

Document of  
The World Bank

Report No: ICR00004114

IMPLEMENTATION COMPLETION AND RESULTS REPORT  
(TF-12347)

ON A

GRANT

IN THE AMOUNT OF US\$38 MILLION

TO THE

REPUBLIC OF SOUTH SUDAN

FOR A

RURAL ROADS PROJECT

June 12, 2017

Transport and ICT Global Practice  
AFCE3  
Africa Region

## CURRENCY EQUIVALENTS

(Exchange Rate Effective November 30, 2011)

Currency Unit = South Sudan Pound (SSP)  
SSP2.95 = US\$ 1

FISCAL YEAR  
July 1 – June 30

Senior Global Practice Director: Jose Luis Irigoyen

Country Director: Carolyn Turk

Practice Manager: Aurelio Menendez

Project Team Leader: Muhammad Zulfiqar Ahmed

ICR Team Leader: Emmanuel Taban

ICR Primary Author: Virginia Maria Henriquez

## ABBREVIATIONS AND ACRONYMS

AA	Audit Agent
ACU	Aid Coordination Unit
AADT	Average Annual Daily Traffic
AfDB	African Development Bank
CE	Central Equatoria
CGC	Community Grievance Committees
CPA	Comprehensive Peace Agreement
DFID	Department for International Development (UK)
DO	Development Objective
DRB	Directorate for Roads and Bridges
EE	Eastern Equatoria
EPP	Emergency Project Paper
ERR	Economic Rate of Return
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESMU	Environmental and Social Management Unit
ESSAF	Environmental and Social Screening and Assessment Framework
ESW	Economic Sector Work
EU	European Union
EXIM	Export-Import
FM	Financial Management
FRC	Feeder Roads Committee
FY	Fiscal Year
GA	Grant Agreement
GRM	Grievance Redressing Mechanism
GRSS	Government of the Republic of South Sudan
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
ICR	Implementation Completion and Results Report
IDA	International Development Association
IPP	Indigenous People Plan
IPPDR	International Public Procurement and Disposal Regulation
ISR	Implementation Status and Results Report
M&E	Monitoring and Evaluation
MAF	Ministry of Agriculture and Forestry
MCDA	Multi-Criteria Decision Analysis
MDG	Millennium Development Goals
MoFEP	Ministry of Finance and Economic Planning
MDTF-SS	Multi-Donor Trust Fund for South Sudan
MRB	Ministry of Roads and Bridges
MTR	Mid-Term Review

NGO	Non-Governmental Organizations
NPV	Net Present Value
OP/BP	Operations Policy/Bank Procedure
PAD	Project Appraisal Document
PC	Project Coordinator
PFM	Project Financial Management
PDO	Project Development Objectives
PFMU	Project Financial Management Unit
PIM	Project Implementation Manual
PMT	Project Management Team
QAG	Quality Assurance Group
QEA	Quality at Entry
QSA	Quality of Supervision
RAP	Resettlement Action Plan
RED	Road Economic Decision
RF	Results Framework
SBD	Simplified Contract and Bidding Documents
SETIDP	Sudan Emergency Transport and Infrastructure Development Project
SMoPI	State Ministry of Physical Infrastructure
SSDP	South Sudan Development Plan
SSP	South Sudan Pound
SSRA	South Sudan Road Authority
SSRF	South Sudan Recovery Fund
SSRMP	South Sudan Road Maintenance Project
SSRRP	South Sudan Rural Roads Project
SSTTF	South Sudan Transition Trust Fund
SS-EARTTDFP	Africa Regional Transport Trade and Development Facilitation Project
TA	Technical Assistance
TAs	Technical Assistants
TORs	Terms of Reference
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
USD	United States Dollars
WE	Western Equatoria
WFP	World Food Program

## Contents

Data Sheet	
A. Basic Information.....	i
B. Key Dates .....	i
C. Ratings Summary .....	i
D. Sector and Theme Codes.....	ii
E. Bank Staff.....	ii
F. Results Framework Analysis .....	iii
G. Ratings of Project Performance in ISRs .....	viii
H. Restructuring (if any).....	viii
I. Disbursement Profile .....	x
1. Project Context, Development Objectives and Design.....	1
2. Key Factors Affecting Implementation and Outcomes .....	6
3. Assessment of Outcomes .....	15
4. Assessment of Risk to Development Outcome.....	20
5. Assessment of Bank and Borrower Performance .....	21
6. Lessons Learned.....	24
7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners.....	26
Annex 1. Project Costs and Financing.....	27
Annex 2. Outputs by Component.....	28
Annex 3. Economic and Financial Analysis .....	34
Annex 4. Bank Lending and Implementation Support/Supervision Processes.....	43
Annex 5. Beneficiary Survey Results .....	45
Annex 6. Stakeholder Workshop Report and Results.....	46
Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR.....	47
Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders .....	51
Annex 9. List of Supporting Documents .....	52
MAP .....	53



## Data Sheet

A. Basic Information			
Country:	South Sudan	Project Name:	South Sudan Rural Roads Project (SSRRP)
Project ID:	P129000	L/C/TF Number(s):	TF-12347
ICR Date:	06/12/2017	ICR Type:	Core ICR
Lending Instrument:	ERL	Borrower:	REPUBLIC OF SOUTH SUDAN
Original Total Commitment:	USD 38.00M	Disbursed Amount:	USD 37.56M
Revised Amount:	USD 37.56M		
<b>Environmental Category: B</b>			
<b>Implementing Agencies:</b> Ministry of Roads and Bridges			
<b>Cofinanciers and Other External Partners:</b>			

B. Key Dates				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	08/02/2011	Effectiveness:	08/15/2012	08/01/2012
Appraisal:	10/14/2011	Restructuring(s):		05/30/2016
Approval:	04/26/2012	Mid-term Review:	09/15/2014	11/05/2014
		Closing:	06/30/2016	10/31/2016

C. Ratings Summary	
<b>C.1 Performance Rating by ICR</b>	
Outcomes:	Moderately Satisfactory
Risk to Development Outcome:	High
Bank Performance:	Satisfactory
Borrower Performance:	Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)			
Bank	Ratings	Borrower	Ratings
Quality at Entry:	Satisfactory	Government:	Satisfactory
Quality of Supervision:	Satisfactory	Implementing Agency/Agencies:	Satisfactory
<b>Overall Bank Performance:</b>	Satisfactory	<b>Overall Borrower Performance:</b>	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):	Yes	Quality at Entry (QEA):	None
Problem Project at any time (Yes/No):	No	Quality of Supervision (QSA):	None
DO rating before Closing/Inactive status:	Moderately Satisfactory		

**D. Sector and Theme Codes**

	Original	Actual
<b>Major Sector/Sector</b>		
Public Administration		
Sub-National Government	4	4
Transportation		
Rural and Inter-Urban Roads	91	91
Public Administration - Transportation	5	5
<b>Major Theme/Theme/Sub Theme</b>		
Economic Policy		
Trade	15	15
Trade Facilitation	15	15
Public Sector Management		
Public Administration	2	2
Municipal Institution Building	2	2
Urban and Rural Development		
Rural Development	83	83
Rural Infrastructure and service delivery	83	83

**E. Bank Staff**

Positions	At ICR	At Approval
Regional Vice President:	Makhtar Diop	Obiageli Katryn Ezekwesili
Country Director:	Carolyn Turk	Bella Bird
Practice Manager:	Aurelio Menendez	Supee Teravaninthorn
Task Team Leader(s):	Muhammad Zulfiqar Ahmed	Tesfamichael Nahusenay Mitiku



ICR Team Leader:	Emmanuel Taban	
ICR Primary Author:	Virginia Maria Henriquez Fernandez	

## F. Results Framework Analysis

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

The Project Development Objective (PDO) is to enhance all season road connectivity to agricultural services for rural communities in high agricultural potential areas.

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

The PDO was not revised.

#### (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
<b>Indicator 1:</b>	Share of rural population with all-season access;			
Value quantitative or Qualitative)	0	9	10.7	10.7
Date achieved	04/17/2012	June 30, 2016	05/30/2016	10/31/2016
Comments (incl. % achievement)	Target achieved. Population data was verified during implementation and surpassed the estimations made based on the census of 2008.			
<b>Sub-Indicator 1(a):</b>	Supplemental information: Number of rural people with access to an all season road (Percentage; number)			
Value quantitative or Qualitative)	0	36,515	43,413	43,413
Date achieved	04/17/2012	June 30, 2016	05/30/2016	10/31/2016
Comments (incl. % achievement)	The expected number of rural people with access to an all season road was increased at project restructuring. Progress reports prepared by contractors and supervision firms provided more accurate data than the estimations made based on the 2008 census.			
<b>Indicator 2:</b>	Reduction of travel time on roads targeted by the project (minutes/km)			
Value quantitative or Qualitative)	3	1		1
Date achieved	04/17/2012	June 30, 2016		10/31/2016

Comments (incl. % achievement)	Target achieved. This indicator was measured by averaging the travel times after works on all project roads.			
<b>Indicator 3:</b>	Number of agricultural production centers connected to all season roads (Number)			
Value quantitative or Qualitative)	0	44	39	39
Date achieved	04/17/2012	June 30, 2016	05/30/2016	10/31/2016
Comments (incl. % achievement)	Target achieved. The number of agricultural centers connected to all season roads was reduced from 44 to 39 at Project Restructuring.			
<b>Indicator 4:</b>	Direct Project Beneficiaries (number)			
Value quantitative or Qualitative)	0	91,287	91,090	91,090
Date achieved	04/17/2012	June 30, 2016	05/30/2016	10/31/2016
Comments (incl. % achievement)	Target achieved. The number of direct project beneficiaries was reduced from 91,287 to 91,090.00 at Project Restructuring, given that more updated and accurate population figures were obtained during project implementation.			
<b>Sub-Indicator 4(a):</b>	Supplemental Information: Of which female (percentage) (Direct Project Beneficiaries)			
Value quantitative or Qualitative)	0	48.1		48.1
Date achieved	04/17/2012	June 30, 2016		10/31/2016
Comments (incl. % achievement)	The expected percentage of female beneficiaries was reached, despite updated beneficiary population figures, as the difference was minor.			
<b>Indicator 5:</b>	Roads in good and fair condition as a share of total classified roads (percentage)			
Value quantitative or Qualitative)	0	100		100
Date achieved	04/17/2012	June 30, 2016		10/31/2016
Comments (incl. % achievement)	Target achieved. The last road condition measurement was carried out by June 2016, after the completion of most works. The total improved classified road network increased from 0 to 465 km under the project, exceeding the originally expected 450km.			

<b>Sub-Indicator 5(a):</b>	Supplemental information: Size of the total classified network (km)			
Value quantitative or Qualitative)	0	450	465	465
Date achieved	04/17/2012	June 30, 2016	05/30/2016	10/31/2016
Comments (incl. % achievement)	The total classified road network was increased from 450km to 465km at Project Restructuring, as a result of the additional road sections intervened by the project.			

**(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
<b>Indicator 1:</b>	Roads rehabilitated, rural roads (Km)			
Value (quantitative or Qualitative)	0	150	175	175
Date achieved	04/17/2012	June 30, 2016	05/30/2016	10/31/2016
Comments (incl. % achievement)	Target achieved. The target was increased from 150 Km to 175 Km at Project Restructuring, as the actual road lengths were verified during project implementation. The Magwi-Labone (89km) and Amadi-Tali (86km) rehabilitated road sections totaled 175km.			
<b>Indicator 2:</b>	Travel time on Magwi - Labone road (Hours)			
Value (quantitative or Qualitative)	3	1		1
Date achieved	04/17/2012	June 30, 2016		10/31/2016
Comments (incl. % achievement)	Target achieved. Travel time was measured on a monthly basis. At appraisal, 3 hours were estimated to go through the whole section.			
<b>Indicator 3:</b>	Employment generated under rehabilitation contracts (Number)			
Value (quantitative or Qualitative)	0	TBD	205	205
Date achieved	04/17/2012	June 30, 2016	05/30/2016	10/31/2016
Comments (incl. % achievement)	Target achieved. The target number was determined during implementation and the Results Framework updated at Project Restructuring. At project restructuring 205 employment opportunities was the target that had been achieved.			

<b>Indicator 4:</b>	Roads improved, rural roads (Km)			
Value (quantitative or Qualitative)	0	300	290	290
Date achieved	04/17/2012	June 30, 2016	05/30/2016	10/31/2016
Comments (incl. % achievement)	Target achieved. At appraisal, the total road length to be improved was estimated at 300 Km. During project implementation, the road lengths were confirmed for each section and totaled 290km. The target value was updated at Project Restructuring.			
<b>Indicator 5:</b>	Travel time on Yei-New Lasu road (Hours)			
Value (quantitative or Qualitative)	3	1		1
Date achieved	04/17/2012	June 30, 2016		10/31/2016
Comments (incl. % achievement)	Target achieved. Travel time was measured on a monthly basis. At appraisal, 3 hours were estimated to go through the whole length.			
<b>Indicator 6:</b>	Employment generated under spot improvement and maintenance contracts (Number)			
Value (quantitative or Qualitative)	0	TBD	396	402
Date achieved	04/17/2012	June 30, 2016	05/30/2016	10/31/2016
Comments (incl. % achievement)	Target exceeded. The target number was determined during implementation and the Results Framework updated at Restructuring. Spot improvement and maintenance contracts generated 290 labor-based and 112 mechanized employment opportunities.			
<b>Indicator 7:</b>	State Roads/Infrastructure Management Units established (Number)			
Value (quantitative or Qualitative)	0	4	0	0
Date achieved	04/17/2012	June 30, 2016	05/30/2016	10/31/2016
Comments (incl. % achievement)	This indicator was dropped, as it was not relevant. Although not operational, State Level Units already existed under the SMOPI, whose staff received training under the project and joined MRB teams in the management and supervision of works.			
<b>Indicator 8:</b>	Planning Department for MRB, including rural roads coordination unit established (Yes/No)			

Value (quantitative or Qualitative)	No	Yes	No	No
Date achieved	04/17/2012	June 30, 2016	05/30/2016	10/31/2016
Comments (incl. % achievement)	This indicator was dropped at Project Restructuring due to funding shortfall.			
<b>Indicator 9:</b>	Business Plan for Rural Roads Development prepared (Number)			
Value (quantitative or Qualitative)	0	4	1	1
Date achieved	04/17/2012	June 30, 2016	05/30/2016	10/31/2016
Comments (incl. % achievement)	Target achieved. The aim was to prepare Business Plans for each pilot state. This activity was delayed due to the low capacity at the state level. As updated through Project Restructuring, one Business Plan was prepared applicable for every state.			
<b>Indicator 10:</b>	Staff from states trained (Number)			
Value (quantitative or Qualitative)	0	40	51	51
Date achieved	04/17/2012	June 30, 2016	05/30/2016	10/31/2016
Comments (incl. % achievement)	At Project Restructuring, the target established at appraisal had already been exceeded, as 51 state officials had received procurement training in April 2013 and August 2014. The target was updated to exactly 51 at Project Restructuring.			
<b>Indicator 11:</b>	Staff from Ministry of Roads and Bridges trained (Number)			
Value (quantitative or Qualitative)	0	10		59
Date achieved	04/17/2012	June 30, 2016		10/31/2016
Comments (incl. % achievement)	Target exceeded by 490%. Forty-nine additional staff from the Ministry of Roads and Bridges received training under the project.			
<b>Indicator 12:</b>	Road Sector Development Program Prepared (Yes/No)			
Value (quantitative or Qualitative)	No	Yes		Yes
Date achieved	04/17/2012	June 30, 2016		10/31/2016
Comments (incl. % achievement)	Target achieved. This result was achieved in June 2016, through TA provided by UNOPS and financed by the Project. The MRB submitted the			

	Road Sector Development Program for approval by the cabinet after project closing, in November 2016.			
<b>Indicator 13:</b>	Strategy for road maintenance financing adopted (Yes/No)			
Value (quantitative or Qualitative)	No	Yes		Mostly
Date achieved	04/17/2012	June 30, 2016		10/31/2016
Comments (incl. % achievement)	Target mostly achieved. Preparation of the Strategy was completed in June 2016 and submitted to Cabinet by MRB for onward submission to Parliament. The adoption of the strategy is beyond the control of the project and is pending approval by Cabinet.			

### G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	11/13/2012	Satisfactory	Moderately Satisfactory	2.00
2	05/27/2013	Satisfactory	Moderately Satisfactory	2.00
3	12/05/2013	Satisfactory	Satisfactory	13.46
4	06/03/2014	Satisfactory	Satisfactory	17.50
5	12/30/2014	Satisfactory	Satisfactory	22.63
6	06/30/2015	Moderately Satisfactory	Moderately Satisfactory	26.41
7	12/24/2015	Moderately Satisfactory	Moderately Satisfactory	29.37
8	06/28/2016	Moderately Satisfactory	Moderately Satisfactory	32.95
9	11/09/2016	Satisfactory	Satisfactory	34.01

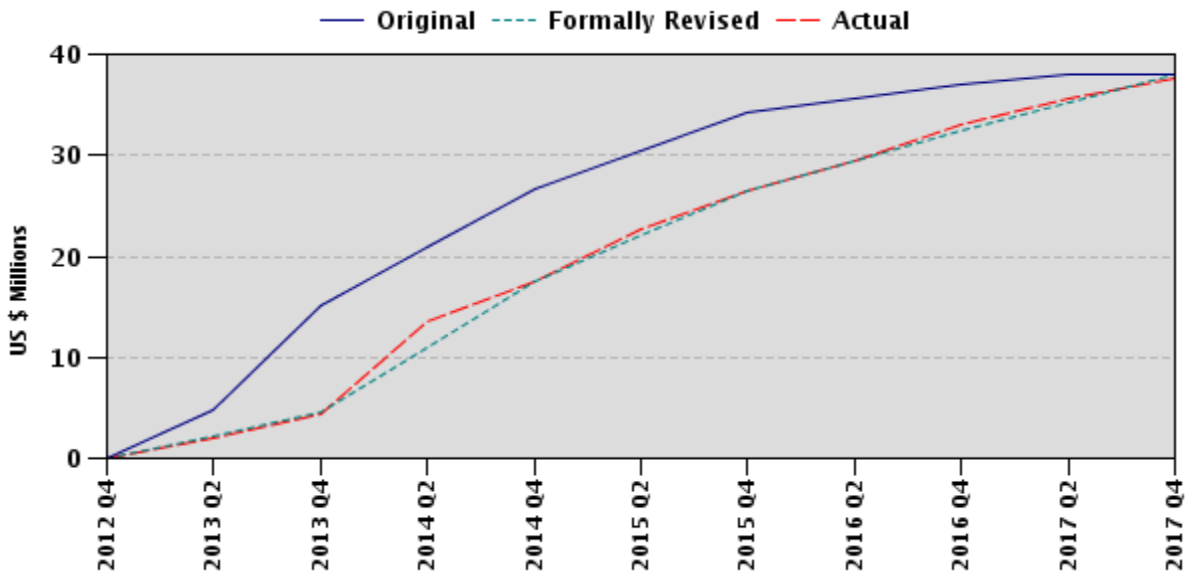
### H. Restructuring (if any)

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
05/30/2016	N	MS	MS	32.45	The purpose of this restructuring was to: (i) extend the project closing date by four (4) months from June 30, 2016 to October 31, 2016; (ii) introduce and drop activities from the three project

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
					<p>components; (iii) revise and update the results framework to reflect changes in project activities and targets; and (iv) re-allocating funds among disbursement categories in order to utilize funds from dropped activities. The four (4) months extension was requested to ensure the completion of the following activities: (a) provision of Technical Assistance (TA) for studies on the creation of a road fund, development of a transport sector business plan, the preparation of a road safety program, strategic studies and the preparation of the road sector development program; (ii) the upgrading and rehabilitation, as well as maintenance and spot improvement of selected rural roads, for which the contracts had to be extended - at no cost- given delays due to insecurity and the increase of market prices; (iii) hiring of TA to conduct technical and social audit. The dropped activities included (i) upgrading and rehabilitation of the Tali-Yirol road; (ii) the maintenance and spot improvement of Rasolo-Maridi road; (iii) supervision services for maintenance and spot improvement of selected</p>

Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
					rural roads; (iv) the TA for establishing Planning Department for MRB; (v) procurement of motor vehicles for MRB/States; and (vi) accounting software. The activities introduced included: (i) the maintenance and spot improvement of the Magwi-Aru junction road.

### I. Disbursement Profile





## **1. Project Context, Development Objectives and Design**

1. The US\$38 million South Sudan Rural Roads Project (SSRRP) supported the Government of the Republic of South Sudan's (GRSS) and development partners'<sup>1</sup> initiative to develop the feeder roads network, as part of the reconstruction and state building for this new nation recovering from a protracted civil war. This project aimed at supporting the country's agricultural potential development to improve the livelihood of the rural population, reduce food insecurity, improve basic services delivery and ensure peace through the provision of reliable access to high agricultural production areas and enhancing agricultural marketing.

2. This project was built on the work carried out under the previous Sudan Emergency Transport and Infrastructure Project (SETIDP) as well as on the subsequent Southern Sudan Roads Maintenance Project (SSRMP), both financed by the Multi-Donor Trust Fund for South Sudan (MDTF-SS)<sup>2</sup>. The SSRRP was financed by the South Sudan Transition Trust Fund (SSTTF), established by the World Bank with a total amount of US\$75 million in response to the urgent call for the reconstruction and building of the country, to provide it with bridge financing in the period between its independence and becoming a member of the Bank.

### **1.1 Context at Appraisal**

#### *Country and sector Background*

3. South Sudan is Africa's newest nation, founded on July 9, 2011, after decades of civil war in Sudan and the signing of the Comprehensive Peace Agreement (CPA) in January 2005, which provided a historic window of opportunity to create a peaceful and prosperous Sudan, though it remained deeply fragile<sup>3</sup> and among the least developed countries in the world, lacking many of the basic conditions to support development. As such, the GRSS called for state building, lifting its population out of poverty, ensuring

---

<sup>1</sup> The partners include: The United States Agency for International Development (USAID), United Nations Office for Project Services (UNOPS), the European Union (EU), the Department for International Development (DFID), and the African Development Bank (AfDB).

<sup>2</sup> The MDTF-SS was established in 2005 to help finance the reconstruction and development of Southern Sudan in a collaborative framework that brought together several of the key development partners and provided a one stop point of contact and information on the reconstruction and development effort. Donors of the MDTF included the Netherlands, Norway, United Kingdom, European Commission (EC), Sweden, Germany, Denmark, Finland, Italy, Iceland, Greece, Canada, Spain, and Egypt. The trust funds were administered by the World Bank, working together with UN partners, donors, civil society, and the respective governments.

<sup>3</sup> Interim Strategy Note for the Republic of South Sudan, International Development Association, 2008.

security and focusing on equitable development. South Sudan, with a population of 8.2 million<sup>4</sup>, is endowed with abundant natural resources including a large amount of good quality agricultural land and significant oil reserves. Yet more than 50 percent of the population was poor and indicators of human well-being were among the lowest in the world. The improvement of the rural livelihood and agriculture sector was key for building this new nation, as well as for diversifying the economy and revenue base away from an over dependence on oil, whilst not affecting food security and employment, as well as macroeconomic stability.

4. Despite being a largely rural and agriculture-dependent country,<sup>5</sup> most of the food was imported from the neighboring countries of Uganda and Kenya. Eighty-three percent of households resided in rural areas and 78 percent depended on farming or livestock as their primary livelihood. The majority of South Sudanese lived in near isolation, lacking access to income-generating opportunities and social services. South Sudan's road network was approximately of 12,642 km (4,000 km were all weather gravel roads and the rest were tracks and trails) and was not receiving proper maintenance thus most roads were in poor to very poor condition, especially in rural areas that were largely inaccessible during the six-month rainy season (from April to October). These conditions made transportation in South Sudan slower and more expensive than anywhere else in Africa, which hindered farmers' sourcing and transporting of key inputs (such as seeds or fertilizers) to their farms and moving their products to the local and regional markets, and limited the potential for agriculture to contribute to overall economic growth.

5. Transport infrastructure management institutions were at formative stage. The capacity of the Ministry of Roads and Bridges (MRB), which had the overall responsibility of developing and managing the road infrastructure, was weak. Capacity at the State level, responsible for feeder roads development and maintenance, was also weak. Operation and maintenance of public infrastructure and utilities was challenging, as priority tended to be accorded to developing new infrastructure.

6. On January 15, 2010, the GRSS adopted the South Sudan Vision 2040, "Towards Freedom, Equality, Justice, Peace and Prosperity for All". This vision was anchored in six pillars, of which the second stated "a prosperous, productive and innovative nation". An infrastructure and agriculture needs assessment was prepared by the African Development Bank (AfDB) in collaboration with the World Bank and other development partners, which found a vast infrastructure deficit reflected across all transport modes, and called for immediate action to improve the transport network and provide access to the hinterlands in

---

<sup>4</sup> Housing and Population Census, Sudan, 2008.

<sup>5</sup> United Nations Children Fund (UNICEF). (2001, July). UNICEF Humanitarian Action Update, Republic of South Sudan

order to enhance agriculture development.<sup>6</sup> This assessment was carried as an input to the South Sudan Development Plan (SSDP) (2011-2013) that was in preparation at the time of appraisal by GRSS. Overall, the assessment confirmed the premise of the SSDP, "providing access to the rural areas of South Sudan", to reverse the current situation of food insecurity, poor rural livelihood, and sporadic insecurity threats.

7. The SSDP (2011-2013) was the framework for the reconstruction and building of the new nation, prepared by the GRSS to lay out the strategy for the reconstruction and nation building, which included calling for the support of development partners in addition to applying part of the country's oil revenues for reconstruction purposes. This Plan was broken into four core building blocks, of which the second aimed at "achieving rapid rural transformation to improve livelihoods and expand employment opportunities". Donors' strategy was consistent with both "South Sudan Vision 2040" and the SSDP.

8. The project was processed under OP/BP 8.00 as an emergency operation to specifically provide financing for the improvement of rural access roads. The Bank assistance was still needed to, among others, rebuild and restore physical assets, such as roads; restoring essential services and economic activities; as well as establishing and preserving human, institutional, and/or social capital and building capacity for longer-term reconstruction. With the Sudan-South Sudan border issue, security challenges within South Sudan and some disaffected militia leaders, there was a continuing need to support and facilitate peace building to overcome the residue of conflict.

#### *Rationale for Bank Assistance*

9. The World Bank's long-term engagement in the transport sector in South Sudan since 2005 has helped to deepen the understanding of transport infrastructure issues in the country whilst undergoing reconstruction and allowed for the strengthening of the transport sector across the board. During the course of this continuous engagement, through the implementation of previous road projects, the SETIDP<sup>7</sup> and SSRMP<sup>8</sup>, interstate roads were opened and road infrastructure and access were improved by rehabilitating, upgrading and providing maintenance to critical national and rural feeder roads. Critical urban infrastructure had been improved in Juba, the Capital of South Sudan, and institutional capacity strengthened at the MRB and other government institutions, through the creation of mass of human resources and the provision of technical assistance.

---

<sup>6</sup> The short term (2012-2014) demand for infrastructure and agriculture development in South Sudan was estimated at about US\$3.76 billion, of which, transport infrastructure accounted for about 61 percent (US\$2.3 billion). The reconstruction and development of the secondary and tertiary roads, considered to be the rural roads network, required about US\$500 million in the short term period.

<sup>7</sup> The Sudan Emergency Transport and Infrastructure Project - SETIDP (P095081, closed in June 2012)

<sup>8</sup> Southern Sudan Roads Maintenance Project – SSRMP P118579, closed in August 2012)

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

10. The Project Development Objective (PDO) stated in both the Project Appraisal Document and the Grant Agreement (GA) signed on May 18, 2012 was to enhance all season road connectivity to agricultural services for rural communities in high agricultural potential areas. The PDO was intended to be achieved by: (i) improving access to high agricultural potential areas; and (ii) enhancing the capacity of participating states and relevant national government institutions to manage rural transport infrastructure.

11. The PDO indicators as specified in the Emergency Project Paper's Annex 2 were: (i) Share of total population with all-season access; (ii) Reduction of travel time on roads targeted by the project; (iii) Number of agricultural production centers connected to all season roads; (iv) Direct Project Beneficiaries (number), of which female (percentage); and (v) Roads in good and fair condition as a share of total classified roads.

## **1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification**

12. The PDO was not changed during the project's implementation. Some key indicator targets were updated during implementation as shown in Section F of the Data Sheet.

## **1.4 Main Beneficiaries**

13. The Emergency Project Paper (EPP) identified the main beneficiaries as those rural people living within five kilometers of the catchment area on both sides of project roads, which are located in high agricultural potential areas. Due to the lack of access roads in South Sudan, the rural population had to walk long distances to get transportation services, hence a five kilometer distance is considered as an average. The Economic Sector Works (ESW), carried out by the World Bank, had confirmed that farmers had to take their products to road side markets, which were as far as five kilometers.

## **1.5 Original Components (*as approved*)**

The project consisted of three components, namely: (i) upgrading and rehabilitation of selected rural roads; (ii) maintenance and spot improvement of selected rural roads; and (iii) institutional development for rural infrastructure management.

14. **Component 1 - Upgrading and Rehabilitation of Selected Rural Roads (US\$22.5 million):** This component financed the upgrading and/or rehabilitation of selected rural roads opening up high agricultural potential areas. Activities included: (i) rehabilitation of about 150 km of roads targeting areas identified by the agriculture sector for having high productivity for production of cereals, much needed to ensure food security; (ii) provision of supervision services; (iii) updating the draft Environment and

Social Screening and Assessment Framework (ESSAF) for the transport sector; and (iv) preparing Environment and Social Impact Assessments/ Management Plans (ESIAs/ESMPs), Resettlement Action Plans (RAPs) and Indigenous Peoples Plans (IPPs) as required for roads to be rehabilitated and maintained under the project.

**15. Component 2 - Maintenance and Spot Improvement of Selected Rural Roads (US\$12 million):** This component financed the maintenance and spot improvement of about 300 km of rural roads deteriorated due to lack of maintenance during the civil war period. This component also included the maintenance of: (i) feeder roads improved by the Government of Southern Sudan over the previous five years; and (ii) critical collector roads that will ensure connectivity of the priority feeder roads to trunk (interstate) roads. This component was executed by both mechanized and labor based contractors and was split into four subcomponents: (i) mechanized maintenance and spot improvement of about 180 kilometers of select rural roads; (ii) supervision of maintenance and spot improvement works for mechanized maintenance contracts; (iii) labor intensive maintenance and spot improvement of about 120 kilometers of select rural roads; and (iv) supervision of maintenance and spot improvement works for labor based maintenance contracts.

**16. Component 3 - Institutional Development for Rural Infrastructure Management (US\$3.5 million):** This component supported institutional development initiatives at pilot states and national levels to enhance the capacity for rural infrastructure management. This component consisted of three sub-components namely: *Sub-Component 3.1:* strengthening of the capacity of Pilot States, in particular their ministries responsible for physical infrastructure, to manage rural infrastructure - encapsulating: (i) handling procurement, contract management and financial management matters, and (ii) preparation of business plans - through provision of goods, technical assistance, services and Workshops and Training required for the purpose. *Sub Component 3.2:* (i) TA to support establishment of a Planning Department for MRB; (ii) TA to support the preparation of Roads Sector Development Program; (iii) support to establishment of a Road Maintenance Fund; and (iv) road safety programs and strategic studies emerging during implementation. *Sub- Component 3.3:* carrying out of project coordination and management through provision of goods, technical assistance, services, Workshops and Training and Operating Costs required for the purpose, including: (i) training to the Project Management Team (PMT), states and Ministry of Environment staff; (ii) technical assistants (TAs) to the PMT, (iii) provision of technical, social and financial audit firm (Audit Agent -AA); (iv) procurement of desktops and installation of NAVISION Accounting System including training of staff in the ministry; and (v) operational costs for the PMT.

## **1.6 Revised Components**

17. Changes introduced with the restructuring approved on May 30, 2016, resulted in the dropping of some activities across all three components. The dropped activities included (i) upgrading and rehabilitation of the Tali-Yirol road; (ii) the maintenance and

spot improvement of Rasolo-Maridi road; (iii) supervision services for maintenance and spot improvement of selected rural roads; (iv) the TA for establishing Planning Department for MRB; (v) procurement of motor vehicles for MRB/States; and (vi) accounting software. The activities introduced included: (i) the maintenance and spot improvement of the Magwi-Aru junction road. Details are provided in Section H of the Data Sheet.

## **1.7 Other significant changes**

18. The project underwent restructuring, approved in May 30, 2016. The purpose of restructuring was to address the impact of the crisis from December 15, 2013 in project implementation. This restructuring was planned to be embedded within an Additional Financing (AF), which began being prepared in 2014. The preparation of the AF was delayed and ultimately dropped due to the non-availability of IDA resources, hence the team had to prepare a separate restructuring paper. Details are provided under Section H of the Data Sheet.

## **2. Key Factors Affecting Implementation and Outcomes**

### **2.1 Project Preparation, Design and Quality at Entry**

19. *Soundness of the Background Analysis.* Project preparation focused on addressing real emergency needs of the recently independent country recovering from a protracted civil war. It responded to an analysis of the national context and to an assessment of infrastructure and agriculture needs at the time, seeking to diversify the economy and revenue base away from an over dependence on oil. Being a largely rural and agriculture dependent country, South Sudan's poor transport infrastructure represented one of the most significant constraints for development, hence the project aimed at responding to the immediate need of reconstructing rural infrastructure to improve the livelihood of the population in the project area by providing access to services and markets, as well as to facilitate the movement of agricultural products from rural production areas to local and international urban markets.

20. Project design reflected experiences from the previous SETIDP and SSRMP road improvement projects. Despite South Sudan's commitment to planned transport projects, the implementation of the previous projects was challenged by the country's budgetary constraints. Allocations for maintenance were often the target of budget amendment processes, given that these resources had to be diverted to emergency and security sector projects. This situation called for a major initiative by the GRSS to approach various donors within and outside of South Sudan

21. Following the learnings from previous projects and building on their efforts, the SSRMP was designed to continue seeking to move from emergency post-conflict interventions towards sustainable roads development, including construction and maintenance of roads, whilst supporting the institutional capacity strengthening of MRB

on project planning as well as the preparation and implementation of a maintenance strategy. MRB continued to be the institution responsible for the implementation of the SSRRP. Building on the experience acquired from past projects, MRB adopted previous Project Management Team (PMT) arrangements, which had the overall responsibility of project management, performance monitoring, and progress reporting. Core functions were organized as units and regular implementation tasks were to be led by a Project Coordinator (PC) throughout the project's life. MRB also designated staff responsible for Environment and Social Safeguards, Planning and Monitoring, Financial Management/Project Accountant, and Contract Administration. Given that managing project funds was a new task for the MRB, it was defined to be carried out by MRB's Directorate of Administration and Finance through the provision of Technical Assistance .

22. *Adequacy of government's commitment.* The GRSS was fully committed to the project and actively participated in its preparation in a participatory and consultative manner with active involvement of the country's Feeder Roads Committee (FRC), co-chaired by the Ministry of Agriculture and Forestry (MAF) and the Ministry of Roads and Bridges (MRB), which is mandated to coordinate feeder roads development.

23. *Assessment of project design.* The project design was simple in scope as it straightforward aimed at improving the livelihood of rural people living areas with high agricultural production, through the provision of access by developing the feeder roads network of the county. SSRRP was designed to contribute significantly the reconstruction and state building of the new nation of South Sudan, which was somewhat challenging due to its fragile environment, resulting from years of civil war. The design was to be implemented in three components as earlier discussed in Section 1. The project design included measures to continue contributing to the creation of employment opportunities and development of local contractors, by incorporating labor based maintenance contracts.

24. The road works were spread across four out of the ten states of South Sudan, namely: Central Equatoria (CE), Eastern Equatoria (EE), Western Equatoria (WE), and Lakes. The state level institutional strengthening activities were to be carried out in four pilot states (EE, WE, Lakes and Western Bahr el Ghazal), selected taking the following factors into consideration: (i) have the highest potential for production of cereals; (ii) possible future extensive development of feeder roads due to favorable situation for surplus production of agricultural products; (iii) geographic spread of the pilot states to allow equitable distribution between Greater Equatoria and Greater Bahr El Ghazal regions; and (iv) strategic location of the states to serve as model for future replication to neighboring states. All ten states were interested in being benefitted by institutional strengthening activities , however, due to resource limitation, only the selected pilot states could participate. At project preparation, other development partners that were preparing to be engaged in feeder roads development expressed their interest in supporting the remaining states.

25. *Assessment of Risks.* Risk assessment was carried out and the overall risk of the project was classified as High both at preparation and during implementation. This classification was based on previous implementation experiences of road development projects in South Sudan, which suffered from delays due to the country's post conflict environment and institutional capacity constraints. In general, the project's potential risks and the measures to mitigate them were identified and incorporated adequately in the project design as shown in the EPP. Nevertheless, an important risk, which was not analyzed during project preparation and design was the probability of a new conflict to arise due to the then positive and forward looking country environment recovering from a post-conflict situation.

26. At project preparation, major government institutions had already begun functioning, such as the MRB, largely thanks to the implementation of the previous Bank projects and the collaboration of other international donors. The national currency, the South Sudan Pounds (SSP) was becoming stronger and people from neighboring countries, such as Uganda and Kenya, were migrating to the GRSS for potential better job opportunities. Due to this country scenario, there were no expectations of a new conflict to arise. As a result, the design didn't identify mitigation measures in case of a future crisis.

## **2.2 Implementation**

27. The SSRRP was approved on April 26, 2012 for an amount of US\$38 million, signed on May 18, 2012 and declared effective on August 1, 2012. The project's initial closing date was June 30, 2016 and was later extended to October 31, 2016 through a restructuring approved on May 30, 2016. Implementation was rated moderately satisfactory in the first two Implementation Status and Results Reports (ISR) due to an initial slow project implementation and low disbursements resulting from a delay in contracting specialists to support the PMT and contracting works. Thereafter implementation progress improved and was rated satisfactory in the following ISRs, until the armed crisis from December 2013 began affecting the project towards its third year, thus the rate was downgraded back to moderately satisfactory. By project closing, the SSRRP had achieved its PDO, hence the implementation was rated satisfactory in the final ISR.

28. **Project Restructuring.** The objectives of the restructuring, approved on May 30, 2016, were to: (i) extend the project closing date by four (4) months from June 30, 2016 to October 31, 2016; (ii) introduce and drop activities from the three project components; (iii) revise and update the results framework to reflect changes in project activities and targets; and (iv) re-allocating funds among disbursement categories in order to utilize funds from dropped activities. Details are provided in Section H of the Data Sheet.

29. **Engagement of UNOPS.** UNOPS and the GRSS signed an agreement on January, 2016 for the provision of TA for the carrying out of the following activities financed by



the project (totaling US\$1.64 million): (i) development of the Road Maintenance Strategy; (ii) development of a Business Plan for Rural Roads applicable to every State; and (iii) development of a Road Safety Program and strategic studies; (iv) the preparation of the Road Sector Development Program. UNOPS also carried out a Bailey Bridge Assessment Study to support the future development of a strategic bridge development program in South Sudan.

30. **Community-Led Development Initiatives, Cooperatives.** The Project supported the improvement and upgrading of road side market places (agricultural cooperative centers and warehouses) on spots that were convenient to facilitate the distribution of agricultural inputs, marketing local farm products, obtain input for cultivation, and for farmers to receive training as well as guidance on business development from agricultural extension agents (all agricultural services). Each works contract had a provision for community-led development activities such as supporting markets and cooperative societies, all aimed to reduce potential intervention/conflict with local communities during project implementation. The location of the markets was determined by the community and county administration. As a result of the project, a total of 39 agricultural cooperative centers were connected to all season roads. Specifically, five warehouses were constructed and 15 agricultural extension agents were trained along the Magwi-Labone (89km) road section. It is worthy of noting that the warehouses were handed over to facilitate food security among the farmers' groups. The Cooperative Bank of South Sudan trained and organized farmers to increase their organization in cooperatives groups to improve their marketing ability and status, and connected them with bulk buyers like agents/suppliers of the World Food Program (WFP).

31. **Midterm Review (MTR).** The MTR was carried out in November 2014. The PDO was found to remain relevant for the development of the GRSS as well as for the provision of food security in the region. The report provided a series of recommendations for all the aspects assessed, particularly highlighting the need for the GRSS and the Bank to seek additional financing to cover the activities that were going to have to be dropped due to the eminent funding shortfall, expand the project horizontally by increasing coverage with more roads and vertically by extending the project's closing date to allow for the implementation of the additional activities. At MTR, the country's situation was considered sound enough to move forward with project implementation.

32. **Technical Audit.** A technical Audit was carried out near project closing, in October 2016, which provided an independent and objective assessment and confirmed the compliance with World Bank procurement guidelines, works design standards and specifications as well as with the Monitoring and Evaluation (M&E) framework for project implementation. The audit enabled the MRB to effectively discharge its supervisory functions with regards to the implementation of the audited works contracts in conformity with best international practice. The audit concluded that the project was completed successfully, with no major technical findings. A few recommendations were proposed to

improve the procurement and quality of works in future projects, including, among others, the need to develop a set of technical specifications tailored to the gravel feeder roads, and to continue incorporating maintenance components in road rehabilitation projects to ensure the sustainability of the road investments, involving the local communities and county offices.

### **2.2.1 Major factors affecting project implementation**

33. **Armed crises in South Sudan.** South Sudan entered into an internal armed conflict starting December 15, 2013 that particularly affected the North and North Eastern parts of the country. However, the progress of the project was not affected, thus just suffering slight delays/disruptions which also stemmed from the uncertain situation of the country. The works and supervision services continued to be implemented as the sites were located in peaceful parts of the country and were not affected by the conflict.

34. Separately, in May 2015, fighting erupted between farmers from Mundri West and East, and Maridi counties, and nomadic cattle keepers who brought cattle from different parts of the country for grazing in these counties. These were localized conflicts that became severe to the extent of engaging the common commuters and military in random surprise attacks. The insecurity in these counties directly impacted the works progress on the Amadi-Tali and Maridi-Kozi road sections. The contractor on the Amadi-Tali rehabilitation contract was able to mobilize security to the site and managed to continue with the works, counting with only half of the staff at site and supervision provided from Juba on spot checks and visits to the site. The contractors on the Maridi-Kozi road maintenance contracts remobilized to the site in late July 2015, but continued working with constant disruption, and successfully completed the works before project closure.

35. On July 8, 2016, fighting erupted between the government and opposition forces in Juba town and various parts of the country. This greatly disrupted the implementation of the near closing construction contracts. Contractors' camps in the Magwi-Lobone and Yei-New Lasu road sections were attacked and repeatedly looted by the unknown armed group since the upsurge of the violence. This resulted in the evacuation of the contractors' and supervision consultants' staff to Uganda or safer places within the country. The contractors were able to report to site in September to resume activities and completed the construction contract in a satisfactory manner. The overall security situation was highly risky at the time, due to a sudden increase in a number of unknown armed groups in a various part of the country including the project area. It is worthy of noting that both the MRB and the PMT remained actively pushing project implementation forward during the outbreaks of these crises.

36. **High construction costs.** Rehabilitation and upgrading works contracts were awarded between 31 to 43 percent above the initial estimates, mainly because the works were designed in 2011 and procured in 2013, and contractors would charge more to

safeguard their heavy machinery and employees given the country's fragility. Some roads did not exactly have the length stated in the project documents, hence road construction costs were found to be higher than initially anticipated. Moreover, during project implementation it was found that due to the heavy deterioration and thick forest cover of some the roads, the budget originally assigned for maintenance contracts was not adequate. This was the particular case of the Rasolo-Maridi (71km) road section, which was dropped and replaced by the Magwi-Aru (55km) road section and by the length extension of some of the other selected road sections. As a result of the funding shortfall, the rehabilitation of the Tali – Yirol road section was also dropped with the intent to undertake it under a potential project Additional Financing.

37. **Currency Crisis/Claims.** The first armed crisis that erupted in 2013 triggered the beginning of a severe currency devaluation that greatly impacted contracts' performance. During project preparation in November 2011, the exchange rate was SSP 2.95: 1 USD, as presented in the Emergency Project Paper and established in the works contracts. The GRSS changed the foreign currency regime from a fixed to floating rate in December 2015, which greatly impacted the performance of the contractors paid in SSP. In December 2015, the SSP was trading at approximately SSP 18:1USD. By April, 2016, near project closing, the SSP was trading at approximately SSP 41:1USD.

38. All civil works contracts were fixed price lump-sum, without any provision for price escalation, as they were awarded in a different country scenario, where the currency had become stronger. The government, with the aim to stabilize the economy following independence in 2011, encouraged contractors to request payment in SSP, hence the payment currency established for the works contracts financed by the project varied from a 100 percent in USD, a 100 percent in SSP and combined between both currencies (details in Annex 3, Table 3.3). This meant that any price escalation exposed the Client to funding shortfall not provided under the project. Due to the currency crisis, difficult access, security and unstable economy challenges, these fixed price contracts were affected by a significant increase in the costs of transport, construction materials, fuel, salaries, commodities, and spare parts among others. As a result, contractors requested payments for works carried out from December 2015 in USD. To ultimately resolve this issue, the Bank agreed to consider this conversion for the works from the date the order was issued, with justification for cost differences rising from of the currency devaluation, in accordance with contract provisions.

39. **Additional Financing (AF).** In view of the emergency crisis, approaching funding shortfall and the need to realign and scale up project activities, the GRSS formally requested a US\$50 million AF in May 2014. This AF was sought to scale up the development effectiveness of the SSRRP and provide maintenance to the rural roads intervened under the SSRRP and previous Bank projects. Unfortunately, all IDA allocation for South Sudan had already been committed and no IDA resources were available to fund the AF. The initiative could not be retaken later, as the country instability and fragility continued to increase.

40. **Second Extension of Project Closing Date.** The first extension of the project closing date enabled the completion of all the works and most institutional strengthening activities including TA services. Yet, increasing challenges faced by the project after July 2016 affected the execution of close-out activities such as the Environment and Social Audit and the Client Implementation Completion and Results Report (ICR). The Client submitted a two-month extension request to close the project in December 30, 2016. The country's unstable situation at the time impeded the processing of this second extension of project closing date. The Social and Environmental Audit was carried out by an individual consultant directly hired by the Bank. The Client ICR could not be prepared, though comments on the Bank's draft ICR were provided.

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

41. **M&E Design.** Project monitoring and evaluation (M&E) was planned against the project results framework designed at appraisal. The PDO outcome and intermediate results indicators were adequately and comprehensively designed at appraisal from a technical, social and sustainability standpoint. The indicators were properly aligned with the PDO and components. At appraisal, it was envisaged that the Planning and Monitoring Unit under the Directorate of Roads and Bridges would be established as responsible for project M&E. In addition, an M&E Specialist financed by the project through TA, had been engaged by the PMT to strengthen the capacity of the Unit. Further TAs were planned to be provided in the areas of financial management (for about three years), procurement, contract management, environment and social safeguards. The PMT was given the responsibility to review the progress of implementation and provide a report accordingly on a quarterly basis, including an update on the results framework indicators and financial progress summaries. A Mid-term Review was included in the M&E design, which was planned to be conducted by March 30, 2014 or a date to be agreed between the Bank and Recipient.

42. **M&E Implementation.** M&E was implemented according to design. Capacity building was provided throughout project implementation for staff at all levels directly involved in road sector planning, execution, monitoring, and evaluation. As part of the M&E development (i) the PMT provided Quarterly reports including updated results framework indicators and Financial Progress summaries; (ii) data collection tools were developed for the project; (iv) an M&E framework plan was developed; (v) The PMT developed M&E tools in Microsoft Excel for the SSRRP to simplify the monitoring work for the project staff and ensure the quality of the data that feed the progress reports (details provided in Annex 2, Table 2.2). Information was collected through both contractor and supervision monthly reports and a midterm review was conducted in November 2014. The World Bank and Borrower were proactive to recognize that the results framework could be further improved during implementation and took advantage of the Project Restructuring approved in May 30, 2016, to revise some PDO and intermediate results indicators' targets.

43. **M&E Utilization.** The data was collected as established in the results framework utilizing the M&E tools developed by the PMT. These data fed the progress reports delivered by the PMT on a quarterly basis. The information gathered through the recollection of the data was not utilized for any future purposes due to the country's extant instability.

## 2.4 Safeguard and Fiduciary Compliance

44. **Environmental and Social Safeguards.** The project was classified as Category B, given that it was intended to support the rehabilitation and maintenance of existing roads thus environmental and social impacts were expected to be limited. During project preparation, MRB prepared an Environmental and Social Screening and Assessment Framework (ESSAF) for the transport sector, which was an update of the 2008 sector specific Environmental and Social Management Framework developed for Sudan, before independence. Bank safeguard policies triggered by this project, included: OP/BP Environmental Assessment (4.01), Indigenous Peoples (4.10), Physical Cultural Resources (4.11) and Involuntary Resettlement (4.12). The specific considerations of each policy were addressed prior to the execution of the works.

45. The PMT, through the Environmental and Social Management Unit (ESMU), was responsible for the coordination of the carrying out the ESSAF update, preparation of the required site specific Environmental and Social Impact Assessment (ESIA) / Environmental and Social Management Plan (ESMP), Resettlement Action Plans (RAPs) and Indigenous Peoples Plans (IPPs) for the works subprojects and monitoring the implementation of mitigation measures. The SSRP financed the hiring of Environmental and Social Experts to monitor and ensure that these policies were followed as stated in the ESSAF. Since most of the road works were confined within the existing right of way, most of these requirements were found not applicable. No significant resettlement was observed in the project. The final ESIA and ESMP were cleared by the Bank on March 11, 2014, and publicly disclosed in South Sudan on March 21, 2014, and in the Bank Info shop on March 24, 2014. No major environmental or social safeguards issues identified under the project.

46. **Environmental and Social Audit.** An Environmental and Social Audit was carried out after project closure and completed in March 2017. The Audit concluded that the overall environmental and social safeguards performance was satisfactory. Key Institutional Safeguards Capacity existed at the PMT, Contractors and Supervising Consultants, thus the provision of safeguards training was found successful. Labor-based works were supervised by the ESMU/MRB, which is deemed acceptable, since these were used for capacity development of Government Staff and the Local Contractors. Adequate stakeholder consultations were undertaken by the project during preparation and

implementation, which facilitated project ownership (especially of labor-based works) and enabled works to progress quite well amidst the challenging working environment.

47. **Procurement.** At appraisal, the procurement capacity assessment of the MRB concluded that the risk level was high, mainly for reasons related to the country's fragile environment. The recommended prior review thresholds for the project were set low for works, goods and consultancy services. All Terms of Reference (TORs) and direct-contracting/single-source selection were subject to prior review by the Bank, regardless of the contract amount. The PMT was responsible for the procurement and administration of all contracts under the SSRRP. The EPP and Project Implementation Manual (PIM) were clear on the procurement processes, notifications and the coordination for procurement of large ticket items. The PMT initially developed a one-year procurement plan, which was regularly updated as per EPP and PIM guidelines to meet the project demand.

48. The PMT involved key stakeholders including top management of MRB at early stages of procurement processes. The Procurement Committee was not established as required in the project organizational chart in the EPP, but used an evaluation committee whose report was endorsed and approved by the Undersecretary of the MRB. Once the armed crisis erupted in 2013, the Bank resolved to maintain all procurement activities prior review. At MTR, delays in the execution of the procurement plan were identified. Although the project provided a procurement specialist to support the PMT, the procurement officers and support staff at PMT were not adequately equipped with certified skills in procurement. This situation was addressed by providing training and technical procurement support to the PMT. Thereafter, the implementation of the procurement plan peaked and procurement performance was rated Satisfactory.

49. **Financial Management.** At appraisal, a Public Expenditure and Financial Accountability Assessment was carried out and concluded that the risk level was moderate. To ensure adherence of project implementation activities, including procurement, payments to contractors, financial records to fiduciary principles and procedures of the Bank, the PMT, was to hire an independent firm (Audit Agent-AA) to conduct financial auditing. The PIM and EPP had explicit procedures on the planning and budgeting processes and disbursement of funds. The Project Financial Management Unit (PFMU) was not established under in Ministry of Finance and Economic Planning (MoFEP), as required in the EPP. Instead, the project provided TA to the PMT through the hiring of a qualified and experienced Financial Management Specialist, which was supported by a dedicated project accountant.

50. In general, the PMT established adequate financial management processes and records management systems based on government financial regulations/treasury accounting instructions. National level financial management activities were satisfactory and counted with qualified staff. The form and content of the quarterly accountability reports for sub-projects and monthly accountability report for sectors and contractors were

satisfactory. Quarterly Interim Financial Reports (IFR) were timely submitted to the Bank. The level of disbursements under the project was considered Satisfactory ahead of closure. The National Audit Chamber conducted the audit of the project financial statements for Fiscal Year (FY) 2016 and expressed unqualified opinion with no major issues noted.

## **2.5 Post-completion Operation/Next Phase**

51. Sustainability of the road network remains a concern as the Country's Strategy for Road Maintenance, prepared under the project, has not obtained all the required levels of approval, and has not been adopted yet. The preparation of the strategy was completed in June 2016 and submitted by the MRB to the Cabinet for onward submission to the Parliament. As of April 2017 approval from the Cabinet was still pending. After project closing, MRB/PMT drafted two legislation bills; one that covers the financial options for maintenance and the other that covers road traffic and safety. These bills are expected to be presented to stakeholders, which include the physical infrastructure committee, aiming at an onward submission to the parliament by June 30, 2017. Without the establishment of a stable and sustainable road maintenance financing scheme, as well as the certainty of GRSS's future budgetary capacity to allocate funds for road maintenance, the resources for these kinds of interventions will continue to compete with other government priorities, consequently leaving the previous and recent road investments to deter. The Bank is awaiting for the country conditions to become more stable and safe to seek financing to scale up the results from the SSRRP.

## **3. Assessment of Outcomes**

### **3.1 Relevance of Objectives, Design and Implementation**

Rating: High

52. The relevance of the PDO is considered high. The PDO has remained aligned with the country's goal to reconstruct and build the new nation, consistent with the SSDP (2011-2013). The PDO of this project was and continues to be particularly aligned with the second core block of the SSDP, as well as with the infrastructure and agriculture needs assessment carried out as part of it, which called for urgent actions to address the infrastructure deficit and confirmed the need to focus on improving access to the rural areas and facilitate the growth of the agriculture sector. In addition, the SSRRP continues to be consistent with the 2011 World Development Report<sup>9</sup> recommendations to invest in transport infrastructure, access to finance, support for community-based employment and local business development. Finally, the PDO remains relevant to the South Sudan Vision 2040,

---

<sup>9</sup> World Development Report, Conflict, Security and Development, May 26, 2011.

"Towards Freedom, Equality, Justice, Peace and Prosperity for All", particularly regarding the pillar of building a prosperous, productive and innovative nation.

53. The Relevance of project design is considered high. Besides being in line with the country's priorities at the time of appraisal, the project components were directly linked to the PDO and intermediate outcome indicators. The financing instrument was an emergency grant from the SSTTF, which was created to provide bridge financing in the period between the GRSS's independence until such time when the country became a member of the Bank, which is found appropriate given the emergency nature of this project. Project design reflected proper diagnosis of a development priorities that remain relevant. The SSRRP was designed as an integral part of agricultural development initiatives in South Sudan, hence the main interventions under this project targeted high agriculture potential areas. The implementation arrangements were adopted using the same institutional setup up as in preceding transport projects, which proved to be effective, highly relevant and ensured the continuity. In addition, the Bank took into account the unstable circumstances of the country and the low capacity of the Implementing Agency and ensured to include the constant provision of TA throughout project implementation. This action was highly relevant as it enabled project implementation.

54. The project design included relevant global crosscutting priorities such as road safety, by incorporating the preparation of a road safety program, and combating HIV/AIDS through the incorporating the requirement to provide HIV/AIDS services and carry out awareness campaigns throughout the execution of road works. Road safety management is relevant to the UN Decade of Action for Road Safety Improvement. Combating HIV/AIDS through creating awareness and public campaigns are also indeed relevant to the Millennium Development Goals (MDG).

### **3.2 Achievement of Project Development Objectives**

Rating: High

55. The project's development objective has been substantially achieved, despite the implementation challenges that arouse due to the armed political crisis from December 2013. Overall, the project benefited more than 91,000 rural people of which 48 percent are female (direct beneficiaries) living within the area of influence of the road corridors, providing access for local populations to markets and services and bettering transit conditions as well as the reliability of the maintained road network. Over 43,000 people, which represent about 11 percent of the rural population in the project area of influence, have access to an all season road. The improvement of the road sections has generated travel time savings, as the average travel time upon completion about one minute per kilometer compared to the three minutes per kilometer at the beginning of the interventions. The project also generated savings to agricultural producers stemming from the connection provided to 39 agricultural production centers to all season roads.



56. Furthermore, 175km of roads were rehabilitated, being completed to gravel wearing course, and maintenance was provided to 290km of roads (mechanical and labor based maintenance contracts combined), achieving the established target. The rehabilitation and maintenance contracts provided employment opportunities to about 205 and 396 people respectively. By MTR, a growing shared vision and positive attitude had arisen among the benefitted population because of the road works carried out in the states and counties. According to interviews with communities living alongside the Yei – Lasu and Magwi – Lobone road sections, people observed greater demand for agricultural products since the road works started, resulting in increased prices in their local markets. In addition, an increase in vehicles using the roads for trade at the local markets was observed, especially on the Yei-Lasu road section.

57. Enhancing the capacity of participating states and relevant national government institutions to manage rural transport infrastructure was established as a means to achieve the PDO. The SSRRP significantly contributed to the otherwise low institutional capacity building of the MRB and State Ministries of Physical Infrastructure (SMoPI). The MRB and PMT continued to amass experience in the procurement, contract management, FM, as well as environmental and social management of road rehabilitation and maintenance contracts. The project financed the provision of training on M&E, FM, project management and multi-criteria decision planning and analysis tools to a total of 110 technical staff from the MRB and SMoPI. A detailed implementation overview of the activities under the three project components is presented in Annex 2.

### **3.3 Efficiency**

Rating: Modest

58. Major benefits of the population stemmed from the road upgrading and rehabilitation as well as maintenance and spot improvement components (components 1 and 2). At appraisal, the economic viability of the project roads was determined using a hybrid of conventional cost benefit analysis, multi-criteria analysis and cost-effectiveness analysis. The cost benefit analysis and multi- criteria analysis were carried out on a list of priority roads using Road Economic Decision (RED) model. The economic evaluation was made by comparing the "with" and "without" project cases for two sets of alternatives each, for rural road rehabilitation and upgrading (Construction) and two traffic growth scenarios, using average annual growth rates of three and five percent respectively.

59. The costs were discounted at a 12 percent rate, the net present value (NPV) ranged from US\$17,639 to US\$121,400 for rehabilitation, upgrading interventions, while the NPV at the same discount rate, reflected a lowest of US\$10,430 to a highest of US\$7.7 million for spot improvement and maintenance. The Economic Rate of Return (ERR) ranged

between 19 percent and 87 percent for rehabilitation and upgrading works and between 37 percent and 78 percent for spot improvement and maintenance works.

60. Despite successful achievement of the PDO, the project was not free from shortcomings. The project experienced cost overruns as works contracts were awarded up to 43 percent above the initial cost estimates, mainly because the works were designed in 2011 and procured in 2013, the condition of the roads had deteriorated and some of them did not have the length stated in the project documents. The limited amount of local construction companies also contributed to the increased works costs. Therefore, construction costs were found to be higher than initially anticipated and contractors charged more to cover both personnel and equipment insurance. Details of the works contracts are provided in Annex 3 (Economic and Financial Analysis).

61. The ex-post economic evaluation followed the same approach as the ex-ante economic analysis, using the RED model, a 12 percent discount rate and a 20-year evaluation period. The net present value (NPV) ranged from US\$4.14 million to US\$8.11 million for rehabilitation, upgrading interventions, while the NPV at the same discount rate, reflected a lowest of US\$0.38 million to a highest of US\$20.89 million for spot improvement and maintenance. The Economic Rate of Return (ERR) ranged between 17 percent and 30 percent for rehabilitation and upgrading works and between 15 percent and 60 percent for spot improvement and maintenance works. Despite the significant increase in costs of the interventions, the results demonstrated that the project remains economically feasible.

62. It is worthy of noting that, neither the ex-ante nor ex-post economic evaluation take into consideration the savings from the reduction in road traffic fatalities and benefits to the pedestrians and non-motorized traffic which could be more significant and demonstrate the greater efficiency of the project.

### **3.4 Justification of Overall Outcome Rating**

Rating: Moderately Satisfactory

63. The relevance of the project objectives is rated high, the achievement of the PDO high and the efficiency modest, the overall outcome rating is Moderately Satisfactory.

### **3.5 Overarching Themes, Other Outcomes and Impacts**

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

64. **Poverty Impacts.** The implementation of the project greatly supported poverty reduction by providing reliable all season road connectivity to agricultural services and markets, as well as creating job opportunities. Road connectivity significantly enhanced the local economy as it reduced transportation time and cost, enabled an increase in the

demand for agricultural commodities and trade activities, which resulted in the emergence and development of small local markets and the establishment of businesses. Farmers were able to sell their produce to businessmen which raised their income levels. Similarly, employment-intensive construction and maintenance offered the opportunity for the absorption of low and semiskilled individuals, bringing normally employment-marginalized groups, both male and female, into the employment fold. Particularly, the labor intensive maintenance and spot improvement works used local community labor, and was very successful in generating short-term employment, boosting technical and entrepreneurial skills, and engendering a sense of community ownership of the roads.

65. Prior to the eruption of the last crisis in July 2016, a reduction in transport costs had been reported in various areas intervened by the Project, particularly in the Yei-New Lasu road section. For instance, transport costs from Yei to Mitika market was 40 SSP before road works begun and later reduced to 25 SSP (about 37.5% reduction). An increase in the production and prices of agricultural products had also been reported. the Yei-New Lasu road section is strategic for the enhancement of agricultural activity, as it goes through and connects some of the most productive areas of the country with the Democratic Republic of Congo. The price of a bucket of maize before road construction was 8 SSP and was reported at 15 SSP before the crisis erupted. Chicken was 15 SSP compared to 40 SSP in Mitika Market. Even though there is no data available on the impact of these production and price increases in poverty, these typically correlate with the improvement of the livelihood of beneficiary communities.

66. Thanks to the provision of access to agricultural services at the agricultural cooperative centers as well as to warehouses for storage, farmers throughout Project beneficiary communities received training and guidance on preparing land for cultivation, farming techniques and preserving their harvest in the store. Farmers had expanded their cultivations and increased produce volumes<sup>10</sup>, given that they can easily obtain trader commodities and safely store their produce to sell and/or consume at the right time.

67. **Gender Aspects.** Employment opportunities were provided to women in labor-based road maintenance contracts. They carried out activities such as clearing and grubbing, as well as the removal of roots from the graded sub-base. Women were also hired as cooks and cleaners for the contractors' camps. On average each contract length of 25 km employed about 60 unskilled labor, of which about 40% were women. The project directly benefited more than 91,000 people of which 48 percent are female living within the area of influence of the road corridors. In regard to institutional strengthening, 15 out of the total 110 MRB and SMoPI staff who received training, were female. Pregnant women have particularly benefitted from the implementation of this project, as they now count with a much faster and reliable access to hospitals, to give birth as well as to receive

---

<sup>10</sup> According to interviews conducted by the MRB with beneficiary population towards project completion.

better pre and post-partum treatment. Prior to the project, pregnant women often died on their way to the hospital.

68. **Social Development.** The SSRRP provided improved access to health centers, schools, markets, and enabled the development of business activities along the corridors. The project also enabled the Government better reach people to deliver services such as medical supply. Road workers and road side communities also benefited from anti Human Immunodeficiency Virus/Acquired Immune-deficiency Syndrome (HIV/AIDS) services and awareness campaigns carried out since the contracts were awarded. Training was provided to assigned peer trainers (selected from the communities and the contractors). Such peer trainers would quarterly visit the communities to provide them with HIV/AIDS awareness and training.

69. **Grievance Redress Mechanism (GRM).** The project developed a GRM to manage community expectations and anxiety. Community Grievance Committees (CGCs) were established consisting of nine (9) members. These CGCs were trained in elementary conflict management skills under the project to help handle community problems arising from the road works. CGCs were industrious in supporting the contractor in the identification of borrow pits, provision of land for works camps and general custody of the site equipment. The GRM monitoring tool created by the PMT was utilized throughout project implementation, to record the complaints as well as the actions and timeline taken to resolve them. The issues recorded were resolved within a weeks' time.

#### **(b) Institutional Change/Strengthening**

70. The project has significantly contributed to the institutional strengthening of the transport sector in GRSS. 110 technical staff from the MRB and SMOPI were trained and acquired experience in various areas including procurement, contract management, FM, as well as environmental and social management, project management and multi-criteria decision planning and analysis tools. TA services were also provided to the MRB in the areas of procurement, FM, M&E, Environmental and Social Safeguards.

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

Not applicable.

#### **4. Assessment of Risk to Development Outcome**

Rating: High

71. **The risk to development outcome is rated high.** The project was implemented in a fragile newly independent country within a post conflict environment. Despite the experience that MRB/PMT had acquired through the implementation of two previous transport projects, it continued to have capacity constraints at project preparation. These

constraints were tackled during implementation by providing training as well as TA to support the implementing agency through the hiring of safeguards, financial management, procurement, and M&E specialists, which undoubtedly contributed to the successful achievement of the PDO. Notwithstanding the government's full commitment to the project during its life cycle, sustainability remains a challenge. The crises that erupted in 2013 and in 2016 caused severe fiscal constraints and an unstable political environment, hence the uncertainty of GRSS's future budgetary capacity to allocate funds for road maintenance or the continuity of institutional strengthening activities.

## **5. Assessment of Bank and Borrower Performance**

### **5.1 Bank Performance**

#### **(a) Bank Performance in Ensuring Quality at Entry**

Rating: Satisfactory

72. The project design was highly relevant to the development priorities of South Sudan. The SSRP was jointly designed by GRSS and development partners to develop the feeder roads network to enable the new nation to continue its rebuilding process. The project benefited from experience and lessons learned from previous transport projects. Given that providing access to the rural areas of South Sudan was among the top priorities of the GRSS, the rehabilitation and maintenance of roads in high agriculture production areas was key at the time of project preparation. The project was also designed based on the government's recovery and reconstruction strategies proposed by the SSDP, the donor strategy to develop the feeder roads network of the country, and the South Sudan Vision 2040. In this respect, there was a strong Bank effort to coordinate its interventions in the transport sector with ongoing efforts from other international financial organizations, particularly the USAID, Netherlands, UNOPS, the EU and DfID, in order to improve the conditions of important key road sections located in high agriculture productive zones.

73. The project design adequately provided arrangements for ensuring fiduciary compliance of the project during implementation. A fiduciary framework was put in place under the SSTTP similar to the one established under the previous MDTF-SS for all its projects. This ensured that the project financial and procurement systems continued to be adequate to manage the project funds and meeting Bank guidelines. Furthermore, the project also provided for monitoring and evaluation arrangements to ensure focus on outputs and results. The Bank carried out an efficient risk assessment and identified adequate mitigations measures at entry. This included institutional strengthening for the Borrower Government Agencies as well as the provision of continuous capacity building and TA support to the implementing agency, which was a continuation of the program carried out under the previous road improvement projects. Due to the Country's positive and forward-looking scenario at project preparation, including the strength of the SSP at

the time, the design didn't identify mitigation measures in case of a future crisis, taking into consideration the post-conflict environment situation.

### **(b) Quality of Supervision**

Rating: Satisfactory

74. The Bank provided constant hands-on support to the PMT to ensure adequate project implementation. As designed at project preparation the support was provided through the carrying out of training, workshops and technical assistance by hiring safeguards, financial management, procurement, and M&E specialists. The Bank task team provided significant support to the project in the execution all the components including cross cutting issues such as HIV/AIDS awareness and implementation of Road Safety measures. The Bank team carried out at least two implementation support missions per year, in which it directly met with the PMT staff members and other government institutions' staff, providing technical advice and sharing knowledge. When needed, the Bank deployed specialists, particularly in the procurement, environmental, and social areas. Aide-memoires were prepared for each of these missions which provided highlights on key issues and follow-up actions to both the client and the Bank's management. In times of eminent crisis, the Bank team would carry out reverse implementation support missions in Nairobi where the South Sudan Country Office was relocated.

75. The Bank task team assessed project implementation and the achievement of the key targets through a MTR in November 2014. Encouraged by the results of this assessment, the Bank task team was proactive in undertaking a project restructuring and AF to respond to the impacts of the first crisis of 2013. Unfortunately, the Bank could not move forward with the latter due to the unavailability of IDA funds and the subsequent worsening of the country's situation.

### **(c) Justification of Rating for Overall Bank Performance**

Rating: Satisfactory

76. Given the quality services and support provided by the Bank task team at both entry and supervision of the project, the overall performance rating for the Bank is assessed as 'Satisfactory'.

## **5.2 Borrower Performance**

### **(a) Government Performance**

Rating: Satisfactory

77. The government was committed to implementing strategies with the aim to build the new nation recovering from years of protracted civil war. The SSDP was at final draft

stage at project preparation and sought to eliminate food insecurity, sporadic insecurity threats and improve rural livelihood through, among others, providing access to the rural areas of South Sudan. For these purposes, the GRSS reached out various traditional and non-traditional donors within and outside of South Sudan around the Globe. The GRSS was fully devoted to the project and actively participated in its preparation in a participatory and consultative manner with active involvement of the country's Feeder Roads Committee (FRC), co-chaired by the MAF and the MRB, which is mandated to coordinate feeder roads development.

78. The Aid Coordination Unit (ACU) within the MoFEP did its best efforts to keep the project up float, even when the crisis was at its worst, as it efficiently moved forward all the formal requests from the PMT to the Bank, such as the request for Additional Financing and project closing extension.

### **(b) Implementing Agency or Agencies Performance**

Rating: Satisfactory

79. Despite the limited capacity in terms of managerial and technical skills, MRB was committed to the implementation of project activities. The first year of Project implementation was slow due to a delay in contracting specialists to support the PMT and contracting works, which resulted in low disbursements. Fortunately, these delays were quickly resolved and overall implementation progress improved.

80. Despite the challenges of a young project implementation agency, the lack of access, insecurity and fragile economy and, the works contracts and institutional strengthening activities were implemented with satisfactory results and Project Development Objectives were met. However, PMT showed throughout project implementation that it needed to strengthen its management role and coordination of activities at both state and county levels. The PMT successfully overcame these challenges thanks to the continuous provision of capacity building and support of specialists financed by the project. Moreover, both the MRB and PMT actively guided and supported the works contractors and supervision consultants to ensure that project momentum was kept in spite of the armed crises that arose, ensuring the safety of all the parties involved. Significant implementation efforts were undertaken by all involved to get the project deliver most of its objectives.

### **(c) Justification of Rating for Overall Borrower Performance**

Rating: Satisfactory

81. The overall performance of the Borrower is rated as 'Satisfactory' based on the successful implementation of the project.

## 6. Lessons Learned

82. ***Denominating works contracts in USD or in an equivalent stable currency, as well as including price variation clauses in the contracts, may mitigate risks associated with the devaluation of local currency in fragile environments.*** Inflation and depreciation in the value of local currency may cause significant fluctuations in the prices of goods and services needed as input to execute the works. The performance of works could be negatively impacted if no contractual provision is made for price escalations resulting from such fluctuations, potentially causing delays and claims. This was the case in the implementation of the SSRRP, as described in paragraph 37. Anticipating rapid price fluctuations and foreseeing appropriate responses to the potential occurrence of a currency crisis is key to prevent the disruption of the execution of works as well as to minimize the Client's exposure to a funding shortfall.

83. ***Different and innovative options should be sought to ensure the continuous monitoring of the execution of works in the face of insecurity.*** In a fragile and conflict environment, project sites may often become inaccessible, impeding independent or direct supervision of works, including the verification of expected outputs for payment. The delay in such payments may result in contractual claims. As a mitigation measure, the team could consider involving a third party monitoring agent or United Nations Agencies to supervise the implementation of project activities in insecure locations. Furthermore, the team should study the possibility of using high resolution satellite data to remotely monitor works progress.

84. ***The use of third party audits is very useful to assess project performance and provide areas of improvement in the implementation of transport projects, particularly in a fragile and conflict environment.*** The SSRRP financed the carrying out of technical, financial as well as social and environmental audits, which were conducted towards project completion. These audits provided independent and objective assessments to confirm compliance with Bank guidelines, evaluate project performance, raise issues that needed to be addressed by the implementing agency to ensure successful project completion as well as recommendations on how to address them. Findings from the audits provided important key recommendations for future transport projects, especially regarding institutional support to MRB, improvements for works contracts and consultancy supervision firms. Particular areas highlighted for continuous support include FM, procurement and contract management as well as environmental and social management, to improve the capacity and operational efficiency in project implementation. Capacity-building and institution-strengthening activities addressing these areas should form an important component in future projects.

85. ***The hiring of local contractors ensured the completion of works in the midst of the crises.*** The Bank, through the implementation of the previous SSRMP, provided support to train and enhance the capacity of local contractors to carry out maintenance works. The labor based maintenance contracts under the SSRRP were executed by local contractors who had participated in trainings supported by the previous project. Overall, such contractors showed to perform well and counted with good guidance from the PMT



as well as supervisors. When both crises erupted, the local contractors consistently remained on site, as they lived in the area and felt ownership of the roads that would benefit their communities. It is key to continue building local capacity, targeting small contractors and observing how they grow. Similarly, feeder roads projects implemented in fragile and conflict environments should evaluate the possibility of slicing the procurement of goods, to ensure that these are supplied locally despite the emergence of a crisis.

86. ***The inclusion of community-led development activities has proven to ensure the population's acceptance and engagement to the project as well as to boost the impact in poverty.*** The SSRRP included a provision for community-led development activities in each works contract, such as construction of markets, storage facilities and schools. This measure enhanced the project's impact on poverty, as it enabled sharing the benefits more effectively with the poorer population along the corridors, which made the project more acceptable. The community was empowered by participating in decision making activities as well as by receiving training and guidance on efficient agriculture techniques and business development, resulting in an overall increase in agricultural production volumes and improvement of livelihoods. Investments in such ancillary activities should form an integral part of the design of projects in order to enhance the development impact on local population.

87. ***The provision of institutional strengthening support to government institutions should be carried out in a manner that ensures sustainable skill and knowledge transfer.*** The Bank, throughout its continuous engagement with South Sudan, has provided hands-on support to beneficiary institutions, particularly to the PMT, through TA by hiring expert consultants specialized in different areas required for successful project implementation (FM, Procurement, M&E, Safeguards). This support has included the carrying out of training and workshops aiming at achieving skills and knowledge transfer to government employees over time. However, the knowledge transfer arrangements have not been sufficiently effective, resulting in over-reliance on consultants. It is also worthy of noting that the Government has not had the capacity to absorb the consultants after the Project closing, which has impeded retaining technical assets that could continue providing institutional support as well as knowledge transfer. To address this issue, the terms of reference for the consultants should be designed in such a way that knowledge transfer milestones are deliverables linked to payment. For instance, one of the deliverables could be that by the end of the first quarter, the government employee attached to the FM consultant should be able to independently prepare and submit quarterly IFRs. Other regular training and capacity support programs for Government employees should also be explored.

88. ***GRM establishment in development projects.*** The development of a GRM in the SSRRP proved very vital as it did not only facilitate conflict resolution/management, but also enabled communities living along the roads to take ownership of the project. It served as a means to engage with citizens and facilitated the identification of sites for materials and work camps for the contractors, as well as hiring of workers from communities along the roads. A similar approach is highly recommended under the South Sudan Eastern Africa Regional Transport Trade and Development Facilitation Project (SS-EARTTDFP)

for upgrading of the Juba-Nadapal road to paved standards under financing from the World Bank, China EXIM Bank and the African Development Bank.

89. ***Project Financial Management Unit (PFMU)***. The MDTF-SS had established a centralized PFMU with the responsibility to ensure a reliable and robust accounting system. However, it was disbanded following the closure of the MDTF-SS. Although the Bank had initiated the concept of a mini-PFMU for the three SSTTF projects (other two being Health and Private Sector Development), its establishment did not move forward. This resulted in the hiring of individual financial management specialists by each project, which costed more. Given the capacity constraints in the country, a centralized PFMU should be established for all projects under Bank financing, given the positive experience under the MDTF-SS.

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

**(a) Borrower/implementing agencies: None**

**(b) Cofinanciers: None**

**(c) Other partners and stakeholders: None**

## Annex 1. Project Costs and Financing

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

Components	Appraisal Estimate (USD Millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
<b>Component 1 - Upgrading and Rehabilitation of Selected Rural Roads</b>	<b>22.50</b>	<b>22.58</b>	<b>100.36</b>
<b>Component 2 - Maintenance and Spot Improvement of Selected Rural Roads</b>	<b>12.00</b>	<b>11.89</b>	<b>99.08</b>
<b>Component 3 - Institutional Development for Rural Infrastructure Management</b>	<b>3.50</b>	<b>3.09</b>	<b>88.29</b>
Total Baseline Cost	38.00	37.56	
Contingencies	0.00	0.00	
<b>Total Project costs</b>	<b>38.00</b>	<b>37.56</b>	<b>98.84</b>

### Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Counterpart-GRSS		0.00	0.00	0.00
South Sudan Transition Trust Fund (SSTTF)	Grant	38.00	37.56	98.84
<b>Total</b>		<b>38.00</b>	<b>37.56</b>	<b>98.84</b>

## Annex 2. Outputs by Component

**Table 2.1 Outputs by Component**

<b>Component 1 - Upgrading and Rehabilitation of Selected Rural Roads:</b> This component financed the upgrading and/or rehabilitation of selected rural roads opening up high agricultural potential areas.		
<b>Activities</b>	<b>Outputs Achieved</b>	<b>Remarks</b>
<p>Activities included:</p> <p>(i) rehabilitation of about 150 km of roads targeting areas identified by the agriculture sector for having high productivity for production of cereals, much needed to ensure food security;</p> <p>(ii) rehabilitation/upgrading of selected rural roads;</p> <p>(iii) provision of supervision services;</p> <p>(iv) updating the draft Environment and Social Screening and Assessment Framework (ESSAF) for the transport sector; and</p> <p>(v) preparing Environment and Social Impact Assessments/ Management Plans (ESIAs/ESMPs), Resettlement Action Plans (RAPs) and Indigenous Peoples Plans (IPPs) as required for roads to be rehabilitated and maintained under the project.</p>	<p>Outputs achieved:</p> <p>175Km of rural roads opening up high agriculture potential areas were upgraded and/or rehabilitated.</p> <p>Supervision services were contracted and successfully carried out.</p> <p>205 jobs were generated under rehabilitation contracts.</p>	<p>The target was increased from 150 Km to 175 Km at Project Restructuring because the actual road lengths were verified and updated during project implementation.</p> <p>The appropriate safeguards instruments were prepared.</p> <p>At restructuring, the upgrading and rehabilitation of the Tali-Yirol road (55Km) was dropped as a result of the funding shortfall. Nevertheless, the project was able to rehabilitate more roads than the initially anticipated as the lengths of the remaining two road sections under rehabilitation contracts [Magwi-Labone (89km) and Amadi-Tali (86km)] were verified prior to the interventions, and totaled 175km</p>
<b>Component 2 - Maintenance and Spot Improvement of Selected Rural Roads:</b> This component financed the maintenance and spot improvement of about 300 km of rural roads deteriorated due to lack of maintenance during the civil war period.		

<p>This component was intended to be executed by both mechanized and labor based contractors and was split into four sub components:</p> <p>(i) mechanized maintenance and spot improvement of about 180 kilometers of select rural roads;</p> <p>(ii) supervision of maintenance and spot improvement works for mechanized maintenance contracts;</p> <p>(iii) labor intensive maintenance and spot improvement of about 120 kilometers of select rural roads; and</p> <p>(iv) supervision of maintenance and spot improvement works for labor based maintenance contracts.</p>	<p>Outputs achieved:</p> <p>290Km of rural roads received maintenance and spot improvements (100Km under mechanized maintenance contracts and 190Km under labor-based maintenance contracts).</p> <p>Spot improvement and maintenance contracts generated a total of 402 employment opportunities (290 under labor-based maintenance contracts and 112 under mechanized maintenance contracts)</p> <p>The supervision of the mechanized road maintenance works was included through an amendment in the Supervision contract for the rehabilitation works.</p> <p>Supervision services were provided to labor based works (about 2-3 supervisors for each contract).</p>	<p>At appraisal, the total road length to be maintained was estimated at 300 Km. During project implementation, the road lengths were confirmed for each section and totaled 290Km. The target value was updated at Project Restructuring.</p> <p>At restructuring, the maintenance and spot improvement of the Rasolo-Maridi (71km) road section was dropped and replaced due to the heavy deterioration and thick forest cover, thus the budget originally assigned for maintenance contracts was not adequate. This section was replaced by the Magwi-Aru (55km) road section.</p>
<p><b>Component 3 - Institutional Development for Rural Infrastructure Management:</b> This component supported institutional development initiatives at pilot states and national levels to enhance the capacity for rural infrastructure management.</p>		
<p>This component consisted of three sub-components:</p> <p><i>Sub-Component One:</i> strengthening of the</p>	<p>Outputs achieved:</p> <p>A total of 51 staff officials from the States have been trained in</p>	<p>At appraisal, the aim was to prepare Business Plans for each pilot state. During project implementation, the preparation of these business plans was</p>

<p>capacity of Pilot States, in particular their ministries responsible for physical infrastructure, to manage rural infrastructure - encapsulating:</p> <p>(i) handling procurement, contract management and financial management matters, and</p> <p>(ii) preparation of business plans - through provision of goods, technical assistance, services and Workshops and Training required for the purpose.</p> <p><i>Sub Component Two:</i></p> <p>(i) TA to support establishment of a Planning Department for MRB;</p> <p>(ii) TA to support the preparation of Roads Sector Development Program;</p> <p>(iii) support to establishment of a Road Maintenance Fund; and</p> <p>(iv) road safety programs and strategic studies emerging during implementation;</p> <p><i>Sub- Component Three:</i> carrying out of project coordination and management through provision of goods, technical assistance, services, Workshops and</p>	<p>procurement, contract management and financial management matters.</p> <p>One Business Plan was prepared applicable for every state, thanks to a TA carried out by UNOPS.</p> <p>A total of 59 staff from MRB were trained in areas such as: Project Management, Multi-Criteria Decision Analysis, Senior Roads Executive Program, Procurement, M&amp;E, etc.</p> <p>The Road Sector Development Program was prepared through TA provided by UNOPS and financed by the Project. This activity was completed in June 2016 and submitted by the MRB to the Cabinet for onward submission to the Parliament in November 2016. As of April 2017 approval from the Cabinet was still pending.</p> <p>The project provided constant hands-on support to the PMT to ensure adequate project implementation. As designed at project preparation the support was provided through</p>	<p>delayed due to lack of capacity at the state level. Therefore, the client and Bank team agreed on the preparation of one Business Plan applicable for every state. The target was updated at project restructuring.</p> <p>The Studies to support the Establishment of a Road Maintenance Fund and a Road Safety Program were bundled in the TA carried out by UNOPS and were finalized in June 2016.</p> <p>The TA to support the establishment of a Planning Department for MRB was dropped at Project Restructuring due to funding shortfall. The intention was to retake this initiative after obtaining the AF that was also dropped.</p> <p>The procurement of desktops and installation of NAVISION Accounting System was dropped during restructuring.</p>
---	---	---

<p>Training and Operating Costs required for the purpose, including:</p> <p>(i) training to the Project Management Team (PMT), states and Ministry of Environment staff;</p> <p>(ii) technical assistants (TAs) to the PMT;</p> <p>(iii) provision of technical, social and financial audit firm (Audit Agent -AA);</p> <p>(iv) procurement of desktops and installation of NAVISION Accounting System including training of staff in the ministry; and</p> <p>(v) operational costs for the PMT.</p>	<p>the carrying out of trainings (procurement, M&amp;E, contract management), workshops and technical assistance by hiring safeguards, financial management, procurement, and M&amp;E specialists.</p> <p>Technical, social and financial audit was carried out and financed by the project.</p> <p>The training of staff in the ministry was completed.</p>	
---	--	--

**Table 2.2 Monitoring Tools developed and utilized by the PMT**

<b>M&amp;E tool</b>	<b>Description</b>
Key Milestone Tracking Matrix	This tool enabled looking at the whole project and dissecting the main activities, targets, as established in the Results Framework, and timelines.
Contract and Financial Monitoring Tool	This tool enabled the tracking of contract status, disbursements, pending payments and balances.
Procurement Tracking Tool	Linked to the procurement plan, this tool showed the status of the procurement processes. It was used to feed the contract and financial monitoring tool.
Borrow Pits Management	This tool allowed to ensure that the lands were turned back to a reusable state once the works were completed (Contractors' responsibility). In cases in which the communities requested that the borrow pit is not reinstated for them to use it as a water collection point, the chief of the

	community was required to sign the form included in the tool to allow this.
Waste Management tool	Enabled the monitoring of the constructors' site camps and their management of construction waste.
Road safety and accident tool	It monitored the compliance with road safety measures included in the works contracts, as well as site safety. It compiled accident data, including road accidents and site accidents due to works (employees). It also helped keep track of actions taken to resolve
Grievance Redress Mechanism monitoring tool	There were grievance redress committees (communities chief and leaders). The members of the committees were trained on dispute resolution and handling complaints. This tool was used to record the complaints and actions taken to resolve them. The issues were resolved within a weeks' time.
Health Management tool	Contractors had clinics established in the sites, which also served people in the communities. The tool helped track illnesses, which either got treated there or referred to the nearby health center (depending on the severity).



**Table 2.3. Provision of Institutional Strengthening through training**

<b>Training</b>	<b>Participants</b>
Project Management (Prince 2 tool)	31 total staff from the MRB (including 6 staff from the PMT).
Multi-Criteria Decision Analysis (MCDA tool)	11 staff (including 5 from SSRA and 2 from the PMT).
Senior Roads Executive Training Program (sector planning, execution, M&E) organized by the University of Birmingham.	4 staff (2 from MRB and 2 from SSRA).
Procurement	61 staff (6 from PMT and 4 from MRB, and 51 from SMoPI).
Advanced M&E results.	1 PMT staff trained.
Professional Accounting Certification from ACCA (Association of Chartered Certified Accountants).	2 PMT staff trained to obtain a One training took place at Nkumba University and the other at Multitech Business School, both in Uganda.

**Annex 3. Economic and Financial Analysis**  
(including assumptions in the analysis)

At appraisal, the economic analysis for the original project included both works components 1) Road Upgrading and Rehabilitation and 2) Maintenance and Spot Improvement, which accounted for 91% percent of the Project’s investment. For both components, the economic viability of the project roads was determined using a hybrid of conventional cost benefit analysis, multi-criteria analysis and cost-effectiveness analysis. The cost benefit analysis and multi- criteria analysis were carried out on a list of priority roads using Road Economic Decision (RED) model. The economic evaluation was made by comparing the "with" and "without" project cases for two sets of alternatives each, for rural road rehabilitation and upgrading (Construction) and two traffic growth scenarios, using average annual growth rates of three and five percent respectively.

The costs were discounted at a 12 percent rate, the net present value (NPV) ranged from US\$17,639 to US\$121,400 for rehabilitation, upgrading interventions, while the NPV at the same discount rate, reflected a lowest of US\$10,430 to a highest of US\$7.7 million for spot improvement and maintenance. The Economic Rate of Return (ERR) ranged between 19 percent and 87 percent for rehabilitation and upgrading works and between 37 percent and 78 percent for spot improvement and maintenance works.

Despite successful achievement of the PDO, the project was not free from shortcomings. The project experienced cost overruns as works contracts were awarded up to 43 percent above the initial cost estimates, mainly because the works were designed in 2011 and procured in 2013, the condition of the roads had deteriorated and some of them did not have the length stated in the project documents. The limited amount of local construction companies also contributed to the increased works costs. Therefore, construction costs were found to be higher than initially anticipated and contractors charged more to cover both personnel and equipment insurance.

**Table 3.1 Road interventions Before and After**

<b>Component</b>	<b>Road Section</b>	<b>Actual Length (Km)</b>	<b>Proposed intervention at Appraisal</b>	<b>Actual intervention</b>
<b>Component 1 - Upgrading and Rehabilitation of</b>	Magwi - Labone (thru' Parajok) Road (89 Kms) Lot 1	89	Rehabilitation/Upgrading Construction	Rehabilitation/Upgrading Construction: Earth road to gravel wearing course

<b>Selected Rural Roads</b>	Amadi - Tali Road (86 Km) Lot 2	86	Rehabilitation/Upgrading Construction	Rehabilitation/Upgrading Construction: Earth road to gravel wearing course
	Tali - Yiroi (Aerial) (52 Km) - Lot 3	0	Rehabilitation/Upgrading Construction	None
<b>Component 2 - Maintenance and Spot Improvement of Selected Rural Roads</b>	Yei - New Lasu Road (45 Km) Lot 1 - Kirinyagga	45	Spot Improvement/Maintenance (Mechanized)	Spot Improvement/Maintenance (Mechanized): earth road to sub-base
	Ras Olo - Maridi Road (71.4 Kms) Lot 2	0	Spot Improvement/Maintenance (Mechanized)	None
	Maridi - Kozi Road (30Kms) Lot 1	40	Spot Improvement/Maintenance (Mechanized)	Spot Improvement/Maintenance (labor-based): earth road to earth with spot graveling
	Maridi - Kozi Road (30Kms) Lot 2	40	Spot Improvement/Maintenance (Mechanized)	Spot Improvement/Maintenance (labor-based): earth road to earth with spot graveling
	Morobo - Panyume (18 Kms) Lot 1	25	Spot Improvement/Maintenance (labor-based)	Spot Improvement/Maintenance (labor-based): earth road to earth with spot graveling
	Panyume - Yaribe (20Kms) Lot 2	25	Spot Improvement/Maintenance (labor-based)	Spot Improvement/Maintenance (labor-based): earth road to earth with spot graveling
	Yaribe - Gimunu	30	Spot Improvement/Maintenance (labor-based)	Spot Improvement/Maintenance (labor-based):

	(30Kms) Lot 3			earth road to earth with spot graveling
	Panyume - Kachu-Limbe (40Kms) Lot 4	30	Spot Improvement/Maintenance (labor-based)	Spot Improvement/Maintenance (labor-based): earth road to earth with spot graveling
	Aru Junction - Magwi	55	Spot Improvement/Maintenance (labor-based)	Spot Improvement/Maintenance (Mechanized): earth road to sub-base

**Table 3.2 Estimated versus Actual costs of the interventions**

<b>Component</b>	<b>Road Section</b>	<b>Original Length (Km)</b>	<b>Actual Length (Km)</b>	<b>Estimated Cost at Appraisal or prior to the intervention (US\$M)</b>	<b>Actual Costs (US\$M)</b>
<b>Component 1 - Upgrading and Rehabilitation of Selected Rural Roads</b>	Magwi - Labone (thru' Parajok) Road (89 Kms) Lot 1	70.3	89	8.00	13.96
	Amadi - Tali Road (86 Km) Lot 2	50	86	5.75	6.19
	Tali - YiroI (Awerial) (52 Km) - Lot 3	51.6	0	6.00	0
<b>Component 2 - Maintenance and Spot Improvement of Selected Rural Roads</b>	Yei - New Lasu Road (45 Km) Lot 1 - Kirinyagga	45	45	4.00	4.13
	Ras Olo - Maridi Road (71.4 Kms) Lot 2	71.4	0	2.16	0

Maridi - Kozi Road (30Kms) Lot 1	60	40	0.93	1.52
Maridi - Kozi Road (30Kms) Lot 2		40	0.93	1.66
Morobo - Panyume (18 Kms) Lot 1	30	25	0.48	0.53
Panyume - Yaribe (20Kms) Lot 2		25	0.5	0.5
Yaribe - Gimunu (30Kms) Lot 3		30	0.6	0.65
Panyume - Kachu-Limbe (40Kms) Lot 4	0	30	0.74	0.82
Aru Junction - Magwi	0	55		2.04

**Table 3.3 Payment currency arrangements for works contracts**

Road Section	Length (Km)	Type of Intervention	Contract Payment Currency
Magwi - Labone	89	Rehabilitation/Upgrading Construction	60% USD, 40% SSP
Amadi -Tali	86	Rehabilitation/Upgrading Construction	100% SSP
Yei – New Lasu	45	Spot Improvement/ Maintenance (mechanized)	100% USD
Maridi- Kozi (Lot 1)	40	Spot Improvement/ Maintenance (Labor-based)	100% SSP
Maridi- Kozi (Lot 2)	40	Spot Improvement/ Maintenance (Labor-based)	100% SSP
Morobo- Panyume	25	Spot Improvement/ Maintenance (Labor-based)	100% SSP

Panyume - Yaribe	25	Spot Improvement/ Maintenance (Labor-based)	100% SSP
Yaribe - Gimunu	30	Spot Improvement/ Maintenance (Labor-based)	100% SSP
Panyume – Kachu-Limbe	30	Spot Improvement/ Maintenance (Labor-based)	100% SSP
Aru Junction - Magwi	55	Spot Improvement/ Maintenance (Labor-based)	100% SSP

### Main Assumptions and Methodology

The ex-post economic evaluation followed the same approach as the ex-ante economic analysis, assessing road users' benefits and actual costs of the investments, using the RED model. The costs were discounted at a 12 percent rate, through a 20-year evaluation period. The main benefits stemming from the investments that were quantified for this analysis are the savings for road users on passenger/freight travel time and the reduction of vehicle operating costs.

#### Traffic Volume

Due to the fragile situation of the Country near project completion as a result of the armed crisis, no count survey data was collected. Therefore, the analysis followed the same assumptions utilized for the ex-ante evaluation: 5 percent average annual traffic growth for the Upgrading and Rehabilitation interventions and 3 percent average annual traffic growth for the Maintenance and Spot Improvement interventions.

**Table 3.4 Before and After Average Annual Daily Traffic (AADT)**

Component	Road Section	AADT at Appraisal (2010) or prior to the interventions (2012) (Veh/day)		Actual AADT at completion (2016) (Veh/day)	
		Non Motorized	Motorized	Non Motorized	Motorized
<b>Component 1 - Upgrading and Rehabilitation of Selected Rural Roads</b>	Magwi - Labone (thru' Parajok) Road (89 Kms) Lot 1	373	11	485	16
	Amadi - Tali Road (86 Km) Lot 2	72	10	91	14
<b>Component 2 - Maintenance and Spot</b>	Yei - New Lasu Road (45 Km) Lot 1 - Kirinyagga	3,091	53	3,880	106*

<b>Improvement of Selected Rural Roads</b>	Maridi - Kozi Road (30Kms) Lot 1	85	4	107	5
	Maridi - Kozi Road (30Kms) Lot 2	85	4	107	5
	Morobo - Panyume (18 Kms) Lot 1	463	-	2,377	5
	Panyume - Yaribe (20Kms) Lot 2	600	37	752	45
	Yaribe - Gimunu (30Kms) Lot 3	834	30	1,045	36
	Panyume - Kachu-Limbe (40Kms) Lot 4	600	37	752	45
	Aru Junction - Magwi	787	10	986	12

\* The Motorized traffic growth for this section was obtained from local authorities through an interview carried out on National TV. Authorities mentioned that the motorized traffic had doubled.

*Speed utilized as proxy for road roughness*

The RED model offers the option to enter the speed a reference vehicle to characterize the condition of a given road because the road roughness of unpaved roads is difficult to measure or estimate due to its variability over seasons, path along the route and maintenance activities. The speeds were obtained from the travel time measurements carried out along each road section after the completion of the works.

**Table 3.5 Before and after Speeds**

<b>Component</b>	<b>Road Section</b>	<b>Actual Length (Km)</b>	<b>Speed at Appraisal or before interventions (Km/hr)</b>	<b>Speed at Completion (Km/hr)</b>
<b>Component 1 - Upgrading and Rehabilitation of Selected Rural Roads</b>	Magwi - Labone (thru' Parajok) Road (89 Kms) Lot 1	89	29.67	89.00
	Amadi - Tali Road (86 Km) Lot 2	86	28.67	86.00

<b>Component 2 - Maintenance and Spot Improvement of Selected Rural Roads</b>	Yei - New Lasu Road (45 Km) Lot 1 - Kirinyagga	45	11.25	60.00
	Maridi - Kozi Road (30Kms) Lot 1	40	10.00	60.00
	Maridi - Kozi Road (30Kms) Lot 2	40	10.00	60.00
	Morobo - Panyume (18 Kms) Lot 1	25	25.00	60.00
	Panyume - Yaribe (20Kms) Lot 2	25	30.00	60.00
	Yaribe - Gimunu (30Kms) Lot 3	30	25.00	60.00
	Panyume - Kachu-Limbe (40Kms) Lot 4	30	30.00	60.00
	Aru Junction - Magwi	55	27.50	60.00

### *Population Served*

The last census carried out in South Sudan was in 2008. According to the South Sudan Bureau of National Statistics, the population grew by a yearly average of 3.84 percent from 2008 to 2015, and estimated a yearly average growth of 3.77 percent from 2016 to 2020. The analysis followed these trends to determine the actual population growth.

**Table 3.6 Population Growth**

<b>Component</b>	<b>Road Section</b>	<b>Actual Length (Km)</b>	<b>Population at Appraisal or prior to the interventions</b>	<b>Actual Population</b>
<b>Component 1 - Upgrading and Rehabilitation of Selected Rural Roads</b>	Magwi - Labone (thru' Parajok) Road (89 Kms) Lot 1	89	19,600	23,648
	Amadi - Tali Road (86 Km) Lot 2	86	6,500	7,843



<b>Component 2 - Maintenance and Spot Improvement of Selected Rural Roads</b>	Yei - New Lasu Road (45 Km) Lot 1 - Kirinyagga	45	9,000	10,860
	Maridi - Kozi Road (30Kms) Lot 1	40	2,100	2,554
	Maridi - Kozi Road (30Kms) Lot 2	40	2,100	2,554
	Morobo -Panyume (18 Kms) Lot 1	25	3,766	11,174
	Panyume - Yaribe (20Kms) Lot 2	25	2,317	2,796
	Yaribe - Gimunu (30Kms) Lot 3	30	3,178	3,835
	Panyume - Kachu- Limbe (40Kms) Lot 4	30	2,317	2,796
	Aru Junction - Magwi	55	4,732.00	2,796

### Summary of Ex-Post Economic Evaluation

The Net Present Value (NPV) of the works ranged from US\$4.14 million to US\$8.11 million for rehabilitation, upgrading interventions, while the NPV at the same discount rate, reflected a lowest of US\$0.38 million to a highest of US\$20.89 million for spot improvement and maintenance. The Economic Rate of Return (ERR) ranged between 17 percent and 30 percent for rehabilitation and upgrading works and between 15 percent and 60 percent for spot improvement and maintenance works. Despite the significant increase in costs of the interventions, the results demonstrated that the project remains economically feasible.

It is worthy of noting that, neither the ex-ante nor ex-post economic evaluation take into consideration the savings from the reduction in road traffic fatalities and benefits to the pedestrians and non-motorized traffic which could be more significant and demonstrate the greater efficiency of the project.

**Table 3.7. Summary table of the Ex-Post Economic and Financial Evaluation**

Component	Road Section	Length (Km)	AADT 2016 (Veh/day)	Speed (Km/hr)	Investment (US\$M)	NPV (US\$ M)	EIRR (%)
<b>Component 1 - Upgrading and Rehabilitation</b>	Magwi - Labone (thru' Parajok)	89	16	89.00	13.96	4.14	17

<b>of Selected Rural Roads</b>	Road (89 Kms) Lot 1						
	Amadi - Tali Road (86 Km) Lot 2	86	14	86.00	6.19	8.11	30
<b>Component 2 - Maintenance and Spot Improvement of Selected Rural Roads</b>	Yei - New Lasu Road (45 Km) Lot 1 - Kirinyagga	45	106	60.00	4.13	20.89	60
	Maridi - Kozi Road (30Kms) Lot 1	40	5	60.00	1.52	0.82	16%
	Maridi - Kozi Road (30Kms) Lot 2	40	5	60.00	1.66		
	Morobo - Panyume (18 Kms) Lot 1	25	5	60.00	0.53	0.48	15%
	Panyume - Yaribe (20Kms) Lot 2	25	45	60.00	0.5	0.68	31%
	Yaribe - Gimunu (30Kms) Lot 3	30	36	60.00	0.65	0.62	24%
	Panyume - Kachu-Limbe (40Kms) Lot 4	30	45	60.00	0.82	0.64	24%
	Aru Junction - Magwi	55	12	60.00	2.04	0.38	15%

## Annex 4. Bank Lending and Implementation Support/Supervision Processes

### (a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
<b>Lending</b>			
Tesfamichael Nahusenay Mitiku	Task Team Leader	GTI07	TTL at Approval
Muhammad Zulfiqar Ahmed	Senior Transport Engineer	GTI01	TTL at closing
Emmanuel Taban	Highway Engineer	GTI01	ICR Team Leader
Adenike Oyeyiola Sherifat	Sr. Financial Management Specialist		
Evarist Baimu	Sr. Counsel		
Yasmin Tayyab	Sr. Social Development Specialist		
Rajiv Sondhi	Sr. Financial Management Specialist		
Bedilu Amare	Environment Specialist		
Abel Lufafa	Agricultural Officer		
Berhane Manna	Sr. Agricultural Specialist		
Teferra Mengesha	Transport Economist (Consultant)		
Alfred Alafi	Consultant (Baseline Data)		
Dennis Kenyi	Consultant (Baseline Data)		
Suzan Piwang	Program Assistant	AFMJB	
Nina Jones	Program Assistant		
Wycliffe Okoth	Program Assistant		
<b>Supervision/ICR</b>			
Tesfamichael Nahusenay Mitiku		GTI07	TTL at Approval
Muhammad Zulfiqar Ahmed	Team Leader	GTI01	TTL at closing
Pascal Tegwa	Procurement Specialist	GGO01	
Stephen Diero Amayo	Financial Management Specialist	GGO25	
Anton Karel George Baare	Safeguards Specialist	GSU07	
Emmanuel Taban	Highway Engineer	GTI01	ICR Team Leader
Grace Tabu Felix	Team Member	AFMJB	
John Bryant Collier	Safeguards Specialist	GEN01	
Ocheng Kenneth Kaunda Odek	Team Member	GGO01	
Virginia Maria Henriquez	Consultant	GTI04	ICR Author
Dorothy M. Akikoli	Program Assistant	AFMJB	

Joseph Nyabicha	Financial Management Specialist	GGO	
Adenike Oyeyiola Sherifat	Sr. Financial Management Specialist	GGO	
Suzan Piwang	Program Assistant	AFMJB	

**(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)
<b>Lending</b>		
<b>Total:</b>		<b>135,350</b>
<b>Supervision/ICR</b>		
<b>Total:</b>		<b>673,699</b>

## **Annex 5. Beneficiary Survey Results**

Not applicable

## **Annex 6. Stakeholder Workshop Report and Results**

Not applicable

## **Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR**

### **Borrower's Comments on the Draft ICR for the South Sudan Rural Roads Project (TF-12347)**

---

#### **1.1 Project Context, Development Objectives and Design**

#### **1.2 Context at Appraisal**

We agreed with the contents as at the appraisal. At the close of the project, access to many key areas of the country had been opened through rehabilitation and maintenance of the classified road network under the SSRRP covering 465km with financing from the SSTTF.

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

The PDO as at the appraisal which is equally stated in the GA was to (i) improving access to high agricultural potential areas; and (ii) enhancing the capacity of participating states and relevant national government institutions to manage rural transport infrastructure

We agreed with the PDO Indicators as specified in the Emergency Project Paper's Annex 2

#### **Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification**

We are in agreement with this section

#### **Main Beneficiaries,**

Agreed

#### **1.3 Original Components (*as approved*)**

Agreed

#### **Revised Components**

Agreed

#### **Other significant changes**

Agreed

#### **Key Factors Affecting Implementation and Outcomes**

#### **1.4 Project Preparation, Design and Quality at Entry**

Agreed

## **Implementation**

Agreed

### **Major Factors that Affected Project Implementation**

Agreed.

However, the implementation was largely delayed as a result of activities such as environmental and social impact assessment that are normally executed before the effectiveness of the project were pushed to commence after the effectiveness date. This greatly impacted on the commencement of other activities like procurement of civil works and supervision services

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

Agreed

### **Safeguard and Fiduciary Compliance Environmental and Social Safeguards**

Agreed

### **Procurement**

Agreed

### **Financial Management**

Agreed

### **Post-completion Operation/Next Phase**

Agreed

### **Assessment of Outcomes**

## **1.5 Relevance of Objectives, Design and Implementation**

Agreed

There was clear linkage between the project components and project development objectives, as such; it has improved the performance of the road transport sector in South Sudan, though the project implementation was impacted greatly by the concern raised in Section 2.2 of our comment to this ICR

### **Achievement of Project Development Objectives**

Agreed

### **Efficiency**

Agreed



## **Justification of Overall Outcome Rating**

Agreed

## **Overarching Themes, Other Outcomes and Impacts**

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

Agreed

### **Institutional Change/Strengthening**

Agreed

### **Other Unintended Outcomes and Impacts (positive or negative)**

Not Applicable.

### **Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops**

Not Applicable.

### **Assessment of Risk to Development Outcome**

Agreed

### **Assessment of Bank and Borrower Performance**

#### **1.6 Bank Performance**

##### **(a) Bank Performance in Ensuring Quality at Entry**

Agreed with the Rating

The project design put in place adequate since it encourages total stakeholders' participation, thus the element of ownership was maintained. The capacity of MRB built under SETIDP and SSRMP laid a foundation and supported the quality at entry for implementation of the project.

##### **Quality of Supervision**

Agreed with the rating

##### **Justification of Rating for Overall Bank Performance**

Agreed with the rating due to the level of services and support provided by the Bank at both entry and supervision of the project, particularly during the turbulent times in the project implementation when the country was engulfed with insecurity

##### **Borrower Performance**

**(a) Government Performance**

Agreed

**Implementing Agency or Agencies Performance**

Agreed

**Justification of Rating for Overall Borrower Performance**

Agreed

**Lessons Learned**

Agreed

**Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders**

Not applicable

## **Annex 9. List of Supporting Documents**

- Emergency Project Paper, April 2012.
- Aide memoires (AMs): October 2012, January/June/November 2013, April/November 2014, June/December 2015, April/October 2016
- Implementation and Status Results Reports (ISRs): November 2012, May 2013, December 2013, June 2014, December 2014, June 2015, December 2015, June 2016, November 2016.
- Mid Term Review: November 2014.
- Restructuring paper, May 2016.
- South Sudan Transition Trust Fund Grant Agreement, May 2012.
- Interim Strategy Note for the Republic of Sudan, March 2008.
- Interim Strategy Note for the Republic of South Sudan, January 2013.
- ICR for the Southern Sudan Roads Maintenance Project, February 2013.
- ICR for the Southern Sudan Emergency Transport and Infrastructure Development Project, June 2013
- Technical Audit Report, October 2016.
- Environmental and Social Audit Report, March 2017.
- Concept Note for Additional Financing, October 2014.
- South Sudan Development Plan (2011-2013)

# MAP

