karuma-Olwiyo (46 km)		1.36	
iii) Fort Portal-Hima (55 km)		1.53	
iv) Hima-Kasese-Kikorongo & Kilembe (53 km)		1.39	
v) Kikorongo-Katunguru & Equator (54 km)		1.26	
Sub-total	**5.08**	**6.96**	**37%**
Road Safety Improvement Action Plan			
A. Civil Works – Black spot Improvements	2.78	7.56	172%
B. Consulting Services Design & Construction Supervision	0.30	0.89	197%
B. Consulting Services	1.70	1.79	6%
C. Equipment	0.30	0.27	(10)%
Sub-total	**5.08**	**10.51**	107.%
National Transport Master Plan			
Consulting Services	2.66	3.05	15%
Sub-Total	**2.66**	**3.05**	15%
TOTAL	**85.29**	**105.15**	23%
NDF FUNDED COMPONENTS			
Pilot Project for the Demonstration of the Use of Innovative Technologies for Construction of Low Volume Traffic Roads		0.82	
A. Civil Works;Matugga-Semuto-Kapeka (36 km)	8.55	(22.16)	159%
B. Consultant Services ; Matugga-Semuto-Kapeka (36 km)	2.24	(1.72)	(30)%

Sub-Total	**10.79**	**23.88**	121%
Feasibility Study and Design of a National Road Agency Building	0.92	0.36 (0.64)	
Sub-Total	**0.92**	**(0.64)**	**(30)%**
TOTAL COST (NDF)	**11.71**	**1.18** **(24.52)***	
TOTAL PROJECT COST	**97.00**	**106.33**	**110%**

* Numbers in brackets are contract amounts. Actual spent at project closing was only $1.18m.

7.6 Achievement of Project, implementation and financial Objectives

7.6.1 Overall Assessment

12. The overall development objective of the RDPP2 was to improve access to rural and economically productive areas and to progressively continue to build up sustainable road sector planning, design and program management capability, as well as road safety management. This was to be achieved through: (i) Upgrading and strengthening of two high priority national roads; (ii) Improvement of safety at selected accident black spots and the associated road safety enforcement and management; (iii) pilot studies of innovative technologies and non-conventional materials in construction of low volume roads and (iv) the Consultancy services for the design and construction supervision of the proposed Road Agency Headquarters building.

13. The rating with respect to achievement of the project and implementation objectives is as follows:

Objective No. 1

14. Upgrading and strengthening of two high priority national roads; the rating for the achievement of this objective is: **SATISFACTORY** as shown below**.**

Table 5: Objective 1 - Outputs

Planned Output	Output Indicator	Actual Output	Remark
Existing national roads upgraded to paved standard or strengthened; Construction well supervised	108 km of gravel roads upgraded by June 2005	Upgrading Karuma-Olwiyo 45.55 km completed in Aug 2006 and Olwiyo-Pakwach 62.55 km completed in July 2007	All planned outputs achieved but two years later. The delayed completion was due to initial delay in credit effectiveness and the prolonged procurement process.

Planned Output	Output Indicator	Actual Output	Remark
	163 km of paved roads strengthened by June 2005	Strengthening of Fort Port – Hima 55.2 km completed in May 2008, Hima-Kikorongo/Kasese-Kilembe 52.7km in March 2007 and Kikorongo-Katunguru/Equator Road 53.7 km in December 2006	All planned outputs achieved but 3 year later. The delayed completion was due to initial delay in credit effectiveness and the prolonged procurement process.

Objective No. 2:

(ii) Improvement of safety at selected accident black spots**: MODERATELY SATISFACTORY** while the provision of road safety enforcement equipment to traffic police, Production of Engineering manuals and specifications and provision of institutional support is rated as **HIGHLY SATISFACTORY** as illustrated below. Overall the investment in road safety appears to be yielding results given that there has been a reduction in the number of road accidents and road accident fatalities. The end FY07/08 report by the Uganda Police indicates that the number of traffic accidents reduced from 17,428 in FY 06/07 to 11,758 in FY07/08, representing a reduction of 33 %; the number of causalities reduced from 14,894 in FY06/07 to 13,432 in FY07/08, representing a reduction of 9.8%; fatal crashes reduced from 1,737 in 2006/7 to 905 in 2007/8, representing a reduction of 48%; and the fatalities (deaths) reduced from 2,383 in FY06/07 to 2,035 in 2007/8, representing a reduction of 14%.

Table 6: Objective 2 - Outputs

Planned Output	Output Indicator	Actual Output	Remark
Road Safety Action Plan Phase 1 implemented	Black spots on two major truck roads identified and reconstructed by June 2004	12 black spots reconstructed along Kampala-Jinja	Procurement of the contractor was delayed by an administrative review process. Improvement works along Kampala-Entebbe Road were cancelled to avoid conflict with the highly sensitive resealing works in preparation for CHOGM.
	Road Safety enforcement equipment handed over to Traffic Police	6 motorcycles with communication equipment, 18 alcohol breathalyzers, 18 speed detection guns, and 18 first aid kits were handed over to Police in 2005	All planned outputs achieved, ahead of time.

Planned Output	Output Indicator	Actual Output	Remark
	Engineering manuals and technical specifications on road safety produced and approved; institutional support provided to MOWT, MOH, RAFU, NCDC, ICC-U, Police, and other road safety stakeholders.	Several documents was produced and approved including the Highway Code, Road safety manuals and specifications, curricula for primary schools and driving schools, several regulations, reports on various feasibility studies. This was coupled with physical assistance to referral hospitals. Training was also conducted for MOWT, RAFU, ICC-U, MOH, etc. Completed in August 2008.	All planned outputs achieved, additional services were requested for by the client, leading to delayed completion.

Objective No 3:

iii) Consultancy Services for preparation for the National and Greater Kampala Area Transport Plans is rated **SATISFACTORY**

Planned Output	Output Indicator	Actual Output	Remark
National and Greater Kampala Area Transport Plan Approved and Agreed	Transport Plans approved and agreed by June 2004	Transport Plans including investment plans completed in March 2005.	A draft Government position paper had been prepared by another consultant in May 2007. This was in the process of being refined by project closure

Objective No.4:

Pilot studies of innovative technologies and non-conventional materials in construction of low volume roads is rated; **MODERATELY UNSATISFACTORY** as elaborated below

Planned Output	Output Indicator	Actual Output	Remark
Innovative low traffic road designs identified and adopted	Innovative design prepared, constructed and tested by June 2006	Innovative design completed and adopted in October 2006. Construction to test the designs is slated to start in November 2008	Procurement of the design Consultant was delayed by the need to procure Technical Assistance to prepare the TOR for consultancy service RFP.

Objective No 5: Consultancy services for the design and construction supervision of the proposed Road Agency Headquarters building is rated as **SATISFACTORY**

Planned Output	Output Indicator	Actual Output	Remark
Road Agency Building designs completed and adopted	Road Agency Building design completed by May 2006	Road Agency building design completed in May 2008	Adoption of design was delayed by need to undertake some changes to the design at the request of the Client.

7.6.2 Component Assessment

7.8 Bank and Borrower Performance

7.8.1 Bank

15. Throughout the life of the project, the Bank showed commitment to ensure that the Client achieved the project outcomes. This was particularly evident with regard to decisively supporting the Client in resolving the contractual issues on the road projects. With respect to supervision, regular (bi-annual) implementation support missions have been conducted throughout the project life. In this regard, the Bank performance is rated as being **SATISFACTORY**

7.8.2 Borrower

Government:

16. Government supported the project given its important contribution to its development programs. It however experienced problems in meeting its counterpart funding obligations in a timely manner. Government's performance rating can be rated as being **SATISFACTORY**

Implementing Agency:

17. The implementing agency endeavored to ensure that projects are finished within the scheduled time, cost and quality. It monitored and managed the projects to ensure that success is achieved. It supported the bank missions whenever there was need to ensure that the Bank accomplishes its mission. Overall, the Implementing Agency's performance is rated as **SATISFACTORY**

7.9 Lessons Learnt and Benefits

7.9.1 Lessons

Government/IDA Management of the Project

18. The arrangement by IDA to decentralize its operations with regard to the project to regional and country office has greatly improved communication and interaction between the Borrower and the Bank.

19. Government continued to have problems meeting its counterpart funding obligations on the project, this putting the government at risk of contractual default and related costs. This risk needs to be properly addressed for future projects such as IDA taking on 100 percent funding of the project.

Project Estimates

20. Estimates for the works components both at appraisal and feasibility/detailed design (Engineer's estimate) were often short of the eventual costs of the works. For appraisal estimates, this was caused by changes in local and global economic factors during the period between project appraisal and actual implementation. For engineers' estimates the other cause related to insufficient investigations of nature sources of construction materials.

21. There is therefore need to provide sufficient physical and fiscal contingence to match the likely changes in local and global economic factors. It is also recommended to make material investigation services at feasibility and detailed design a reimbursable at cost sum to facilitate more comprehensive materials investigation at this stage.

Project Related Activities

22. Procurement continued to be a major delaying activity for most of the project components. It is therefore vital to have good procurement planning to avoid such delays to projects. Commencement of procurement could also be de-linked from the date of effectiveness of the credit to give some lead time to procurement activities

23. Physical improvements to identified black spot locations should be better planned so as to be part of the major road rehabilitation contracts.

7.9.1 Benefits

24. The major benefit has been upgrading of 108.05 km of truck roads in Northern Uganda and strengthening of 157.64 km of truck roads in Western Uganda. This will enhance the economic and social developments in the areas.

Annex 6. List of Supporting Documents

1. Project Appraisal Documents for:
   i) Road Development Program, Phase I Project – June 3, 1999
   ii) Road Develop Program, Phase II Project – June 7, 2001
   iii) Road Development Program, Phase III Project – August 9, 2004

2. Development Credit Agreements for:
   i) Road Development Program Phase I Project – November 22, 1999
   ii) Road Develop Program, Phase II Project – August 16, 2001
   iii) Road Development Program, Phase III – February 23, 2005.

3. Aide-memoire, implementation status reports and project progress reports.
4. Country Assistance Strategy

5. Project Implementation Plan

6. Executive Agency Implementation Policy Framework and Implementation Strategy, March 2000

7. Uganda National Road Authority Act, June 8, 2006

8. Consultants' Study Reports:
   i) Transitional Institutional Reforms for the Establishment of Road Agency, June 1998
   ii) Road Agency Study, March 2002

UGANDA
ROAD WORKS EXECUTED UNDER THE ROAD DEVELOPMENT PROGRAM PHASE 2

- ROADS DESIGNED UNDER RSISTAP AND UPGRADED UNDER RDPP2
- ROADS DESIGNED UNDER RSISTAP AND UPGRADED UNDER OTHER PHASES OF RDP
- ROAD WORKS DESIGNED UNDER RSISTAP BUT DROPPED DUE TO LOW RATES OF RETURN
- PAVED ROADS
- GRAVEL ROADS
- DISTRICT CAPITALS
- NATIONAL CAPITAL
- RIVERS
- INTERNATIONAL BOUNDARIES

Source: Uganda National Road Authority (UNRA).

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0 25 50 75 100 Kilometers
0 25 50 75 Miles

30°E 32°E 34°E 4°N 2°N 0°

SUDAN
KENYA
DEM. REP. OF CONGO
TANZANIA
RWANDA
Lake Albert
Lake Edward
Lake Victoria
Albert Nile
Victoria Nile
To Juba
To Faradje
To Beni
To Bunia
To Lodwar
To Nakuru
To Kisumu
To Goma
To Kigali
To Nyakanazi

Moyo, Yumbe, Koboko, Maracha, Adjumani, Arua, Kitgum, Kaabong, Kotido, Kilak, Gulu, Abim, Moroto, Nebbi, Pakwach, Olwiyo, Karuma, Oyam, Lira, Bulisa, Apac, Dokolo, Amuria, Katakwi, Nakapiripirit, Kaberamaido, Soroti, Masindi, Amolatar, Kumi, Hoima, Kapchorwa, Sironko, Bukwo, Nakasongola, Pallisa, Budaka, Mbale, Kamuli, Kaliro, Kiboga, Luwero, Wobulenzi, Zirobwe, Kayunga, Busiki, Butaleja, Bubulo, Kibale, Fort Portal, Bundibugyo, Kyenjojo, Nakaseke, Tororo, Mubende, Busunju, Iganga, Bugiri, Busia, Wakiso, Gayaza, Mityana, Mukono, Jinja, Kilembe, Kasese, Kampala, Mpigi, Kamwenge, Mpondwe, Sembabule, Katunguru, Ibanda, Kiruhura, Masaka, Kalangala, Bushenyi, Mbarara, Isingiro, Rakai, Kanungu, Rukungiri, Ntungamo, Kisoro, Kabale

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