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IMPLEMENTATION COMPLETION AND RESULTS REPORT

IDA-52480 and IDA-H8440

ON A

CREDIT

IN THE AMOUNT OF 138.7 SDR MILLION

(US\$ 210 MILLION EQUIVALENT)

TO THE

UNITED REPUBLIC OF TANZANIA

AND A

GRANT

IN THE AMOUNT OF SDR 2.0 MILLION

(US\$ 3 MILLION EQUIVALENT)

TO THE DAR ES SALAAM CORRIDOR COMMITTEE

FOR THE FIRST PHASE (APL1) OF THE
SOUTHERN AFRICA TRADE AND TRANSPORT FACILITATION PROGRAM

January 28, 2022

Transport Global Practice
Eastern and Southern Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective January 21, 2022)

Currency Unit = Tanzanian Shilling (TZS)

2,310 TZS = US\$1

US\$ 1.40 = SDR 1

FISCAL YEAR

July 1 - June 30

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ABBREVIATIONS AND ACRONYMS

AADT	Average Annual Daily Traffic
AIDS	Acquired Immunodeficiency Syndrome
APL	Adaptable Program Loan
COMESA	Common Market for Eastern and Southern Africa
COVID-19	Coronavirus disease caused by SARS-CoV-2
CPF	Country Partnership Strategy
CPMS	Corridor Performance Monitoring System
DANIDA	Danish International Development Agency
DCC	Dar es Salaam Corridor Committee
DRC	Democratic Republic of the Congo
EAC	East African Community
EIRR	Economic Internal Rate of Return
EMS	Emergency Medical Services
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
GDP	Gross Domestic Product
GoT	Government of Tanzania
HDM	Highway Development and Management Model
HIV	Human Immunodeficiency Virus
ICR	Implementation Completion and Results Report
ISR	Implementation Status Report
IDA	International Development Association
Km	Kilometer
M&E	Monitoring and Evaluation
MTR	Mid-Term Review
MoFP	Ministry of Finance and Planning
MoHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children
NPV	Net Present Value
NSC	North-South Corridor
NSC-AfT	North-South Corridor Aid for Trade Program
NTB	Non-Tariff Barriers
OSIS	One Stop Inspection Station
OSBP	One-Stop Border Post
PAD	Project Appraisal Document
PDO	Project Development Objective
RAP	Resettlement Action Plan
SADC	Southern African Development Community
SATTFP	Southern Africa Trade and Transport Facilitation Program
SDR	Special Drawing Rights
TACAIDS	Tanzania Commission for AIDS
TANROADS	Tanzania National Roads Agency
TEU	Twenty Foot Equivalent Unit
ToC	Theory of Change

TTL	Task Team Leader
TZS	Tanzania Shilling
US\$	United States Dollar
VOC	Vehicle Operating Costs
WB	World Bank

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DATA SHEET

BASIC INFORMATION

Product Information

Project ID	Project Name
P120370	Southern Africa Trade and Transport Facilitation Project
Country	Financing Instrument
Eastern Africa	Investment Project Financing
Original EA Category	Revised EA Category
Partial Assessment (B)	Partial Assessment (B)

Organizations

Borrower	Implementing Agency
REPUBLIC OF TANZANIA AND DAR ES SALAAM CORRIDOR COMMITTEE	TANROADS

Project Development Objective (PDO)

Original PDO

The project development objective of the Southern Africa Trade and Transport Facilitation Program - Phase 1 (APL-1) is to facilitate the movement of goods and people along the Dar Corridor in Tanzania, whilst supporting improvements in the services for HIV/AIDS and road safety.

The objective of the Southern Africa Trade and Transport Facilitation Program is to facilitate the movement of goods and people along the north-south corridor (NSC), whilst supporting improvement in the services for Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) and road safety.



FINANCING

	Original Amount (US\$)	Revised Amount (US\$)	Actual Disbursed (US\$)
World Bank Financing			
IDA-52480	210,000,000	190,476,661	172,517,796
IDA-H8440	3,000,000	2,992,015	2,885,218
Total	213,000,000	193,468,676	175,403,014
Non-World Bank Financing			
Total	0	0	0
Total Project Cost	213,000,000	193,468,676	175,403,013

KEY DATES

Approval	Effectiveness	MTR Review	Original Closing	Actual Closing
21-May-2013	26-Nov-2013	17-Nov-2016	31-Dec-2018	31-Dec-2020

RESTRUCTURING AND/OR ADDITIONAL FINANCING

Date(s)	Amount Disbursed (US\$M)	Key Revisions
20-Dec-2018	143.05	Change in Results Framework Change in Loan Closing Date(s) Reallocation between Disbursement Categories Change in Implementation Schedule
04-Jun-2020	193.31	Change in Loan Closing Date(s)

KEY RATINGS

Outcome	Bank Performance	M&E Quality
Moderately Unsatisfactory	Moderately Satisfactory	Modest



RATINGS OF PROJECT PERFORMANCE IN ISRs

No.	Date ISR Archived	DO Rating	IP Rating	Actual Disbursements (US\$M)
01	13-Oct-2013	Satisfactory	Satisfactory	0
02	25-Apr-2014	Satisfactory	Moderately Satisfactory	.04
03	17-Nov-2014	Satisfactory	Moderately Satisfactory	19.70
04	14-Jan-2015	Satisfactory	Moderately Satisfactory	19.70
05	17-Jul-2015	Satisfactory	Moderately Satisfactory	24.75
06	11-Mar-2016	Satisfactory	Moderately Satisfactory	35.11
07	28-Sep-2016	Satisfactory	Moderately Satisfactory	35.11
08	28-Nov-2016	Satisfactory	Satisfactory	64.73
09	18-Apr-2017	Satisfactory	Satisfactory	112.31
10	12-Jan-2018	Satisfactory	Moderately Satisfactory	112.31
11	09-May-2018	Satisfactory	Moderately Satisfactory	114.43
12	09-May-2019	Satisfactory	Moderately Satisfactory	143.05
13	17-Dec-2019	Moderately Satisfactory	Moderately Satisfactory	172.81
14	24-Jul-2020	Moderately Satisfactory	Moderately Satisfactory	193.31

SECTORS AND THEMES

Sectors

Major Sector/Sector (%)

Health 5

Public Administration - Health 5

Transportation 95

Public Administration - Transportation 11

Rural and Inter-Urban Roads 84



Themes		
Major Theme/ Theme (Level 2)/ Theme (Level 3)		(%)
Economic Policy		68
Trade		68
Trade Facilitation		68
Private Sector Development		23
Regional Integration		23
Human Development and Gender		2
Disease Control		2
HIV/AIDS		2
Urban and Rural Development		7
Urban Development		7
Urban Infrastructure and Service Delivery		7
ADM STAFF		
Role	At Approval	At ICR
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I. PROJECT CONTEXT AND DEVELOPMENT OBJECTIVES

A. CONTEXT AT APPRAISAL

Context

- At the time of the project's appraisal, the Eastern and Southern Africa region was highly diverse, showing considerable potential for significant gains from deeper integration.** The countries of the region range from South Africa, the continent's most advanced economy, with advanced manufacturing and service industries and superior logistic services, to some of the smallest and poorest. The region had enjoyed economic growth rates above the global average for the previous decade, driven by increasing global demand for primary commodities (especially agricultural goods and copper and other minerals) and imports of capital and consumer goods into the region. Despite this growth, intra-regional trade remained modest, accounting for only 13% of total trade in 2011.
- The countries of the region faced several common problems related to trade and transport integration.** These included many small and/or landlocked states, geographic remoteness from major global markets, high unemployment and poverty, overreliance on the export of primary commodities, and large informal sectors. Improving the regional transport network was determined to be a necessary condition for competitiveness and improved regional and global economic integration.
- The broader North-South Corridor (NSC) was identified as the key trade network of the region but faced serious constraints.** Extending some 3,900 km from Dar es Salaam in Tanzania to Durban in South Africa, the corridor encompassed both road and rail networks, and maritime and inland water ports. See Annex 6 for a map of the wider NSC corridor. The northern portion of this corridor is known as the Dar es Salaam (or simply Dar) corridor. While, the region was relatively well endowed with physically continuous road and rail networks, the infrastructure was often poor or incomplete, inadequately maintained, and with limitations in organization, management, and coordination, particularly at the ports, border crossings, and railways. As a result, transport costs along the corridor were some of the highest in the world. A number of barriers impacted trade flows, such as the poor quality of clearance documentation, extremely long delays at border crossings, the continued proliferation of authorized and unauthorized checkpoints and other nontariff barriers, and the lack of a robust transit system.
- It was recognized that facilitating road transport along the NSC could be a major factor in the spread of Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS).** Transport workers, their spouses, and sexual partners have long been identified as vulnerable groups at high risk of HIV/AIDS. Tanzania, along with other countries in the region, had a nationally adopted HIV/AIDS program, and the incidence of HIV among adults in Tanzania had declined slightly from an estimated 7.1% in 2001 to 5.6% in 2009. Nevertheless, activities addressing the risks of HIV/AIDS transmission among truck drivers and surrounding communities along transit corridors had not been implemented in a systematic manner. The Tanzania Commission for AIDS (TACAIDS), the national body leading the multisectoral response to the HIV/AIDS epidemic, had identified an acute need for improved HIV mitigation activities along the Dar es Salaam Corridor,



where the rate of infection in some regions (Iringa, Morogoro, Mbeya) were among the highest, and fastest growing, in the country.

5. **Similarly, fatalities and injuries from road traffic crashes represented a significant and growing economic and social cost in Africa, particularly on the major trade corridors.** Africa had one of the highest road traffic death rates in the world, accounting for 20% of all the road deaths globally. In Tanzania, road crash fatalities were increasing quickly, reaching 20,615 in 2008, and resulting in 2,905 fatalities and 17,861 injuries. The Government of Tanzania (GoT) had recognized the significant social and economic cost of road traffic crashes, costing an estimated 3% of gross domestic product (GDP), and passed the National Road Safety Policy in 2009 to reduce the level of road deaths by at least 25% over the period 2008-2015.

6. **The Dar es Salaam Corridor Committee (DCC) had been established to manage, monitor, and improve performance on the corridor.** This committee was expected to eventually take on a similar role to other corridor committees operating across the region (such as the Central Corridor Transit Transport Facilitation Agency which oversees the corridor extending from the Port of Dar es Salaam through the middle of Tanzania to and into Burundi, Rwanda, the Democratic Republic of Congo (DRC) and Uganda). This purpose of the DCC was to develop strategies to improve seamless transportation along the corridor, performance targets for monitoring progress, market the corridor and implement strategies to attract traffic, undertake research, and otherwise coordinate and improve corridor utilization.¹ At appraisal, Tanzania and Malawi had signed the constitution of the DCC and were funding its operations through direct contributions. Zambia had also signed the document but had not formally requested to be included in the program. The DRC had not yet signed the constitution but was expected to. Member countries were in the process of discussing the creation of a levy on shipments along the corridor in order to establish a sustainable financing mechanism for the committee, but at approval, no final agreement had been signed. Discussion was underway to establish a similar committee for the southern end of the corridor, but it was not as advanced.

7. **This project, the Southern Africa Trade and Transport Facilitation Program – Adaptable Program Lending 1 (SATTFP-APL1), was the first in what was to be a series of projects supporting the overall improvement of trade flows in the Eastern and Southern Africa Region.** With its inception in over \$1 billion in commitments made by the World Bank and other donors during an April 2009 conference to improve trade and competitiveness along the North-South Corridor,² the program was expected to be a regional, multi-sector, and multi-phase program to facilitate trade integration by addressing institutional, social, and physical constraints along the NSC. The first phase of this program was planned to address key transport constraints along branches of the northern portion of the NSC, with individual APLs in Tanzania, Malawi and Mozambique. The second phase was to include additional countries as they met program triggers.³

¹ See Constitution of the Dar Es Salaam Corridor Committee, <https://www.gtkp.com/assets/uploads/20100215-214125-5332-Dar%20es%20Salaam%20Corr%20Constitution.pdf>

² This conference, held on April 6th, 2009 in Lusaka Zambia brought together the regional economic communities spanning eastern and southern Africa (COMESA, EAC, and SADC) as well as development institutions to launch an extensive Aide for Trade program. For more information, see: https://www.wto.org/english/news_e/news09_e/aid_06apr09_pressconf_e.doc

³ Annex 6 provides an overview of the full NSC corridor, including those countries which could have eventually benefited from the program, the road condition of the various segments at the time of appraisal, and identifies the road segment financed by this project.



8. **This project was aligned with regional initiatives, Tanzania’s national development strategy, and the World Bank’s (WB) relevant assistance strategies.** At a regional level, the regional economic communities had established a tripartite agreement in 2006 with the objective of accelerating economic integration amongst regional countries, with one pillar focusing on the removal of trade barriers and the introduction of trade facilitation programs. The North South Corridor Aid for Trade (NSC-AfT) Pilot Program under this pillar included an Integrated Border Management component to reduce the waiting time and cost of cross-border transactions, establishing One Stop Border Posts (OSBPs) between tripartite countries. The activities of this project were acknowledged priorities under this program and confirmed with key stakeholders. Nationally, the project was consistent with the Tanzania’s five-year National Strategy (2010/11- 2014/15) based on Tanzania's Development Vision 2025, which included the need to improve infrastructure for road transport and facilitation of transit traffic. The project also contributed to the WB’s relevant strategies, both at the national and regional levels, including the Country Assistance Strategy (FY12-FY15) which prioritized supporting growth and competitiveness, regional integration, and improving the investment climate; and the Regional Integration Assistance Strategy for Sub-Saharan Africa which focused on the creation of open, unified, regional economic spaces to foster a competitive and efficient private sector.

9. **The project built on the WB’s long engagement in Tanzania, as well as considerable experience in developing regional trade, and transport facilitation projects in Europe, Asia, and Africa.** SATTFP was preceded by a series of earlier WB transport projects in the country. In addition, the engagement of the Sub-Saharan African Transport Policy Program (a Bank Executed Trust Fund) in Tanzania for the fifteen years leading up to the project helped lay the institutional groundwork for major transport reform and development programs. Concerning regional trade and transport facilitation projects, the WB was already supporting four trade corridor projects in Africa: the East Africa Trade and Transport Facilitation Project linking Kenya and South Sudan; the Central Africa Economic and Monetary Community of Central Africa Transport and Transit Facilitation Project; the West Africa Transport and Transit Facilitation Project, covering Ghana, Burkina Faso and Mali; and the Abidjan-Lagos Trade and Transport Facilitation Project, covering Ghana, Benin, Togo, and Cote d'Ivoire. This knowledge was complimented in the preparation of this project by the experience in regional initiatives in other sectors such as the Great Lakes Initiative on HIV/AIDS Support Project.

10. **This project was quite innovative and ambitious, reflecting a much more holistic approach to corridor development than was common at the time, and setting the precedent for many following projects across the region.** In particular, by raising road safety and HIV/AIDS to the level of Project Development Objectives, as well as bringing the promotion of trade to the forefront, it went far beyond the “typical” road project in terms of its recognition of the opportunities and costs associated with road corridors. This type of engagement has become increasingly more common in the decade since its preparation began, with the incorporation of corridor wide impacts and a more holistic approach to project design being implemented in countries across the WB’s transport portfolio. This project’s status as a highly innovative engagement, setting the trend for a wider shift in how the WB conceptualizes and implements corridor projects is an important context to its evaluation under this Implementation Completion and Results Report (ICR).



Theory of Change (Results Chain)

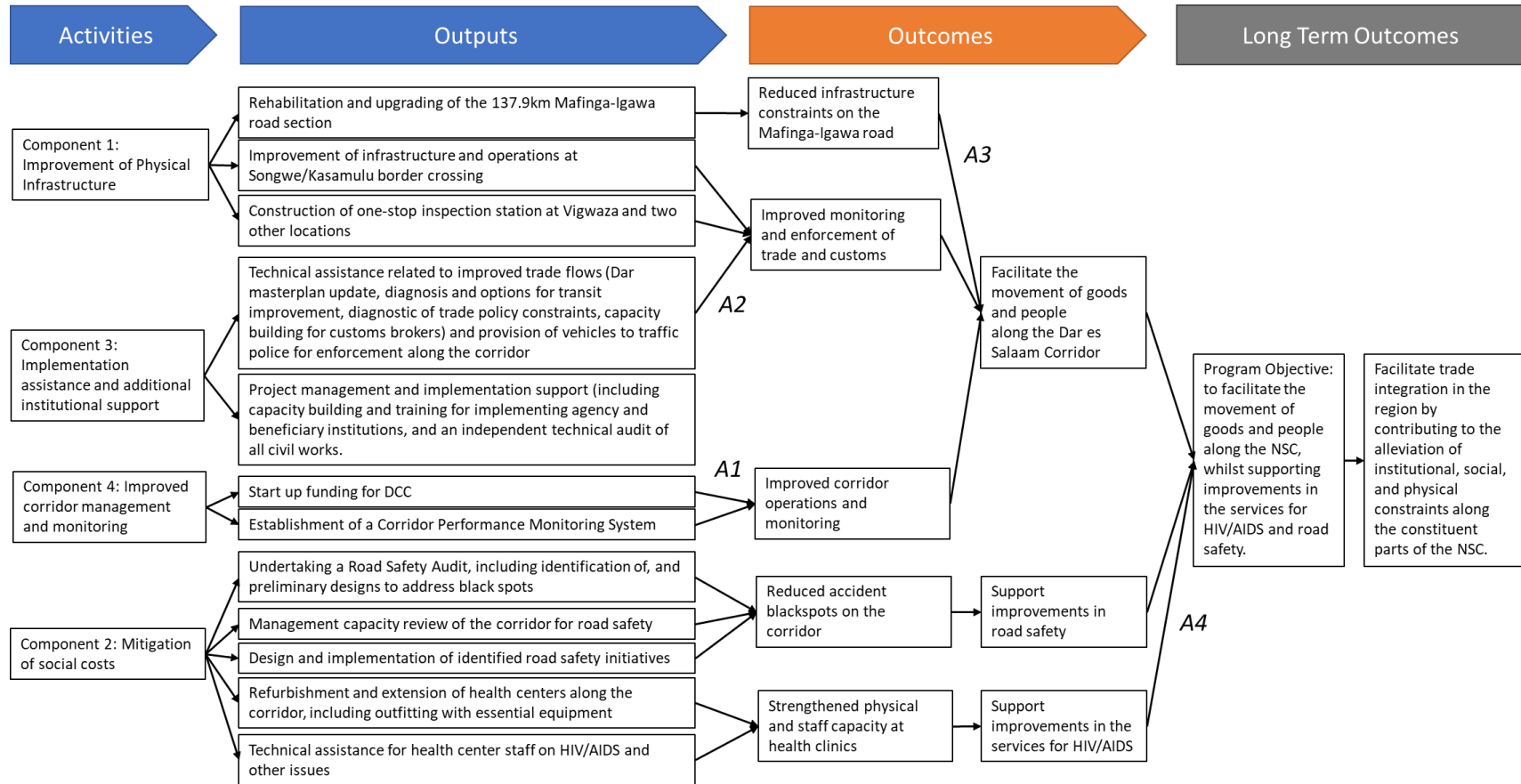
11. **The project was intended as the first in a series of projects, tackling key constraints to trade along the NSC on a country-by-country basis.** As described above, as the key trade network for the whole of the Eastern and Southern African region, facilitating trade and reducing barriers was an objective that went beyond any single country or sector. The long-term objective of the project (and overall program) was to facilitate trade by addressing the physical, institutional, and social constraints which act as sources of friction to the flow of goods and people. The Project was designed to improve the movement of people and goods through activities supporting three channels: addressing infrastructure bottlenecks, improving customs and enforcement, and improving the institutional monitoring of the corridor.

12. **In addition, as trade increases and the flow of vehicles and people also increase, various social risks associated with such activities also increase.** While there are other risks inherent in the growth and change associated with corridor development, the two key risks identified for the Dar es Salaam corridor were road safety and increased spread of HIV/AIDS. Increasing traffic, increasing speeds, and the draw of economic opportunities along the roadside can all create dangerous areas for road crashes, known as “black spots”. In addition, the expansion of long-haul trucking frequently leads to an increased risk of HIV/AIDS spread along the corridor.

13. **Therefore, the project activities were designed to address physical and institutional barriers to trade along the corridor while simultaneously mitigating the increased risks of road safety and HIV/AIDS.** As this project was developed prior to the requirement to include a Theory of Change (ToC) within the Project Appraisal Document (PAD), Figure 1 below represents the project’s results chain as described in the PAD in the standard ToC structure. Note that the project components are shown out of order to improve clarity.



Figure 1: Theory of Change



Assumptions

- A1 – Agreement is signed between corridor countries to establish sustainable funding mechanism for DCC
- A2 – Police reduce road blocks as condition to receive vehicles
- A3 – Improvements in Mafinga-Igawa and other road segments are maintained over time
- A4 – improvements in social costs will more than counteract potential risk from increased trade and traffic



Project Development Objectives (PDOs)

14. The PDO as stated in the PAD and Financial Agreement was to facilitate the movement of goods and people along the Dar Corridor in Tanzania, whilst supporting improvements in the services for HIV/AIDS and road safety.⁴

Key Expected Outcomes and Outcome Indicators

15. The project had three clear development objectives, each associated with one or more PDO indicators, as elaborated in Table 1:

Table 1: SATTFP PDOs and PDO Indicators	
PDO	Indicators
(i) to facilitate the movement of goods and people along the Dar Corridor	<ul style="list-style-type: none"> Reduction in average journey time for an imported container (TEU) from departure from port gate in Dar es Salaam to Kasumulu on the corridor (days); Reduction in total time required at police roadblocks along the Dar es Salaam Corridor in Tanzania (hours); Reduction in total time required to cross the Songwe/Kasumulu border crossing into Malawi (hours); Roads in good and fair condition as a share of Dar es Salaam Corridor length (%); Reduction in total vehicle operating costs (VOC) on Mafinga - Igawa road (%);
(ii) to support improvement in the services for HIV/AIDS	<ul style="list-style-type: none"> Direct project beneficiaries of new/improved health centers and HIV clinics on Dar es Salaam Corridor in Tanzania (number), of which female (percentage);
(iii) to support improvement in the services for road safety	<ul style="list-style-type: none"> Reduction in the number of accident black spots on Dar es Salaam Corridor in Tanzania (number).

Components

16. The project had four components, the first financing physical infrastructure, the second mitigating social risks, the third supporting capacity building and institutional strengthening, and the last supporting corridor monitoring and management. The total estimated project cost was US\$ 213 million. The first three components were financed through an IDA credit of US\$ 210 million, while the final component was financed by an IDA grant of US\$3 million. Table 2 provides a summary of the project’s components at approval.

⁴ The objective of the wider Southern Africa Trade and Transport Facilitation Program was to facilitate the movement of goods and people along the NSC, whilst supporting improvement in the services for HIV/AIDS and road safety.



Components	Description	Amount Allocated
Component 1: Improvement of physical infrastructure	<p>Execution of civil works on the corridor, including:</p> <ul style="list-style-type: none"> • The rehabilitation and upgrading of the 137.9 km Mafinga- Igawa road section. • The improvement of infrastructure and operations at the Songwe/Kasamulu border crossing on the Tanzania/Malawi border, including construction of a One Stop Border Post (OSBP). • The construction of a One-Stop Inspection station (OSIS) at Vigwaza and at two other locations in Tanzania. The OSIS were expected to have an administration building, a weighbridge, a parking area, a wellness center, a small commercial center for shops/restaurants to serve the mobile population, and a filling station. By providing streamlined inspection services at three established points along the corridor, they were intended to reduce the time and costs incurred for transit by weighbridges and police checkpoints. 	IDA Credit: US\$185 million
Component 2: Mitigation of social costs	<p>Activities to mitigate potential social costs associated with increased traffic along the corridor, including:</p> <ul style="list-style-type: none"> • Road Safety Initiatives on the Corridor, including undertaking a Road Safety Audit, management capacity review for the corridor, and design and implementation of road safety measures. • HIV/AIDS Initiatives on the Corridor, including refurbishing and extending priority lower-level health centers, purchase of essential equipment for the centers, and capacity building for the health center staff. 	IDA Credit: US\$16 million
Component 3: Implementation assistance and additional institutional support	<p>Financing to provide necessary project management and implementation assistance to the implementation unit, together with capacity building and requested training, and other priority studies. Studies included an update of the urban transport masterplan for Dar es Salaam, diagnostic of transit procedures between corridor countries, diagnostic of</p>	IDA Credit: US\$9.0 million

⁵ See Table 4 – for revised components and actual expenditures



	policy constraints for trade facilitation, capacity building for customs brokers in Tanzania, and an independent technical audit of civil works. The component was also intended to finance the purchase of vehicles for the Traffic Police.	
Component 4: Improved corridor management and monitoring	Support the strengthening of the DCC and the funding of its operating costs for a finite period, until a sustainable financing model had been introduced. This component also included the establishment of a Corridor Performance Monitoring System (CPMS), to enable the management and monitoring of performance on the corridor.	IDA Grant: US\$3.0 million

B. SIGNIFICANT CHANGES DURING IMPLEMENTATION (IF APPLICABLE)

Revised PDOs and Outcome Targets

17. No changes were made to the PDO.

Revised PDO Indicators

18. **Changes were made to the project’s results framework as part of a December 2018 restructuring, removing one PDO indicator (and associated intermediate indicator) and changing one intermediate indicator’s target.** The changes are outlined in Table 3 below:

Table 3: Revised SATTFP-APL1 PDOs and PDO Indicators		
Original Indicator	Revised Indicator	Description of Change
<i>PDO 1: to facilitate the movement of goods and people along the Dar Corridor</i>		
Reduction in average journey time for an imported container (TEU) from departure from port gate in Dar es Salaam to Kasumulu on the corridor (days);	Average time from ship readiness to unload to final destination for an imported container, on the corridor targeted by the project	Indicator language changed, baseline and target unchanged
	Freight volume measured in TEU in targeted corridor	New sub-indicator
Reduction in total time required at police road blocks along the	Reduction in total time required at police road blocks along the Dar es	No change.



Dar es Salaam Corridor in Tanzania (hours);	Salaam Corridor in Tanzania (hours);	
Reduction in total time required to cross the Songwe/Kasumulu border crossing into Malawi (hours)	Reduction in total time required to cross the Songwe/Kasumulu border crossing into Malawi (hours);	No change
Roads in good and fair condition as a share of Dar es Salaam Corridor length (%)	Roads in good and fair condition as a share of Dar es Salaam Corridor length (%);	No change
Reduction in total vehicle operating costs (VOC) on Mafinga - Igawa road (%)	Reduction in total vehicle operating costs (VOC) on Mafinga - Igawa road (%);	Following restructuring, this indicator was removed from the results framework.
	Improved corridor management and performance monitoring (yes/no)	New Indicator
<i>PDO 2: Support improvements in the services for HIV/AIDS</i>		
Direct project beneficiaries of new/improved health centers and HIV clinics on Dar es Salaam Corridor in Tanzania (number), of which female (percentage)	People with access to a basic package of health, nutrition or reproductive health services (number), of which female (percentage)	Indicator language changed, baseline and target unchanged
<i>PDO 3: Support improvements in the services for road safety</i>		
Reduction in the number of accident black spots on Dar es Salaam Corridor in Tanzania (number).	Reduction in the number of accident black spots on Dar es Salaam Corridor in Tanzania (number).	No change

Revised Components

19. **No formal changes were made to the project’s components.** Some changes were made to project activities as described below.

Other Changes

20. **The project was restructured twice.** The first, a level 2 restructuring, was approved by the Country Director on December 20, 2018 to extend the closing date by 18 months (from December 31, 2018 to June 30, 2020) to allow for the completion of project activities. This restructuring also revised the results framework, as described above, reallocated financing among disbursement categories in order to benefit from realized savings under some activities and address exchange rate fluctuations, and to adjust the project implementation schedule in line with the extension of the closing date. The second restructuring was approved by the responsible Regional Director on June 4th, 2020 to extend the closing date by an additional six months. This



extension was intended to allow for the completion of various project activities which had been delayed, such as the health clinics, black spot remediation, and the OSBP. No other changes were made under this restructuring.

21. In addition to the formal restructurings, the project underwent a series of changes within its components, especially regarding activities related to the DCC. Following the end of WB financing under Component 4, the DCC became functionally defunct due to lack of sustainable funding. Despite extended conversations, the participant countries were unable to reach agreement on the levy which was intended to provide sustainable funding for the committee. As a result, once funding ended under the project, the DCC stopped operations. As various activities under the project were intended to benefit or be technically overseen by the DCC, those which had not been commenced at the time its funding expired were dropped or implemented in a more limited manner, including piloting of a customs guarantee scheme, piloting of a transit guarantee scheme, and provision of equipment for DCC. During implementation, prior to it becoming clear that no levy would be implemented, the CPMS was shifted from the grant financed Component 4 to Component 3, with the full grant amount used to support DCC. The CPMS was developed under the project but cannot be implemented as the DCC was intended to own and operate it.

22. Other significant changes within components included:

Component 1:

- At appraisal, the project had expected to construct three One Stop Inspection Stations (OSIS) along the corridor (one at Vigwaza and two at locations to be determined during implementation). In order to address a projected overall cost overrun, it was decided during mid-term review to reallocate the funds intended to finance the two undetermined OSIS, and instead prepare feasibility and detailed engineering designs and tender documents for three stations (at Ruaha Mbuyuni in Iringa Region, Makambako in Njombe Region and Mpemba in Mbeya Region).
- Supporting the project's contribution to addressing infrastructure bottlenecks along the Dar corridor, an activity was added which financed the feasibility, detailed design and safeguards instruments for the rehabilitation of the corridor from Igawa to the Zambian border at Tunduma.

Component 2:

- In order to strengthen the project's contribution to the road safety PDO, an Emergency Medical Service (EMS) and Trauma Care Pilot was included under Component 2. This activity was intended to provide trauma care for victims of road accidents along the corridor, focusing on the section from Dar es Salaam to Ruaha Mbuyuni. This included rehabilitation and expansion of seven EMS first aid posts; procurement of twelve ambulances, two rider vans, three supervision vehicles, and three medium fire/rescue vehicles; outfitting of a call center to handle emergency calls; and training for staff.

Component 3:

- The consultancy services for update of the urban transport master plan for Dar es Salaam was dropped during the project's Mid-Term Review (MTR). Instead, the project financed the feasibility



study and engineering designs for the Dar es Salaam Bus Rapid Transit Phase 5. Although only tangentially connected to the PDO of the movement of goods and people along the corridor, these designs were intended to support the preparation of another WB financed activity under preparation.

- Originally intended to be financed under Component 4’s grant financing, the Corridor Performance Monitoring system was financed under Component 3’s IDA credit to increase grant resources available for supporting the DCC’s operations.

23. **Table 4, below, outlines the actual amount disbursed for each component, as compared with the original allocation.**

Table 4: Summary of Major Changes to Components and Actual Disbursement			
Components	Amount Allocated	Description of Major Changes	Actual Expenditure
Component 1: Improvement of physical infrastructure	IDA Credit: US\$185 million	Construction of additional OSIS were dropped and feasibility and designs for another corridor section were prepared	IDA Credit: US\$160 million
Component 2: Mitigation of social costs	IDA Credit: US\$16 million	Inclusion of EMS Pilot	IDA Credit: US\$20.6 million
Component 3: Implementation assistance and additional institutional support	IDA Credit: US\$9.0 million	Dar transport masterplan dropped, inclusion of additional studies and CPMS	IDA Credit: US\$9.8 million
Component 4: Improved corridor management and monitoring	IDA Grant: US\$3.0 million	CPMS moved to Component 3, with savings used to expand support to DCC	IDA Grant: US\$2.8 million
		<i>Refund of disbursed but unused project funds⁶</i>	<i>US\$ -17.9 million</i>
	Total: US\$213.0 million		Total: US\$175.4 million

⁶ At the time of the drafting of the ICR, it was not possible to map reimbursed funds to specific components with certainty. Therefore, the refunded amount is shown as a single line.



Rationale for Changes and Their Implication on the Original Theory of Change

24. **The project's two restructurings were primarily approved to allow the necessary time for completion of all works under the project.** These were intended to account for project delays and increase the probability for the PDOs to be achieved. Other project changes were relatively minimal, largely restricted to reallocation of funds between components and omitting/incorporating specific activities. These changes were made to align the project activities to implementation realities or to achieving its PDOs.

25. **Impacts on the ToC are minimal, with the most significant being the addition of the EMS pilot contributing to the road safety PDO and shifting of the CPMS activities to Component 3.**

II. OUTCOME

A. RELEVANCE OF PDOs

Assessment of Relevance of PDOs and Rating

26. **The project's PDOs continue to be highly consistent with the country's growth and poverty reduction strategy.** The Tanzania Development Vision 2025 continues to be the country's overarching strategy for growth and poverty eradication. As this Vision has been in place throughout the life of the project, it remains relevant. To support this vision, Tanzania has continued to develop five-year development plans on a rolling basis. The National Five Year Development Plan 2016/17 – 2020/21 (in place at project close) highlights the need for transport infrastructure. It places a key focus on Tanzania's potential as a transit hub for the region, identifying the need to improve physical infrastructure and transit policies to facilitate trade. The plan also prioritizes the need to address HIV/AIDS and strengthen the overall health system. All three of the project's PDOs are clearly aligned and remain relevant to Tanzania's development vision and strategies.

27. **The PDOs are also consistent with the WB's support strategy for Tanzania.** At project close, the guiding Country Partnership Strategy (CPF) for Tanzania had been approved in 2018, building off a Systematic Country Diagnostic from the previous year. This CPF includes three focus areas, the first of which is to "enhance productivity and accelerate equitable and sustainable growth." Two objectives under this focus area are directly relevant to the first PDO in the project, namely to "capture Tanzania's potential as a maritime gateway and regional trade hub" and to "enhance transport, energy and digital connectivity for improved services to rural areas." Under Focus Area 2 "boost human capital and social inclusion using a lifecycle approach," an objective was set to "improve the quality of health care and education," which is directly relevant to the project's second and third PDOs.

28. **At the regional level, the PDOs are consistent with the WB's Africa strategy for regional integration.** At project close, the WB's regional integration approach was established by its Africa



Regional Integration and Cooperation Assistance Strategy (FY18-23).⁷ The project's first PDO is clearly aligned with this strategy. In particular, strategic priority 1: "generate economic dynamism along regional economic corridors" includes objectives to "develop regional infrastructure along economically important trunk routes" and to "harmonize policy and reduce nontariff barriers to promote trade and improve productivity along these economic corridors". Although it was published after the project closed, the FY21-23 update of this strategy only reinforces the continued relevance of the project, refocusing the original strategy's first strategic priority to more clearly promote trade facilitation and specifically citing the wider SATTFP as working towards this goal. The update also includes a new pillar on human capital development which is well aligned with the project's second and third PDOs.

29. **The project's relevance is rated as High.** As outlined above, the PDOs continued to be strongly aligned with the Bank and borrower's development strategies.

B. ACHIEVEMENT OF PDOs (EFFICACY)

Assessment of Achievement of Each Objective/Outcome

30. **The project has three separate PDOs, each measured by indicators and supported by various activities. They are assessed individually below:**

PDO 1: to facilitate the movement of goods and people along the Dar Corridor

31. **As indicated by the Theory of Change, the project contributed to this PDO through three primary channels: reducing infrastructure barriers along the corridor, reducing non-tariff barriers (NTBs) to trade by streamlining procedures and processes for customs and enforcement, and improving corridor monitoring and management.** The project's results framework included indicators for monitoring these channels, as well as for assessing overall achievement of the PDO. These three channels are assessed individually below, and their achievement, or lack of, is used to establish context and attribution of overall PDO achievement to the project.

32. **Rehabilitation of the Mafinga-Igawa road section addressed the largest infrastructure bottleneck along the Tanzania portion of the corridor.** Financed under Component 1, and accounting for the majority of project funds (78%), the rehabilitation of the Mafinga – Igawa road segment (137.9 km) addressed the largest infrastructure related constraint along the corridor, rehabilitating the severely deteriorated road segment. Prior to the project's approval, the Danish International Development Agency (DANIDA) had funded the rehabilitation of 149.6 km of the corridor between Iyovi and Iringa and was in the process of financing rehabilitation of an additional 76 km from Iringa to Mafinga, immediately preceding the Mafinga-Igawa section rehabilitated by SATTFP-APL1. Taking into account the DANIDA financed work, 77% of the Dar corridor in Tanzania was determined to be in good or fair condition, leaving 197 km remaining to be rehabilitated at appraisal. The project addressed this remaining gap through two channels, financing the rehabilitation of the Mafinga-Igawa segment improved the majority, while supporting the preparation of feasibility studies, detailed designs and environmental safeguards instruments for the remaining portion of the corridor leading to the border at

⁷ See *Supporting Africa's Transformation: Regional Integration and Cooperation Assistance Strategy for the Period FY18-23*.



Tunduma. This rehabilitation increased the share of the corridor in good or fair condition to 92%, in line with the target. Through these works, the project substantially addressed these infrastructure constraints, reducing the vehicle operating costs (VOC) along the improved section by 17.7% (from US\$ 0.68 per vehicle-km to US\$ 0.51 per vehicle-km), substantially better than estimated during project preparation.⁸

33. **The project included various activities intended to address NTBs along the corridor.** The construction of the OSBP and OSIS, as well as the project's variety of transit and customs technical assistance, were intended to streamline the customs and inspection processes and reduce delays. As stated in Section I.B, during implementation it was agreed that, instead of financing the construction of 3 OSIS (one at Vigwaza and two at undetermined locations), the project would focus on construction of the one OSIS already prepared for Vigwaza, while financing the preparation of feasibility and designs for three additional OSIS. The OSBP at the Songwe/Kasumulu border crossing with Malawi was intended to address one of the few remaining crossings on the Dar corridor which had not be improved under the NSC-AfT Pilot Program. At project closure, these activities had not translated into a reduction in NTBs, as civil works were still ongoing for both the Vigwaza OSIS and the OSBP at Songwe/Kasumulu, with agreement that their completion would be financed through government resources.⁹ As a result of this ongoing construction (and COVID-19 protocols in place to limit spread of the disease), the PDO indicator measuring time required for trucks to cross the Songwe/Kasumulu border into Malawi was not achieved (increasing from 24 hours at appraisal to 72 hours at project close). In addition, the project financed a variety of technical assistance and capacity building activities intended to diagnose NTBs and address constraints. These studies and capacity building were executed as intended, with the exception of the pilot transit guarantee system which was dropped due to DCC becoming defunct. Their impact has been limited, however, as follow up and implementation of findings was largely to be completed by DCC. Finally, the project had intended to finance the purchase of police vehicles to improve enforcement along the corridor. This was to be paired with a reduction in police checkpoints, providing an alternate means of enforcement which would facilitate smoother transit. Although consultations had taken place and agreement reached with all stakeholders during preparation, the number of police checkpoints had not been reduced as of project close due to a variety of concerns on the part of the police. As a result, this activity was dropped, and no vehicles were provided. Although the PDO indicator target measuring time required at police roadblocks was achieved (total time at roadblocks along the corridor dropped from 5 hours at appraisal to 2 hours at project close), due to a lack of data or institutional memory regarding the cause of the delays measured during appraisal, the ICR is unable to assess the cause of this reduction, However as the activity which would have contributed to this indicator was dropped, the decrease is unlikely to be attributable to the project.

34. **Support for improved corridor monitoring and management was to be accomplished by the operationalization of the DCC.** The DCC was legally created prior to project approval through an agreement by corridor countries. As discussed in Section I.B, this committee went defunct following the expiration of the project's grant funding. At the time of project closure, the GoT was in discussions with other corridor countries on options for reinstating corridor monitoring, either through relaunching DCC or other means (such as expanding the mandate of the Central Corridor Transit Transport Facilitation Agency). The project also financed

⁸ See Annex 4 on economic analysis for a further elaboration on VoC.

⁹ As of the drafting of the ICR, these works had not been completed, although the OSIS was nearly complete, and some progress had been made on the OSBP. Details on the status of works of the various components at project close as well as at the drafting of the ICR are included in Annex 4.



the preparation of a CPMS to be based in the DCC, together with support for the hardware and software to operate such a system. The CPMS was intended to be a tool to allow the DCC to maintain an operational database tracking the corridor's performance and utilization; maintain comparative pricing, delivery time and reliability data on the Dar es Salaam corridor; and compare it with other corridors. The CPMS was developed under the project, but not implemented due the DCC becoming defunct. Once agreement is reached regarding institutional arrangements for the corridor, the CPMS is expected to be operationalized. Although the PDO indicator intended to measure this channel, "improved corridor management and performance monitoring (yes/no)", was technically achieved due to preparation and delivery of the CPMS, no such improved management will be realized on the ground until the institutional governance arrangements have been settled.

35. Overall achievement of this PDO was intended to be monitored during implementation through the first PDO indicator, but changes made to the results framework during restructuring reduce its usefulness. As described in Section IV.A, this indicator's description was changed during restructuring, from "reduction in average journey time for an imported container (TEU) from departure from port gate in Dar es Salaam to Kasumulu on the corridor" to "Average time from ship readiness to unload to final destination for an imported container, on the corridor targeted by the project." This change greatly expanded the portion of a container's journey included in the measurement, but without commiserate changes to the baseline and target. A sub-indicator measuring the volume of freight was added during restructuring. Intermediate indicators were included as well, measuring completion of physical works.

36. This PDO was substantially achieved, although ongoing works at the OSBP significantly erode overall improvements. As described above, the time taken for a container to transit the corridor within Tanzania reduced dramatically, from a baseline of 7 days to 2 days at project closure as measured by the Tanzania Revenue Authority. This improvement has been validated through comparison with a system which has been developed to monitor trucking along the corridor, which indicates that the monthly median time for trucks to travel from Dar es Salaam to Kasumulu ranged from 40 to 53 hours over the period from 2018 to 2019.¹⁰ However, much of this improvement is currently eroded due to an increase in wait times at the border (from 24 to 72 hours), where the ongoing construction of the OSBP has led to extensive delays. In terms of volume of goods, the PDO sub-indicator, "freight volume measured in TEU in targeted corridor," shows a dramatic increase, from 35,000 TEU per year at appraisal to 81,478 at project close. This is confirmed by traffic counts collected as part of the economic analysis of the Mafinga-Igawa segment,¹¹ where average daily traffic measured increased by 159% (from 1,716 vehicles per day in 2011 to 4,444 in 2020) at the Makambako Counting Station in the middle of the rehabilitated corridor. This increase was echoed for trucks, where such traffic increased by 80% at Makambako during the assessed period (from 821 trucks per day in 2011 to 1,339 in 2020), indicating the significant expansion in the movement of goods along the corridor. Other counting stations also noted some increase, although not as pronounced.¹² Although the increase in traffic could be attributed to

¹⁰ This tool is being prepared in coordination with the World Bank, collecting data from a sample of trucks operating across the entire NSC and reporting transit statistics monthly. Although more recent data provided by the tool indicates this journey time has potentially decreased further, limited sample size for the specific Dar-Kasumulu journey (only one or two tracked trips per month, perhaps related to COVID-19 driven changes) makes its veracity difficult to validate.

¹¹ See Annex 4

¹² At the Changarawe counting station, the increase was less pronounced (13% higher than at appraisal), while at the third station (Halali) it was essentially unchanged. The various segments of the corridor see somewhat different traffic profiles due to their local population distributions.



a variety of factors, the contribution of the project with regards to addressing the most restrictive infrastructure bottlenecks is highly likely to have been a key contributing factor as are the activities intended to reduce NTBs along the corridor. As further activities are completed (such as the OSBP and the OSIS), these gains are expected to be increased further. With regards to the movement of people, while no PDO indicators directly measure the passenger traffic, other data sources indicate it was facilitated as well. According to traffic counts at Makambako, bus traffic increased over the life of the project (from 134 buses per day in 2011 to 188 in 2020) while minibus traffic decreased (from 151 vehicles per day in 2011 to 73 in 2011).¹³ Other types of passenger vehicles increased even more dramatically.¹⁴ While not directly comparable, the significant improvement in transit times for freight along the corridor suggests that journey times for passengers improved as well.

PDO 2: to support improvements in the services for HIV/AIDS

37. **Recognizing the potential that achieving the project's first PDO (increase in the movement of goods and people) would lead directly to an increase in the transmission of HIV/AIDS along the corridor, the project incorporated activities intended to strengthen the HIV/AIDS capacity of health care facilities in the project area.** The project financed the rehabilitation and expansion of 20 health clinics along the corridor, furnishing them with the equipment necessary for the diagnosis and treatment of HIV/AIDS, and training of health clinic staff. Executed under the direction of Tanzania's HIV/AIDS service, TACAIDS, the identification of the specific health clinics and their needed improvements were made in consultation with regional health officials. At project close, 5 of the clinics had been fully operationalized and handed over to the government. Section III.B. identifies the key factors leading to these delays, including a new payment system implemented in the last two years of the project and (to a lesser extent) COVID-19 related challenges. The remaining 15 were between 60 and 90% completed and planned to be completed through GoT resources.¹⁵ As these health clinics were not available for use during construction, there is some anecdotal evidence from stakeholder interviews that the capacity for HIV/AIDS services along some portions of the corridor may actually be negatively impacted in the short term, as compared to before the interventions. The project also financed the training of 487 personnel along the corridor on issues related to HIV/AIDS care, including masters level course for 4 staff, as well as the production of HIV/AIDS sensitization materials to encourage general awareness of prevention mechanisms. In addition, during rehabilitation of the Mafinga-Igawa road segment, the contractor provided for HIV/AIDS awareness and prevention activities at project sites, and an assessment of HIV/AIDS rates in the project area found no increase in the surrounding population following construction, despite an increase in the numbers of tests conducted.

38. **Achievement of this PDO was measured through one PDO indicator and two intermediate indicators.** The PDO indicator's language was updated during restructuring, from "Direct project beneficiaries of new/improved health centers and HIV clinics on Dar es Salaam Corridor in Tanzania (number) of which female (percentage)" to "People with access to a basic package of health, nutrition or reproductive health services (number) of which female (percentage)." This change did not impact the way the indicator was measured, which

¹³ Similar trends were seen at other counting stations.

¹⁴ See Annex 4 for full traffic counts at points measured along the corridor.

¹⁵ Although additional progress had been made in construction, as of the drafting of the ICR no additional health facilities had been completed. See Annex 4 for a full elaboration of the status of the clinics, both at project close and at the time of the ICR.

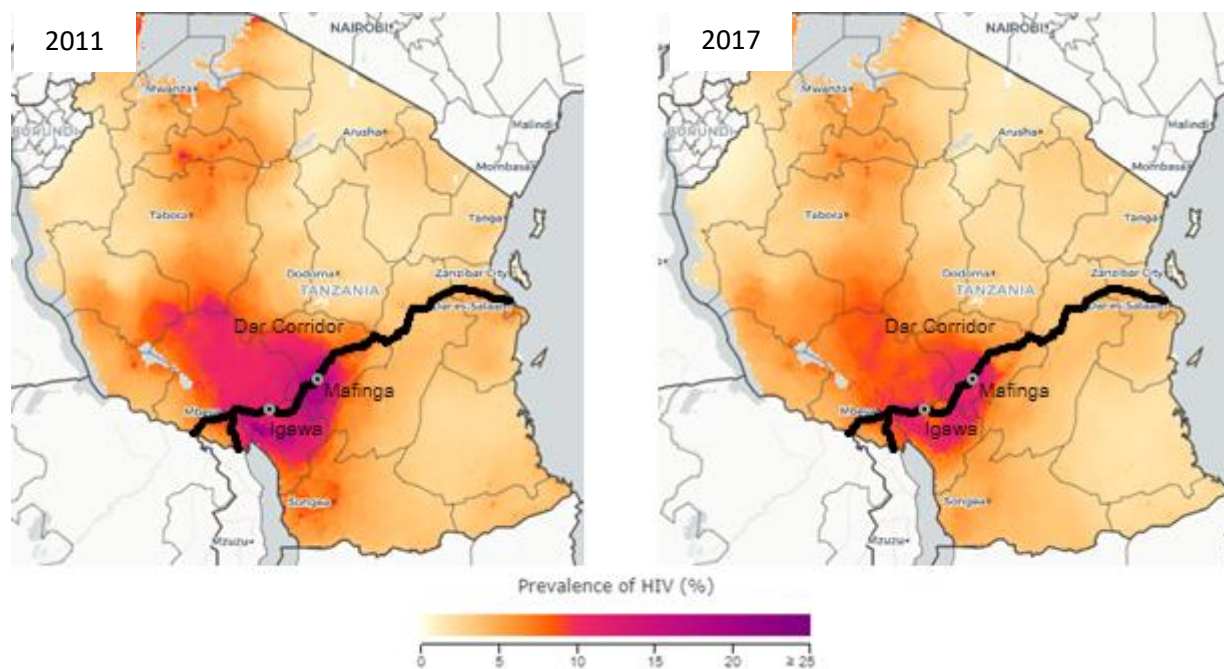


remained a summation of the patient registries for those health clinics which had received support under the project (the 5 completed clinics, at project close). Far exceeding the target of 3,000 people, 7,425 patients were receiving treatment at the rehabilitated centers when the project closed, including 1,198 people at Njisi, 114 people at Busale, 4,113 people at Tunduma, and 2,000 people at Mlowo. Of these, 40% were female, below the targeted 50%, but well exceeding the actual number of women represented by the target (50% of 3000). Noting that this result has been generated by only a quarter of the intended facilities, the eventual impact of the rehabilitated facilities is likely to be much higher (and the target set at appraisal somewhat underestimating the patient population). Regarding intermediate indicators, the project tracked the number of health centers completed (5 out of 20 targeted) and the number of medical personnel trained (487, compared to the targeted 60).

39. **This PDO was partially achieved, meeting indicator targets but only providing services at 25% of the expected sites and in a limited geographic area.** Overall, the impact of the project with regards to HIV/AIDS was mixed. As indicated, the project met or exceeded most of its HIV/AIDS related indicator targets, with the exception being the intermediate indicator on the number of health clinics improved. The number of patients being provided with HIV/AIDS services is higher than targeted, the number of staff trained was significantly above initial targets, and HIV/AIDS sensitization activities performed under the road rehabilitation contractors were well performing. Despite these positive indications, at the time of project closure, only 25% of the intended clinics had been completed, leaving a significant gap in terms of geographic coverage along the corridor (all completed health clinics are in the portion of the corridor near the Malawi – Tanzania border). Along the rest of the corridor, it is not clear whether services are improved as compared to before the project, due to training and other support provided, or eroded due to the stalled construction impacting the available facilities at the 15 health clinics with ongoing work. As part of Tanzania’s broader HIV/AIDS efforts, the project contributed to a general lessening of HIV prevalence in the country, with the most dramatic reductions in the south-central areas of the country, through which the corridor passes. See Figure 2 below for HIV prevalence rates at project appraisal and in 2017, the last year such geographically granular data is available. This is following completion of some relevant project activities (training, sensitization materials, HIV/AIDS activities during road construction), but proceeds the reopening of health clinics, with attribution only weakly possible.



Figure 2: HIV Prevalence in Tanzania (2011-2017), Including Dar Corridor Alignment and Project Road Segment



Source: Dwyer-Lindgren, L, et al. Mapping HIV prevalence in sub-Saharan Africa between 2000 and 2017. Nature. 15 May 2019. Project corridor added by ICR author.

PDO 3: to support improvements in the services for road safety

40. The project contributed to this PDO through several activities intended to identify and address road crash blackspots along the corridor and the development and rollout of the EMS pilot.

41. In order to improve overall safety along the corridor, the project included activities to identify and mitigate risks at the most dangerous sections of the corridor, known as black spots. In the first year after effectiveness, the project financed a road safety assessment, assessing 750 km of the corridor.¹⁶ This audit identified 32 spots which warranted mitigation measures, with 8 identified as very high risk. These 8 locations were chosen as sites for mitigation measures under the project, with interventions including revising junction layouts, addition of safety barriers, formalization of pedestrian crossings, improved signage, improved street lighting, traffic calming, service road installation, carriageway and shoulder resurfacing, and other similar interventions depending on the identified challenges at each black spot. At project close, work was still ongoing on all 8 identified blackspots, with actual locations varying between 25% and 80% completed. At the finalization of the ICR (a year following project completion), work had been completed on 5 of the spots, with the other 3 still about 73% complete. Following completion of the Mafinga – Igawa road works, the project financed an independent safety audit to identify any issues which may have been overlooked during implementation, with

¹⁶ This covers the full corridor length excluding the 138 km which was rehabilitated under the project and the 185 km which were under rehabilitation financed by DANIDA at the time. Both remaining sections were audited for road safety considerations as part of separate exercises.



all identified issues addressed by the contractor prior to handing the road over to the government. The project also financed a Road Safety Capacity Management Review for Tanzania, Malawi and Zambia, assessing these countries' ability to manage road safety and suggesting improvements.

42. During 2016 it was decided by project stakeholders, and agreed by the WB team, that the project would incorporate a pilot for EMS along the portion of the corridor between Dar es Salaam and Morogoro.

This pilot was designed to improve post-crash care at 3 hospitals and 4 health centers, provide ambulances and fire rescue trucks, deploy a communications system linking the various EMS elements, and develop a dispatch center located at Muhimbili National Hospital to receive calls on the designated emergency number. At project close, work was not yet completed at any of the EMS sites (85% complete at 4 locations and not yet begun at the other 3) or the dispatch center. As of the ICR's drafting, the more advanced 4 locations had been completed and handed over, although the other 3 and the dispatch center remained under construction. Vehicles were delivered as intended, but not put into use pending completion of the EMS sites. Training and capacity building was conducted for health clinic staff working along the corridor. A Trust Funded impact evaluation was prepared for the EMS pilot but could not be completed until the system was put into place.

43. This PDO was measured by one PDO indicator and one intermediate indicator. As mentioned above, the PDO indicator "reduction in the number of accident black spots on Dar es Salaam Corridor in Tanzania" was not achieved, with none of the identified black spots being fully addressed during the project's implementation, and only 4 of the targeted 8 completed as of a year following project close. The intermediate indicator "length of lane-km subject to Road Safety Audit" was more than achieved, with a total of 1500 lane – km audited during the initial stage of project implementation, and the additional 276 lane -km of the Mafinga – Igawa segment audited following its completion, for a total of 1776 lane – km.

44. This PDO was not achieved during the project, although in the year following project closure progress has been made. As described above, none of the major road safety works along the corridor were completed during the project's implementation, although as of the drafting of the ICR, 5 of the 8 blackspots identified as being of very high risk had been remediated and 4 of the post-crash care facilities put into operation (and without rollout of the EMS system intended to facilitate their use). While there are indications that the long-term safety of the corridor could be improved due to the project if all works are completed and the EMS pilot fully implemented, this potential is not incorporated in the ICR assessment as works are not finalized. In addition, although actually better than other similar roads in Tanzania, the road crash record along the Mafinga-Igawa project sites during construction was still quite poor (see Section IV.B for more information), speaking to the mixed efficacy for road safety.

Justification of Overall Efficacy Rating

45. The overall efficacy rating of the project is Modest. The project largely achieved its first PDO, related to facilitating the flow of people and goods along the corridor, and only partially achieved the PDOs related to supporting improvements in the services for HIV/AIDS and road safety. As described above, a significant share of project activities remained incomplete at project closure, making attribution of wider impacts on trade flows, HIV/AIDS rates, or road safety difficult to assess. It is possible that the project will more fully achieve its objectives in the future, as remaining works are



completed. As outlined in Section I.A., this project was quite ambitious in its design, raising considerations of road safety and HIV/AIDS to the level of PDO in a way which was quite unique at the time (although more common in recent years). As such, if ongoing works are completed as current status suggests they may be, the impact of the project could be highly transformational for the corridor, likely far beyond that of a simpler road improvement project. However, it is not possible as of the drafting of the ICR to validate the outcomes resulting from these still to be completed works, and thus an efficacy rating of Modest has been assessed.

C. EFFICIENCY

Assessment of Efficiency and Rating

46. **The project's efficiency has been assessed along two dimensions: an economic analysis of project interventions and an assessment of the efficiency of project implementation.** Although this section provides a short summary of the results of this assessment, full detail is included in Annex 4.

47. **An ex-post economic analysis was conducted on the project, replicating the analysis done during preparation to the extent possible.** The primary investment made, the Mafinga – Igawa road rehabilitation which accounted for 78% of overall project costs, was found to have strong economic benefits, in line with estimations at appraisal. Reflecting its importance as a key economic and trade corridor and resulting heavy traffic, the investment's net present value (NPV) was found to be US\$ 342.7 million, with an Economic Internal Rate of Return (EIRR) of 47.3%, in line with the assessment at appraisal (the NPV was assessed at US\$ 358.5 million during appraisal, with an EIRR of 40.1%). This is well above commonly used WB benchmarks for such projects, and quite high compared to other concurrent investments in Tanzania's road corridors.¹⁷ As the OSIS and OSBP were not completed, with final costs and benefits unable to be quantified, no economic analysis was performed for these investments. In line with the PAD and reflecting the difficulty in accessing data and analysis, smaller investments were not analyzed.

48. **The project encountered significant delays in most project activities other than the Mafinga – Igawa road rehabilitation, with various activities incomplete at project close.** For reasons elaborated in Section III.B, many of the project's activities were delayed in their contracting and then during implementation. As a result, despite the two extensions to the closing date (totaling 2 years) many activities remained partially complete when the project closed, including the OSIS, the OSBP, the EMS pilot, 15 of the 20 health centers and the 8 black spots improvements. As WB financing can only be used for works done during the project's implementation, a total of US\$17.9 million was refunded from previously disbursed funds. At project close, it was unclear whether government or other resources would be available to complete these works, although some work has continued on nearly all activities under the government's own resources. While project costs

¹⁷ The Tanzania Transport Sector Support Program (P055120) was implemented concurrently with SATTFP, financing two key road segments along a corridor in the northern part of Tanzania, among other investments. These corridors were found to have EIRRs of 17.1% and 16.3%. See the project's ICR for more information.



were reasonable and in line with expectations, as these activities remained incomplete, the benefits associated with their associated costs cannot be assessed.

49. **The overall efficiency rating of the project is Modest.** Although the economic benefits of the Mafinga-Igawa corridor were found to be highly positive supporting the achievement of the first PDO, as described in section II.B the project suffered from significant delays in implementation and a lack of completion of most other project activities related to the second and third PDOs. Although the first PDO was achieved in a relatively efficient manner, the factors related to the lower efficacy of the second and third PDOs were largely related to efficiency, indicating an overall modest efficiency rating.

D. JUSTIFICATION OF OVERALL OUTCOME RATING

50. **The overall outcome of the project is rated Moderately Unsatisfactory.** As described above, the relevance is assessed as High, the efficacy as Modest, and the efficiency as Modest. Although the impact and efficiency of the project's largest component were as expected, other project outputs and outcomes are less clearly positive or efficient. As works are still ongoing on many of the incomplete civil works under GoT financing, it is possible that the project could eventually achieve better efficacy, and thus a more positive outcome. However, as mentioned in the sub-section describing efficacy, it is not possible to validate such assumptions at the time of the drafting of the ICR, and thus they cannot be accounted for in this rating. As the restructurings of the project were primarily related to extensions, with no change to the PDO and only minor changes to the language of several indicators, no split evaluation was determined to be necessary.

E. OTHER OUTCOMES AND IMPACTS (IF ANY)

Gender

51. **The project did not explicitly incorporate a gender dimension into its design or implementation, and thus did not include any actions or indicators to specifically target the mobility needs of women.** Effort was made to ensure that the project would have no negative impacts on women in the communities around its work sites, with surveys conducted regarding HIV/AIDS, gender-based violence, Sexual exploitation and abuse, child pregnancies and crime. No negative impacts were identified for either lot of the Mafinga – Igawa project.

Institutional Strengthening

52. **The project supported the strengthening of Tanzania's ability to manage its road sector by building the capacity of the national roads authority (TANROADS) on project management.** As the project's implementing agency, capacity building and training activities for TANROADS staff were financed. One important contribution of the project was in financing a resident international expert on contract management to work with TANROADS through the project. Project stakeholders cited the support of this expert as key for institutional capacity and improved project outcomes, although it was not clear whether capacity building was retained in the institution when the expert's contract ended at project close. In addition, three procurement



experts and an Information and Communications Technologies Technical Advisor supported TANROADS during the project. In addition, 226 staff from TANROADS, 215 staff from the Ministry of Works and Transport (75 from works, 140 from transport) received some training under the project.

53. **Through the project, TANROADS was able to develop competency using Superpave, which has become the standard for road design in the country.** As outlined in Section III.B., the initial design for the Mafinga-Igawa road went through an extensive design review following project effectiveness. As part of this redesign, the Superpave approach was used. This pavement design system has been found to be better performing, tailoring the pavement design more closely to the expected conditions along the corridor. A Superpave expert was brought in under the project to guide TANROADS in its use, developing competencies which have allowed Superpave to be used for all subsequent roads implemented by the agency.

54. **The project also supported the capacity of the health sector along the corridor, both in terms of road safety and HIV/AIDS.** Under the HIV/AIDS support activities, training was provided for health facility staff on infection prevention and health care waste management, including 368 staff trained as part of short courses and 4 receiving master's degrees. Under the EMS pilot, 123 personnel were trained in EMS topics.

55. **The project supported the operations of the DCC for several years, funding staff and operational costs through the IDA Grant.** This was intended to build and maintain the institution until a sustainable source of funding could be secured. As the participant countries never finalized agreement on the levy to finance the DCC, this institutional capacity was lost when it went defunct.

Mobilizing Private Sector Financing

56. **The project was fully funded through IDA, with no private sector capital leveraged as is common with such road projects.** For the longer term, project outcomes, especially that of PDO 1, will be key to spurring private sector growth along the corridor, both in Tanzania and across the broader Southern and Eastern Africa Region. The impacts of the project and other similar initiatives can be seen in the increasing trade volumes, reduced VOC, and shorter transit times along the corridor.

Poverty Reduction and Shared Prosperity

57. **While the project was not explicitly designed to have a distributional impact on the poor, the investments made under the project support the county's poverty reduction strategy.** As described in section II.A, the project supports Tanzania's vision for the future and poverty reduction strategies. By enabling improved access to services, opportunities, and employment in some of the more remote areas of the country, SATTFP-APL1 should be expected to drive both growth, and poverty reduction. This said, no data was collected by the project to validate such an impact.



III. KEY FACTORS THAT AFFECTED IMPLEMENTATION AND OUTCOME

A. KEY FACTORS DURING PREPARATION

58. **Scope of the project** – This project brought an ambitiously holistic approach to corridor improvement, going far beyond what was typical for such projects at the time. Originally conceived during an Aid for Trade conference in 2009 where the WB committed to support a series of projects along the NSC, the project scope was based on an assessment of the needs along the overall corridor length. Through this assessment and during project preparation, trade facilitation, road safety and preventing the spread of HIV/AIDS from expanding trade were identified as key issues to be addressed under the project. The project’s explicit incorporation of a holistic approach to corridor development (including infrastructure, trade facilitation and health activities and objectives) was unique in Tanzania, and highly unusual across the WB global transport portfolio at the time. It was the first experience incorporating such activities for TANROADS, the implementing agency, introducing complications to implementation, but also improving the potential impact of the investments.

59. **Regional cooperation** – The implementation of the trade aspects of the project was in service to, and reliant on cooperation between the countries of the NSC, in particular Zambia, Malawi, and DRC, in addition to Tanzania. At project approval, these countries had an established dialogue, with Malawi, Zambia and Tanzania all having signed the constitution establishing the DCC. This cooperation was reflected in the wider Program, with a second APL planned (and eventually approved) in Malawi. Subsequent APLs were intended to follow in other countries along the NSC.¹⁸ That said, the final formal agreements which would be necessary for project success were not fully in place at approval.

60. **Cross sectoral collaboration** - In order to realize its cross-sectoral PDOs, the project was prepared in coordination with stakeholders outside of the typical transport sector institutions in the country, including TACAIDS and the Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDGEC) regarding the HIV/AIDS components; and the Ministry of Home Affairs regarding the traffic police support; DCC was both a beneficiary of the project, and expected to contribute substantively to its implementation; in addition to TANROADS and its overarching Ministry of Works and Transport. The identification of health clinic sites, for example, was the responsibility of the MoHCDGEC, with DCC was involved heavily in much of the trade facilitation work, including capacity building, CPMS design, and corridor performance indicators in the results framework. While bringing additional knowledge and skillsets into the project, this cross-sectoral approach also introduced complexities which delayed decision making and implementation.

61. **Readiness of designs** – The civil works implemented under the project were at different levels of readiness at project approval. The largest work (the Mafinga-Igawa road) had had its feasibility, design and safeguards instruments prepared under another WB financed project. Although the design itself

¹⁸ At the time of the drafting of the ICR no other APLs had been approved or were under discussion for SATTFP. When the APL2 in Malawi closes, it is expected that the overall program will end.



was found to have issues during implementation (as described in Section III.B. below), its readiness facilitated efficient progress after effectiveness. The other activities, however, had largely not yet been designed, leading to eventual delays during implementation. In some cases, the selection of specific activities (such as health center sites, or specific facilities to be included in the OSBP and OSIS) were part of cross sectoral discussions during preparation, with final selections to be made after effectiveness.

B. KEY FACTORS DURING IMPLEMENTATION

62. **SATTFP-APL1 underwent a variety of changes during implementation, with nearly all components seeing at least minor changes.** The key factors impacting the project included:

Factors Subject to Government(s) and/or Implementing Agency Control

63. **The DCC member countries were unable to implement a levy to provide sustainable financing, resulting its collapse.** As discussed in Section I.A. DCC had been created prior to the project in order to facilitate, monitor and promote trade along the Dar Corridor. At the time of project approval, the committee was in operation, with its budget provided by direct support from the Tanzanian and Zambian governments. Upon reaching effectiveness, the project began funding operations under Component 4's grant financing, with an eventual US\$ 3 million used for this purpose. These project funds were intended as gap financing pending the agreement and implementation of a levy of US\$ 0.30 on all transit consignments to corridor countries which would, with the objective of raising an estimated US\$ 320,000 per year to sustainably fund operations of DCC. Although this levy had been agreed by senior leadership of all corridor countries by mid-2017, the Government-to-Government Agreement governing the DCC and the execution of the levy was never signed, preventing its implementation. As a result, once the financing under the IDA Grant expired no resources were available for its operations, all staff were laid off and it ceased to function. This had significant negative impacts on the project, as various project activities were intended to benefit the DCC or be managed by it. In addition, some of the PDO indicators were intended to be monitored by the DCC through the CPMS. As a result, they remained unmonitored throughout the life of the project, only measured through a one-time survey at project close.

64. **The implementation of a new clearance process by the Ministry of Finance and Planning (MoFP) delayed payments for final deliverables and stalled works.** As part of a government wide effort to reduce corruption and ensure payments were only made on qualified deliverables, the MoFP implemented a new procedure in the last two years of project implementation. This procedure required all payments for development partner funded activities to go through a centralized system which required clearance from the Ministry of Works and Transport and the MoFP. The new process, a lack of familiarity by users throughout the Government, and resulting and cascading delays, effectively froze payments for contractors working on the project created a serious challenge for the delivery of many project activities, including the OSBP, the OSIS, the EMS pilot, the black spot improvements, and the Health Clinics. As the contracts for many of these works had been won by relatively small, local contractors, they were unable to proceed with works without mobilization and other payments. As a



result, works stalled for many of these activities, contributing to delays that necessitated the second extension, and eventually the inability to complete various works. It should be noted that this process not only impacted the delivery of SATTFP-APL1, but also all other projects financed by development partners.

65. **The Mafinga – Igawa road design was changed during implementation to better account for projected demand.** The initial design prepared for the project was found to be below standard, inconsistent with expected road usage, and based on incorrect data. In order to correct this, a design review was undertaken to improve the original design, including extending the road segment by 800 meters so as to include Igawa town and adding safety features such as lighting, service roads, truck layby lanes, and parking for trucks at inspection stations to separate them from the general roadway. In addition, they moved to a new pavement design (Superpave) which better considers road use and weather at the specific road site. An international expert in Superpave was leveraged to improve TANROADS's knowledge in its use. Piloted in this project, Superpave has now become the standard approach for roads in Tanzania. As a result of the design review and changes, an addendum was added to the roads contracts which raised the price substantially from the initial bids. The overall price of the road was very close to projections during appraisal, however, as the initial bids received were lower than expected.

66. **Issues and challenges related to the design of other activities contributed to delays as well.** While the major road investment was already designed prior to project approval, other activities were designed during implementation. This led to significant delays during implementation. The design of the OSBP, for example took 3 times as long as expected and included a much more extensive set of services at the OSBP than originally budgeted, delaying the launch of civil works and requiring a phased approach, whereby only part of the full design would be prepared under this project. The OSIS at Vigwaza was similarly more extensive than the budget could cover, with a similar phased approach adopted.

67. **The length of the corridor (covering more than 700km in Tanzania) made contracting and supervision more challenging.** While some activities, such as the Mafinga-Igawa road, were spatially constrained, many activities were spread along significant lengths of the corridor (including the health clinics and blackspot improvements). Regarding the blackspot improvements, this led to TANROADS having to conduct a second procurement process splitting the 8 locations into two geographically distinct lots of 4, as no bids were received for the initial call due to concerns by contractors. Regarding the health clinics, a single supervision consultant was selected to supervise construction at all 20 sites, spanning the width of the country, making close supervision difficult.

68. **The implementing agency's project management capacity with regards to SATTFP-APL1 improved over time, including a change in project manager, and leveraging project support for technical assistance, but challenges remain.** Various project stakeholders cited the change of project manager in early 2017 as a key factor in accelerating implementation. In addition, the project financed the hiring of various expert consultants to reinforce TANROADS staff in project delivery, with a contract management consultant particularly cited for facilitating the delivery of project activities and addressing challenges as they arose. Beyond the scope of this project to be addressed, TANROADS remains capacity



constrained as compared to their mandate and workload, managing a large number of projects with a limited number of staff. Centralized safeguards and procurement teams have sufficient knowledge and expertise to support projects but are understaffed, as are TANROADS technical teams and project managers.

Factors Subject to World Bank Control

69. **The WB project team remained heavily engaged throughout the project's life. The Bank conducted regular missions throughout implementation (at least twice a year).** Stakeholders complemented the Bank's support in the project for its timeliness and cooperative approach. Despite its long implementation period, the project only had two Task Team Leaders (TTLs) through preparation and implementation, with many other members of the project team remaining part of the project for 5 or more years. Although both TTLs were based in Washington DC, the team included core staff based in Dar es Salaam to provide day to day support to the implementing agency.

70. **The WB showed flexibility in adapting to the project's realities, including approving two extensions and various other more limited changes.** As described above, the project was extended twice to allow for the completion of project activities. Totalling 2 years, these extensions were intended to provide space for works to be completed. The second extension was intended to allow for completion of the health-related facilities during the start of the COVID-19 pandemic.

Factors outside of the control of government and/or implementing agencies

71. **The COVID-19 pandemic impacted the end of the project, delaying works and impacting traffic along the corridor.** As the project was nearing the closing date established by the first extension, the pandemic began to impact the availability of supplies and labor for projects globally. These impacts contributed to the delays in the works still ongoing at that time (including the OSBP, OSIS, health clinics, and EMS pilot), delays which continued throughout the remainder of the second extension. The COVID-19 pandemic has also potentially reduced or delayed traffic along the corridor as captured in the project's results framework due to concerns of infection and because of border crossing protocols, although no data is available to quantify this assumption due to the CPMS not being in place to provide data over time. Finally, WB supervision of the final year of the project (and preparation of this ICR) had to be done virtually, without being able to visit project sites or meet directly with stakeholders, introducing challenges and inefficiencies.

72. **Exchange rate fluctuations between SDR and the US\$ reduced the effective amount available for project execution.** The project's financing amount of SDR 138.7 million was equivalent to US\$ 210 million at approval, with components and activities scoped within this fiscal space. Over the project's lifetime, fluctuations in the exchange rate reduced the total to US\$ 198.20 by project close. This was a constraint on the project, and one reason for the reduction in some components to ensure others could be fully funded.



IV. BANK PERFORMANCE, COMPLIANCE ISSUES, AND RISK TO DEVELOPMENT OUTCOME

A. QUALITY OF MONITORING AND EVALUATION (M&E)

M&E Design

73. **At appraisal, the project team prepared a results framework for both the individual project (SATTFP-APL1) and the SATTF Program as a whole.** These frameworks were closely aligned, with the overarching program's framework aggregating the indicators in the first APL with what was expected to be similar indicators in follow on projects. Noting that this is the first of the SATTF Program's projects to reach close, the assessment in this ICR is restricted to only the project specific framework, with the overarching framework to be assessed at the close of the second APL.

74. **The project's M&E design at appraisal was generally appropriate for monitoring its progress against all three PDOs, with at least one indicator directly relevant for each, and intermediate indicators tracking progress of completion.** The first PDO in particular was well covered, with 5 indicators established to track various outcomes related to facilitating the movement of people and goods. The second and third PDOs were both monitored by one PDO indicator.

75. **M&E monitoring was intended to be the responsibility of TANROADS, with corridor performance indicators reported by the DCC.** As implementing agency for the project, TANROADS had overall responsibility for monitoring and reporting on the results framework, as well as reporting on indicators related to project outputs. Through the CPMS developed by the project, the DCC was expected to report on corridor performance (such as traffic volumes, journey times along the corridors, and time spent at roadblocks or the border crossing).

76. **There were some shortcomings in the results framework as designed.** Despite the various aspects of the first PDO (Facilitate the movement of goods and people along the Dar Corridor) which were well captured by its 5 PDO indicators, all indicators reflected the movement of goods with no way of measuring the movement of people. Although the indicator regarding vehicle operating costs along the corridor had some relevance for passenger travel, it was dropped during restructuring. Even if it had remained in the results framework, vehicle operating costs can be a loose proxy for travel costs, especially when many people move along the corridor on buses and other forms of public transport. Of more minor concern, the wording of various indicators could have been better formulated, as including a direction of change in the indicator itself makes the interpretation of measurements unclear without clarification. For instance, it is unclear whether the indicator "Reduction in total time required for trucks to cross the Songwe/Kasumulu border crossing into Malawi" suggests a baseline should be 0 hours, indicating no reduction, and increase over time as improvements are made, as opposed to the way the indicator was monitored, with a baseline of 24 hours (the total time required at appraisal) with the target of reducing this as delays at the border were reduced.

77. **The changes made to the results framework at restructuring clarified some indicators but introduced confusion in others.** Originally formulated as "reduction in average journey time for an imported container (TEU) from departure from port gate in Dar es Salaam to Kasumulu on the corridor", the first PDO indicator was revised to "Average time from ship readiness to unload to final destination for an imported container, on the



corridor targeted by the project.” Although the definition changed, no changes were made to the baseline or target. The revised description of this indicator was functionally measured as the time it takes for a container to transit the corridor, from the point a ship is docked at the port and ready to unload, to it clearing customs at the border exiting Tanzania. This includes the process of unloading from the ship, clearance, and loading onto a truck; the journey from the port to the border crossing at Kasumulu, including any delays for inspections, roadblocks, or other reasons; and the customs process at the border check point. At project closure these various steps required 11 days to clear the port, 2 days to travel from the port gate to the border, and 3 days for the container to be cleared at the OSBP.¹⁹ The original formulation of the indicator only includes the middle portion of this journey, from the port gate to the border. Therefore, while the indicator was not achieved (16 days for the journey, compared to a target of 5 days), comparing the target to the original definition of the indicator (2 days from port gate to the border) highlights the actual improvement in performance and time savings. The longest portion of this process, the dwell time in the port of Dar es Salaam, is outside the scope of this project. Other changes in the results framework were broadly positive, introducing a new sub-indicator to measure freight along the corridor, a new PDO indicator reflecting corridor management, and dropping and revising intermediate indicators to better reflect the project activities and specifics of monitoring. Despite restructuring, it should be noted that no indicators measuring the EMS pilot were included in the results framework.

M&E Implementation

78. **The M&E framework was not monitored consistently during implementation.** Many indicators were not updated on a regular basis, although this is largely a result of the collapse of the DCC and its function and capacity to track corridor performance. Corridor performance indicators should have been provided on a regular basis by the CPMS and available to serve as a tool for tracking the performance of the project and the corridor more broadly. As this system was never implemented, these indicators were only assessed at two points during the project, appraisal and closing, and data was collected by a survey implemented for specifically that purpose. For other indicators, where the definition was somewhat unclear, change over in project teams on both the client and WB sides resulted in some confusion on the specific definition and methodologies to be applied. That said, although there were some fluctuations in how several indicators were interpreted during implementation, as reflected in the Implementation Status Reports (ISR) filed by the project team, they were addressed and rectified in subsequent ISRs. At project close, the implementation unit carefully reviewed the results framework with the WB team and addressed remaining inconsistencies and gaps.

M&E Utilization

79. **The project’s results framework was used as a checklist during implementation, allowing the project team and implementing agency a way to formally track progress of outputs.** The project’s M&E was otherwise not used to inform or course-correct its implementation. Looking forward, the more substantive indicators

¹⁹ While the breakdown of various segments of the journey are not included in the results framework, the methodology for its collection requires data from various sources, facilitating the disaggregation to the level presented.



related to corridor performance are the most relevant to be monitored as tools for corridor operations. Whether this is done will depend on whether a corridor governing institution can be established, either through re-operationalization of the DCC or if another institution is created/expanded to include the Dar corridor.

Justification of Overall Rating of Quality of M&E

80. **The project's M&E is assessed as Modest.** As described above, while the design of the M&E system was broadly appropriate to the project (noting certain shortcomings), the inability to implement the CPMS and confusion around various indicators definitions during implementation handicapped its effectiveness as a monitoring tool.

B. ENVIRONMENTAL, SOCIAL, AND FIDUCIARY COMPLIANCE

81. **The project's environmental management was largely in line with expectations.** The project was rated with an Environmental Assessment category of B. All sub-projects under Components 1 and 2 (those including major civil works) were subjected to Environmental and Social Impact Assessments (ESIAs), which concluded that all potential impacts could be mitigated through implementation of Environmental and Social Management Plans (ESMPs), which were generally adhered to during project implementation. Early in project implementation, especially along the Mafinga-Igawa highway, there were challenges with waste and pollution related to construction, poor management of borrow pits, etc. Following heightened WB emphasis on safeguards performance, including the hiring of additional safeguards consultants on the WB team, these deficiencies were largely addressed and performance improved. Some key challenges encountered during implementation included:

- **Crossing a wetland** – The Mafinga – Igawa road passes through a wetland area. Although it would have been possible for the project road to go around the wetland, it was decided it would be better to maintain the existing alignment of the road and rehabilitate it instead of building a new route. During construction the contractor was found to have dumped debris in the wetlands, blocking water flow. This was quickly remediated once discovered by the implementing agency/WB. As a careful assessment of the wetland would be required to know the full of the impact of the existing road or the impacts of construction in a new site, it is not possible to validate the efficacy of this decision. That said, the project did no additional damage to the environment, restoring it to the pre-project condition.
- **Erosion effecting the road corridor** – Along the road corridor, pre-existing erosion began to threaten the project road during construction. In order to determine the root cause of this erosion and propose mitigation measures, the contractor hired a geologist from the University of Dar es Salaam. The proposal and mitigation measures were reviewed by the WB and an independent geotechnical expert hired by TANROADS. Although this erosion remains a concern, TANROADS continues to monitor and mitigate the erosion as needed.
- **Remediation of worksites** – The project had a mixed record in terms of returning work sites to



their original condition. In the cases of borrow pits and quarry sites, the project was one of the few to effectively rehabilitate these sites, an unusual and positive outcome for road projects in the country. However, as of the last visit to the sites, the environmental safeguards team noted that the diversion roads created during construction of the road segment had not been effectively attended to, with significant erosion affecting more than 20 km along the corridor.

82. **The project's social safeguard management was largely satisfactory, although some issues continue to be monitored at the time of the preparation of this ICR.** As described above, relevant major civil works were subjected to ESIA and addressed through ESMPs. The implementing agencies substantially addressed social safeguards issues under the project, although there were concerns remaining at project close regarding resettlement and compensation for project affected persons at the OSBP and black spot improvement work sites. In order to assess whether there were any negative impacts on the community from the road construction, an assessment of the incidence of HIV/Gender based violence/sexual exploitation and abuse, child pregnancies and crime was prepared for both lots, with no statistically significant changes found. Key challenges, benefits and considerations included:

- **Resettlement** – Resettlement action plans (RAP) were prepared for project activities which might require displacement and implemented satisfactorily for most investments. At the time of project closure, there remained several issues, however, especially related to the OSBP and blackspot improvements. At the OSBP, compensation and demolition of property required by the implementation occurred prior to clearance of the RAP. After project close, the WB continued to monitor to ensure OP4.12 standards were met, and project affected persons appropriately compensated. At one of the black spot improvement locations, works began, including displacement without preparation of safeguards instruments by TANROADS and approval by the WB. The WB safeguards team has remained engaged on these topics following project close, and will do so until all RAP issues are addressed.
- **Repurposing of the contractor's office as a community center and other community support** – As part of the broader stakeholder and community engagement, the contractors supported a variety of works in the community. The most significant of these included the handover of the contractor's facilities to the community for use as a community center after decommissioning.
- **There were 24 fatalities along the Mafinga – Igawa road during its rehabilitation, largely due to road crashes.** During construction a total of 104 accidents occurred along the project road, 13 of which were fatal, accounting for 24 total fatalities. Of these, two were attributed to the contractors' employees or involved contractors' employees and/or equipment, with the rest due to road crashes. Reinforcing the inclusion of road safety as a PDO of the project, it should be noted that this rate of fatalities (0.06 fatalities per km per year) was half that of the Tanzanian average for trunk roads (0.11 fatalities per km per year) at the time, likely reflecting the slower speeds along the corridor due to construction. Reflecting its role as a key transit route for the region, the traffic along the corridor is very high, with a high number of large trucks in poor condition operating at high speeds. That said, this fatality rate is undoubtedly shocking, and led to a variety of mitigation measures along the road sites to prevent further crashes. A road safety



audit was also conducted as a means to improve the safety performance of the road over the long term, with findings incorporated into the road design.

83. **The project's financial management was satisfactory.** During preparation, TANROADS was identified as the agency best placed to handle all fiduciary responsibilities for the project. A World Bank financial management specialist based in the Tanzania country office supported the project through implementation. Reporting was provided on a regular (although at times somewhat delayed) basis, and all audits were unqualified.

84. **The project's procurement performance was largely satisfactory, apart from the wider challenges at the end of the project regarding the new system.** As institutional capacity was identified during preparation as a potential risk to implementation, the project supported hiring expert consultants to support TANROADS on procurement and contract management, although some delays in procurement continued to impact the project throughout its implementation. In the instances where procurements failed, they were successfully repackaged (typically reducing the geographic scope under one lot, such as in the health centers) and bids awarded. The design challenges noted under Section III.B delayed procurement and led to an addendum on one of the road rehabilitation contracts, but this was largely a technical challenge, as opposed to a procurement one. Finally, the implementation of a new system by MoFP in the last few years of implementation significantly delayed payments on contracts, stalling works for months. This challenge impacted all of Tanzania's donor funded projects and went far beyond this the scope or responsibility of this operation or implementing agency alone.

C. BANK PERFORMANCE

Quality at Entry

85. **At approval, the project had reached a reasonable level of preparation.** It met key strategic priorities of the country and region, incorporated an innovative and appropriate design including the mitigation of social costs of the corridor expansion, planned for safeguards aspects to the extent possible, and identified and planned for the mitigation of institutional procurement capacity risks. Although not all designs were ready, a design had been prepared for the road corridor which accounted for more than 70% of total project costs.

86. **SATTFP-APL1 was strategically relevant, responding to a regional challenge with the first of what was intended to be a much larger program and incorporating multiple countries in its design and implementation.** Building from the WB's commitments to support the NSC corridor, the WB was highly engaged in bringing corridor stakeholders together to facilitate project design. Although showing strong momentum, this process was not entirely complete at project approval. As outlined above, the project was (and remains) highly relevant to the goals of the country, and for the WB's support for Tanzania and the wider region.

87. **As described under section III.A, the project was technically innovative, bringing cross sectoral stakeholders together to meet identified challenges along the corridor.** Various project stakeholders referenced the WB's role in ensuring the project adopted a multi-sectoral approach in a road project, a first for Tanzania, and one of the first for the WB globally. This project's incorporation of trade and social aspects of the



corridor, in addition to the road infrastructure itself has since become more typical in WB corridor projects, with trade and road safety, in particular, increasingly common in similar WB corridor operations.

88. **The risk assessment during preparation identified key risks which ultimately impacted the project, and suggested mitigation measures.** Key risks identified in the PAD which were particularly relevant included coordination among the various regional stakeholders, implementing agency risks related to both TANROADS and the DCC, general complexity of corridor and trade projects leading to delays, risk that social components may not be perceived as important, and concerns for the sustainability of the trade facilitation and social aspects. Although there were additional challenges which impacted the project (such as COVID-19), the ones identified at appraisal included all major risks that could reasonably be foreseen which ultimately impacted the project. While each of these risks was accompanied by some level of mitigation during preparation, they remained key challenges during implementation and mitigation measures were not always sufficient to reduce their impact on the project.

Quality of Supervision

89. **The WB team was flexible and responsive to project demands throughout implementation, while maintaining a focus on delivery and ensuring due diligence.** The project team conducted formal supervision missions twice-a-year throughout the project, with additional support provided on a more frequent basis as needed. The WB approved two extensions of the closing date, for a total of 2 years.

90. **Although the project faced delays and challenges at various points, the WB team remained committed to the ambitious goals of the project, working closely with the implementing agency to deliver all project activities.** The WB was instrumental in supporting Tanzania to prepare the project in a way which was far more holistic than was typical in a road project at the time. As various challenges arose, this commitment was maintained, working with the borrower to overcome, as opposed to dropping, poorly performing activities. In addition, when project stakeholders raised interest in incorporating an EMS into the project, the Bank approved reallocation of funds to support this new set of activities, including working with the UK's Department for International Development (now the Foreign, Commonwealth & Development Office) to fund an impact evaluation on the pilot system.²⁰

91. **The project only had 2 TTLs throughout its preparation and implementation, a total period of 11 years (from Activity Initiation in December 2009 to its closing in December 2020).** In addition to the TTLs, the project benefited from long engagement by most of its task team, with low turnover of technical, safeguards and fiduciary staff. As a result, the project benefited from strong support from the WB based on familiarity and trust.

92. **The project ratings were largely candid and reflected project status at that point.** The progress towards achievement of the PDO was rated as satisfactory throughout much of the project's implementation, being shifted to moderately satisfactory in December of 2019, a rating which was maintained in the last ISR filed by the project in July 2020. Although this appears overly optimistic in hindsight, this rating was justified at the time, as the second extension had just been approved and it seemed likely that the project would complete

²⁰ This impact evaluation was ultimately unable to be completed during the project as the EMS pilot was not put into operations.



most or all its activities before its closing. It was only after this point that it became clear that the progress to completion of the second and third PDOs was at risk. Implementation progress was rated as moderately satisfactory for much of the project, reflecting its slow, but steady progress. As with the PDO achievement rating, the final rating was made in July of 2020, 5 months before the project closed.

93. **The final year of the project’s supervision and the preparation of its ICR were impacted by the COVID-19 pandemic.** The WB team was on mission in Tanzania in support of the project in March 2020 when the WB requested all staff to immediately return to their duty stations due to the quickly escalating global crisis. All project supervision from that point until the project closed, as well as the preparation of the ICR, was conducted virtually. While this made coordination and oversight more difficult, the project team should be commended for reacting quickly to client requests during this time, including quickly processing the second extension before the project closed.

94. **The first project restructuring introduced confusion into the results framework.** As discussed in Section IV.A, the restructuring of the results framework changed the definitions of some indicators without adjusting their baselines. In addition, although the DCC was expected to provide results monitoring for corridor performance indicators related to the first PDO, it had ceased to function a year before the restructuring. The team could have used this opportunity to rethink the M&E system of the project.

Justification of Overall Rating of Bank Performance

95. **The overall Bank performance is rated as Moderately Satisfactory.** As described above, the WB provided strong support throughout the project’s preparation and implementation with some shortcomings. Despite the approval of two extensions the project was unable to complete various activities, although the primary underlying causes for the delays at the end of implementation (the delay of payments due to the introduction of the government-wide payment clearance system and COVID-19) were beyond the scope of WB supervision to address.

D. RISK TO DEVELOPMENT OUTCOME

96. **There are significant risks to the project’s Development Outcomes.** These risks stem from two key concerns, the collapse of the DCC and the incomplete status of various civil works under the project.

97. **The sustainability of the core project investment, the Mafinga – Igawa road, is supported by Tanzania’s Road Fund.** Established by Parliament, the Road Fund provides stable revenue, collected from fuel levies and other road user fees, to ensure sustainable maintenance of the road network. With revenues increasing year over year for a 2020/2021 fiscal year total of nearly US\$400 million²¹, the Fund is well placed to maintain the country’s growing paved road network. This is reflective of a general approach which has been adopted of maintaining those roads already improved before continuing

²¹ Tanzania Roads Fund website, *Revenue Collection for the Roads Fund for FY2020/21*.
<https://www.roadfund.go.tz/en/revenues>



expansion of the network. Although priorities may change in the future, the GoT has shown sustained commitment to ensuring its roads are maintained.

98. **Although the road is likely to be maintained, risk to the continued achievement of the first PDO stems from considerations about trade facilitation along the corridor.** While the corridor will continue to serve as a key transit corridor whether or not these facilities are in place, the collapse of the DCC and the stalled construction at the OSIS and OSBP are bottlenecks to fully unlocking the corridor's performance to the extent intended under SATTFP-APL1.

99. **Long term achievement of the HIV/AIDS and Road Safety PDOs will be determined largely by whether the remaining activities are able to be completed and operationalized.** Unless the remaining health centers, blackspot improvements, and EMS facilities are put into service, the second and third PDOs will remain largely unachieved. In fact, the unfinished works are a significant risk to these outcomes themselves, reducing the capacity of the facilities being improved.

100. **These risks are mitigated, somewhat, by the strong commitment shown by the Government of Tanzania to completing project activities under its own financing after project close.** In line with the assessment of the project and its goals remaining highly relevant for the country (Section II.A.), following project close, work has continued on all incomplete activities, with some works completed and most others approaching completion. The commitment to mobilize its own financing for all project works highlights a commitment to the holistic approach adopted by the project, and a belief in the eventual positive impacts of achieving the project's PDOs.

V. LESSONS AND RECOMMENDATIONS

101. **The following lessons learned and recommendations from the project are intended to inform future WB financed operations, falling into several categories:**

102. **Regional integration and multi-country engagements**

- **Regional projects which rely on international agreements for their implementation or sustainability bear substantial risk beyond the project's ability to influence.** Although the partner countries on the NSC corridor had reached initial agreement on establishing a levy on transit along the corridor for sustainably funding the DCC, no official agreement had been signed at project approval. Moving ahead with a stop gap funding mechanism without the necessary formal agreements in place introduced a risk to the project beyond its ability to influence. If preparing projects which rely on unsigned international agreements project teams should identify and plan for fallback options in case no agreement is reached, even when the likelihood of such agreements being reached is perceived as high
- **In pursuing multi-country, regional commitments, the WB has an opportunity to leverage its convening power, APL/Series of Project engagements, and multi-country projects to drive large scale change.** As noted, this project and the SATTFP-APL2 in Malawi were expected to be the first of a much larger engagement by the Bank in developing the NSC.



This APL was intended to address trade and other (i.e., road safety, HIV/AIDS) along the entirety of the corridor, and over an extended period. Although the WB has remained actively engaged throughout the region, by not extending this commitment as intended an opportunity was lost to have a multiplicative impact on the corridor, reaching an economy of scale to drive trade and development. In addition, follow on projects could have supported Tanzania in delivering on the ambitious scope of this specific APL, which it is now pursuing using its own financing following the close of the project.

103. **Institutional arrangements and strengthening**

- **In countries where the same agency is implementing multiple WB projects, implementing agency capacity should be built across WB engagements and as an ongoing process.** Although TANROADS has shown increasing capacity throughout the duration of the project, it remains quite overloaded compared to its capacity (especially regarding numbers of staff). In countries such as Tanzania, where multiple projects are being implemented by a single agency, the WB should work with the borrower to ensure that additional projects are not overwhelming limited capacity without sufficient capacity building to support the additional workload.
- **M&E can be impacted by project changes, both in terms of the appropriateness of design and in its implementation.** As outlined in Section IV.A., the project's M&E suffered from two key challenges, the collapse of DCC made monitoring of key corridor performance indicators impossible, and changes made to the results framework during restructuring introduced complexities and misalignment between indicators and activities. Addressing these challenges would have required different actions, but both highlight the importance of giving attention to M&E on an ongoing basis (and especially during restructuring), ensuring that indicators are monitored and appropriate for changing project activities.
- **WB supervision and support for safeguards issues can significantly improve social and environmental outcomes.** As briefly mentioned in Section IV.4., the project initially suffered from a number of challenges related to safeguards implementation along the corridor. Identifying this, and recognizing TANROADS's constrained safeguards capacity, the WB hired two consultants to strengthen supervision and support for environmental and social safeguards, shifting the project to a more positive safeguards trajectory.

104. **Integration of multi-sectoral approaches in corridors**

- **The integration of multi-sectoral components into a corridor project can greatly expand its potential impact, but delivery requires managing additional complexity.** Serving as something of a prototype for corridor projects which would follow, SATTFP-APL1 was one of the first financed by the WB to include health aspects in its design in such an integral way. It also raised road safety to the PDO level years before road safety reached the point of being mandatory in all WB roads projects. Paired with the trade facilitation activities, this project went far beyond a "typical" roads project at the time. The importance of this approach has been shown across the wider transport portfolio, with similar corridor projects becoming



increasingly common. While this model brings a much higher potential benefit, the number of stakeholders and skillsets necessary is equally increased, especially as there was an inconsistent level of familiarity with WB policies and approaches across beneficiary agencies, and the implementing agency did not have any experience in health-related projects.

- **Design reviews provide an opportunity to incorporate additional features for those living along a road investment.** Although the review of the Mafinga-Igawa road was necessitated by problems in the original designs, reviewing these plans allowed the implementing agency to identify and include a wide range of additional features, such as sidewalks and lighting in settled areas, service roads where needed, truck parking lanes leading up to weighbridges, etc.
- **Measures for road safety during construction have to be commiserate with the nature of the road.** As discussed in Section VI.B, there were a large number of fatalities along the road during construction. Although technically fewer than the national average for such a road over an equivalent period, the number of crashes and fatalities suggests that the contractors' approach to managing traffic was insufficient for the quantity and nature of the traffic on the corridor.



ANNEX 1. RESULTS FRAMEWORK AND KEY OUTPUTS

A. RESULTS INDICATORS

A.1 PDO Indicators

Objective/Outcome: Facilitate the Movement of Goods and People along the Dar Corridor

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Average time from ship readiness to unload to final destination for an imported container, on the corridor targeted by the project	Days	7.00 31-Dec-2012	5.00 30-Apr-2018		15.00 31-Dec-2020
Freight volume measured in TEU in targeted corridor	Number	35000.00	70000.00 30-Apr-2018		81,478.00

Comments (achievements against targets):

This indicator was technically not achieved, with the actual time taken from ship readiness to Kasumulo measured at 15 days as compared to the target of 7 days, but would have been achieved if the language of the indicator had not been changed. The language of this indicator, however, was changed during restructuring without an associated change to the baseline and target. As originally defined, the indicator measured the time from "departure from the port gate...to Kasumulo on the corridor". The revised definition included not only this trip, but the time between "ship readiness to unload" and the container leaving the port gate, an average time of 11 days at the time of project closure. If measured against the original description (and thus the target), the indicator would have been achieved, with a time of 4.5 days from departure from the port gate to Kasumulu.



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Reduction in total time required at police road blocks along the Dar corridor in Tanzania	Hours	5.00 31-Dec-2012	2.00 30-Apr-2018		2.00 31-Dec-2020

Comments (achievements against targets):

The target was fully achieved. Note that, while the indicator is defined as "reduction in total time...". Throughout the project's live (including when setting baselines and targets, it was measured total time required at such road blocks.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Reduction in total time required for trucks to cross the Songwe/Kasumulu border crossing into Malawi	Hours	24.00 31-Dec-2012	12.00 30-Apr-2018		72.00 31-Dec-2020

Comments (achievements against targets):

This target was not achieved due, in part, to the ongoing construction of the One Stop Border Post financed by the project. Additional COVID-19 protocols likely also contributed to the increased time at the border. Note that, although the indicator was written as "reduction in total time..." it was measured consistently through the project as the time required, including in the setting of baselines and targets.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised	Actual Achieved at
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				Target	Completion
Roads in good and fair condition as a share of the Dar Corridor length in Tanzania (731km out of 928km to Tunduma)	Percentage	77.00	92.00		92.00
		31-Dec-2012	30-Apr-2018		01-Jun-2020

Comments (achievements against targets):

The indicator was fully achieved as measured during a road condition survey using a laser profilometer in June 2020. This reflects the interventions under this project between Mafinga and Igawa, as well as other rehabilitation and maintenance along the corridor.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Improved corridor management and performance monitoring	Yes/No	No	Y		Yes
		31-Dec-2012	30-Apr-2018		31-Dec-2020

Comments (achievements against targets):

This indicator was technically achieved, as the Corridor Performance Monitoring System was prepared for the corridor. However, as it was not implemented due to the collapse of its host organization, benefits are not realized on the ground.

Objective/Outcome: Support Improvements in the Services for HIV/AIDS.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion



People with access to a basic package of health, nutrition, or reproductive health services (number)	Number	0.00 31-Dec-2012	3000.00 30-Apr-2018		7,425.00 31-Dec-2020
Of which female	Percentage	0.00	50.00		40.00

Comments (achievements against targets):

This indicator was achieved, reaching nearly 250% of the original target. This was assessed based on the patient registers of the 5 health clinics completed under the project. Noting the actual language in the indicator, this is likely a highly conservative measurement, as those who have "access" to the clinics are many more than those who are currently patients.

Objective/Outcome: Support Improvements in Road Safety.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Reduction in the number of accident black spots on Dar Corridor in Tanzania	Number	0.00 31-Dec-2012	8.00 30-Apr-2018		0.00 30-Apr-2018

Comments (achievements against targets):

This indicator was not achieved. Although work was ongoing at the identified 8 black spots at the time of project closure, none had been completed.



A.2 Intermediate Results Indicators

Component: Improvement of Physical Infrastructure

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Roads constructed, non-rural	Kilometers	0.00	138.00		138.00
		31-Dec-2012	02-Jan-2018		30-Nov-2018

Comments (achievements against targets):

This indicator was fully achieved based on the executed works under Component 1 of the project. the road segment was delivered in two lots and handed over to the Government in November 2018.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Establishment of One Stop Border Post (OSBP) at Songwe-Kasumulu border crossing	Yes/No	No	Y		No
		31-Dec-2012	30-Apr-2018		30-Apr-2018

Comments (achievements against targets):

This was not achieved. At the time of project closure, the OSBP was an estimated 50%-60% completed due to delays caused by protracted review processes and COVID-19. Works were continued under Government financing after project closure.



Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Establishment of One Stop Rest Stops along the Dar es Salaam Corridor in Tanzania	Yes/No	No 31-May-2016	Y 30-Apr-2018		No 31-Dec-2020

Comments (achievements against targets):

At project closure the OSIS was nearly completion but had not yet been handed over to the government.

Component: Improvement of infra and operations at the Songwe/Kasamulu border crossing on Tanzania/Malawi border

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Length of lane-km subject to Road Safety Audit	Kilometers	0.00 31-Dec-2012	1000.00 30-Apr-2018	1,500.00 30-Jun-2020	1,776.00 31-Dec-2020

Comments (achievements against targets):

This indicator was fully achieved. A road safety assessment was conducted on the full corridor (1500 lane-km) early in implementation in order to identify black spots for rehabilitation under the project. In addition, due to road crashes on the Mafinga-Igawa Section during construction (276 lane-km), an additional road safety audit was conducted to identify and address any road safety issues.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
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Number of improved health centers and HIV clinics on the NSC Corridor	Number	0.00 31-Dec-2012	20.00 30-Apr-2018		5.00 31-Dec-2020
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Comments (achievements against targets):
 This indicator was not achieved. Of the 20 health clinics being improved, 5 had been completed and handed over to the Government. The remainder were under construction (between 60 and 90% completed). Works continued following project closure under Government financing.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of medical personnel trained in health centers and HIV clinics on the NSC Corridor	Number	0.00 31-Dec-2012	60.00 30-Apr-2018		487.00 31-Dec-2020

Comments (achievements against targets):
 This indicator was achieved (reaching more than 800% of the target). The staff receiving training were from TACAIDS and MoHCDGEC and were identified based on a training assessment conducted. The original target was set prior to this assessment and was likely an underestimation of the training needs.

Component: Road Safety Initiatives on the Corridor

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Number of Customs Brokers	Number	0.00	20.00		40.00



receiving training		31-Dec-2012	30-Apr-2018		31-Dec-2020
<p>Comments (achievements against targets): The indicator was achieved (200% of the target). Trainings were conducted by DCC through their engagements with customs brokers.</p>					

Component: HIV/AIDS Initiatives on the Corridor.

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Introduction of sustainable funding mechanism for DCC	Yes/No	No 31-Dec-2012	Y 30-Apr-2018		No 31-Dec-2020

Comments (achievements against targets):

This was not achieved. DCC was funded for its initial years under the IDA grant provided by this project. Although a fuel levy was intended to be established as a sustainable funding mechanism, disagreement between partner countries prevented it from going into effect. At project closure, neither the levy nor any other sustainable funding mechanism had been established, although discussions were ongoing within the GoT on the long-term management of the corridor..

Indicator Name	Unit of Measure	Baseline	Original Target	Formally Revised Target	Actual Achieved at Completion
Introduction of a Corridor Performance Monitoring System	Yes/No	No 31-Dec-2012	Y 30-Apr-2018		Yes 31-Dec-2020



Comments (achievements against targets):

This target was achieved, however the CPMS which was prepared under the project can not be implemented due to DCC going defunct. As a result, while it is introduced, it is not contributing to corridor monitoring.



B. KEY OUTPUTS BY COMPONENT

Objective/Outcome 1: to facilitate the movement of goods and people along the Dar Corridor	
Outcome Indicators	<ol style="list-style-type: none"> 1. Average time from ship readiness to unload to final destination for an imported container, on the corridor targeted by the project 2. Freight volume measured in TEU in targeted corridor 3. Reduction in total time required at police road blocks along the Dar es Salaam Corridor in Tanzania (hours); 4. Reduction in total time required to cross the Songwe/Kasumulu border crossing into Malawi (hours); 5. Roads in good and fair condition as a share of Dar es Salaam Corridor length (%); 6. Improved Corridor management and performance monitoring (yes/no)
Intermediate Results Indicators	<ol style="list-style-type: none"> 1. Roads constructed, non-rural 2. Establishment of One Stop Border Post (OSBP) at Songwe-Kasumulu border crossing 3. Establishment of One Stop Rest Stops along the Dar es Salaam Corridor in Tanzania 4. Number of Customs Brokers receiving training 5. Introduction of sustainable funding mechanism for DCC 6. Introduction of a Corridor Performance Monitoring System
Key Outputs by Component (linked to the achievement of the Objective/Outcome 1)	<ol style="list-style-type: none"> 1. Rehabilitation and upgrading of the Mafinga-Igawa road section 2. Improvement of infrastructure and operations at Songwe/Kasumulu border crossing, including OSBP 3. Construction of OSIS at Vigwaza 4. Technical assistance related to trade flows, including CPMS 5. Start-up funding for DCC
Objective/Outcome 2: Support improvements in the services for HIV/AIDS	
Outcome Indicators	<ol style="list-style-type: none"> 1. People with access to a basic package of health, nutrition, or reproductive health services (number), of which female



Intermediate Results Indicators	<ol style="list-style-type: none">1. Number of improved health centers and HIV clinics on the NSC Corridor2. Number of medical personnel trained in health centers and HIV clinics on the NSC Corridor
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	<ol style="list-style-type: none">1. Refurbishment and extension of health centers along the corridor, including outfitting with essential equipment2. Technical assistance for health center staff on HIV/AIDS and other issues
Objective/Outcome 3: Support improvements in the services for road safety	
Outcome Indicators	<ol style="list-style-type: none">1. Reduction in the number of accident black spots on Dar es Salaam Corridor in Tanzania (number)
Intermediate Results Indicators	<ol style="list-style-type: none">1. Length of lane-km subject to Road Safety Audit
Key Outputs by Component (linked to the achievement of the Objective/Outcome 2)	<ol style="list-style-type: none">1. Road safety audit, including identification of blackspots2. Implementation of black spot improvements at 8 locations3. management capacity review for road safety

**ANNEX 2. BANK LENDING AND IMPLEMENTATION SUPPORT/SUPERVISION****A. TASK TEAM MEMBERS**

Name	Role
Preparation	
Richard Martin Humphreys	Task Team Leader(s)
Gisbert Joseph Kinyero	Procurement Specialist(s)
Michael Eriu Okuny	Financial Management Specialist
Helen Z. Shahriari	Social Specialist
Marco Antonio Zambrano Chavez	Social Specialist
Jane A. N. Kibbassa	Social Specialist
Faith-Lucy Matumbo	Team Member
Sevara Melibaeva	Team Member
Yonas Eliesikia Mchomvu	Team Member
Judith Elimhoo Mziray	Team Member
Supervision/ICR	
Gylfi Palsson	Task Team Leader(s)
Winter M. Chinamale, Gisbert Joseph Kinyero, Raymond Joseph Mbishi	Procurement Specialist(s)
Nkundwe Jonah Mwakiluma	Financial Management Specialist
Jacob Omondi Obongo	Social Specialist
Allen David Natai	Procurement Team
Imma Ismaily Killasama	Procurement Team
Judith Elimhoo Mziray	Team Member
Grace Anselmo Mayala	Procurement Team
Michael Eriu Okuny	Team Member



Yonas Eliesikia Mchomvu	Team Member
Desta Wolde Woldearegay	Procurement Team
Rahmoune Essalhi	Procurement Team
Dominic S. Haazen	Team Member
Mary C.K. Bitekerezo	Social Specialist
Juan D. Quintero	Environmental Specialist

B. STAFF TIME AND COST

Stage of Project Cycle	Staff Time and Cost	
	No. of staff weeks	US\$ (including travel and consultant costs)
Preparation		
FY10	41.073	272,112.88
FY11	6.675	43,998.79
FY12	50.230	269,965.50
FY13	27.745	161,181.46
FY14	1.475	19,882.57
FY15	0	12,142.73
Total	127.20	779,283.93
Supervision/ICR		
FY12	0	1,145.78
FY13	0	46.32
FY14	26.545	215,357.15
FY15	20.772	211,225.75
FY16	23.626	205,448.78
FY17	25.219	266,079.89



FY18	20.602	148,027.53
FY19	18.895	174,133.20
FY20	17.332	124,946.93
Total	152.99	1,346,411.33



ANNEX 3. PROJECT COST BY COMPONENT

Components	Amount at Approval (US\$M)	Actual at Project Closing (US\$M)	Percentage of Approval
Improvement of physical infrastructure	185.00	159.96	86%
Mitigation of social costs	16.00	20.65	129%
Implementation Assistance and Institutional Support	9.00	9.81	109%
Improved corridor management and monitoring	3.00	2.89	96%
Refund of unused project funds		-17.90	-
Total	213.00	175.40	82%



ANNEX 4. EFFICIENCY ANALYSIS

This annex provides an analysis of the project’s efficiency in achieving its PDOs. This is done in two ways, first by attempting to update the economic analysis as included in the PAD, and second by reviewing the overall efficiency of project implementation, accounting for updated project costs, benefits, and delays.

Economic Analysis

At appraisal, the economic analysis for the project theoretically assessed costs and benefits quantifiable at the time, including the Mafinga-Igawa road rehabilitation and the Vigwaza OSIS. As the other interventions were either much smaller in cost, more difficult to quantify their benefits, or undefined in terms of their specific activities and benefits, they were not assessed.

Economic Analysis of the Mafinga – Igawa road section

Summary of analysis at appraisal

At appraisal, an economic analysis of the proposed intervention was conducted utilizing the World Bank Highway Development and Management Model (HDM-4), the standard approach for such activities. This methodology compares the estimated road users and agency benefits and costs in the scenario where road works are conducted with a status quo continuation of the current maintenance regime. The primary inputs for the evaluation are: (a) capital investment and maintenance costs; (b) the benefit stream, comprising savings in vehicle operating costs (VOC), travel time savings, and the residual value of the infrastructure at the end of the appraisal period; and (c) evaluation of benefits over a 25-year appraisal period. At appraisal, the implementation period was assumed to be 2012-2015, with an opening of the road in 2016.

Based on traffic patterns, location of major traffic junctions and the planned construction packages, the project road was for purposes of traffic modelling and economic appraisal divided into three traffic sections, namely: Changarawe, Makambako and Halali. The analysis was conducted separately for each section, with traffic counts measured at three counting stations along the corridor: Changarawe (west of Mafinga), Makambako, and Halali. The traffic volume measured at appraisal is shown in table A4-1 below.

Table A4-1: Mafinga – Igawa Composition and Volume of Traffic at Counting Stations (2011)

	Changarawe	Makambako	Halali
Heavy Trucks (>3.5 tons)	932	648	454
Light Trucks (<3.5 tons)	191	173	49
Large Buses	143	134	86
Minibuses	192	151	76
Cars, pickups, 4WD	1,023	563	321
Motorcycles	104	47	18
Total	2,585	1,716	1,004



These results were projected into average annual daily traffic (AADT) estimates for the assessment period using seasonal factors and conservative traffic growth forecasts. Other details of the assessment methodology are included in the PAD. Vehicle Operating Costs (VOC) at design review stage were USD 0.68 per vehicle-km in 2012.

Based on this analysis at appraisal, the Net Present Value (NPV) for the road rehabilitation was assessed using a 12 percent discount rate and found to be US\$ 358.5 million, with an Economic Internal Rate of Return (EIRR) of 40.1%.

Updated analysis at project close

The analysis performed in the PAD was recalculated at project closing, taking into account updated factors, including revised traffic counts, project costs, and road condition.²² An updated traffic count was conducted for seven days from 5th November to 11th November 2020 (shown in Table A4-2 below) and processed to get Annual Average Daily Traffic (AADT) to establish post construction traffic volume levels. It should be noted that these traffic counts were likely depressed from their otherwise level of demand, as they were conducted during the height of the global COVID-19 pandemic, and thus may be considered as conservative. A road condition (IRI) survey was conducted to establish the project road roughness after construction.

Table A4-2: Mafinga – Igawa Composition and Volume of Traffic at Counting Stations (2020)²³

	Changarawe	Makambako	Halali
Heavy Trucks (>3.5 tons)	591	1267	442
Light Trucks (<3.5 tons)	75	72	30
Large Buses	90	188	68
Minibuses	44	73	30
Cars, pickups, 4WD	1,718	2,032	286
Motorcycles	405	812	89
Total	2,923	4,444	945

VOC along the corridor at project completion were calculated to be US\$ 0.51 per vehicle-km. This represents a 17.7% decrease from calculated VOC design and exceeds the original target set during appraisal of a 15% reduction at project close (although this indicator was dropped during restructuring and thus not reported in the project’s results framework).

Based on this analysis, using similar assumptions but updated traffic, road condition and relevant factors, HDM-4 was re-run and new economic benefits calculated. The NPV was calculated at US\$ 342.74 million, while the EIRR was calculated to be 47.3%. This is found to be in line with expectations at appraisal, and noting COVID restrictions on cross border travel, likely conservative.

²² During preparation of this project completion report, the Feasibility Study and HDM-4 Object files used in preparation of PAD were not accessible. However, as the HDM-4 Workspace prepared during design review of the road was available, this was used to conduct the comparison.

²³ Data collected by TANROADS for the updated economic analysis contains a higher level of granularity between modes but has been aggregated in this annex in line with the traffic counts presented during appraisal to facilitate cross comparison in this assessment.



Economic Analysis of the OSIS

At appraisal, the projected economic benefits of the establishment of three OSIS were calculated based on projected costs and benefits accruing from: (a) the saving in crew time costs for transit traffic, (b) the saving in the value of cargo time for transit traffic, and (c) a reduction in the amount of money paid to the traffic police at police checkpoints. The costs and benefits as calculated at appraisal are summarized in Table A4-3 below.

Table A4-3: Economic impact summary for Vigwaza OSIS at appraisal (Costs, Benefits and NPV in US\$ millions, EIRR in %)

	Capital Costs	Recurrent Costs	Benefits from Time Saving	Benefits from Illegal Payment Reduction	Net Present Value
Discounted (12% discount rate)	-15.16	-4.11	4.65	19.66	1.71
Undiscounted	-17.53	-13.56	23.45	91.68	
EIRR (%)					13.10%

As noted in the PAD, the benefits from establishing the OSIS were expected to largely accrue from the reduction in illegal payments from reducing the number of police checkpoints along the corridor. Over its life, the OSIS was expected to have an NPV of US\$ 1.71 million and an EIRR of 13.1%.

No update of this analysis is possible at project close as the OSIS activities have been substantially changed (only one OSIS to be constructed), the Vigwaza OSIS is not in operation with civil works are still ongoing, and updated traffic data is not available for the site. In addition, the fact that the OSIS’s projected benefits largely came from the reduction in police check points and resulting illegal payments makes it impossible to update the benefit calculations. No reduction in police checkpoints has been seen along the corridor (the reason the planned provision of police vehicles was dropped), and it is unclear whether they will be reduced once the OSIS is completed.

Economic Analysis of the OSBP

At appraisal, a discussion of the potential benefits of the OSBP was included, and a placeholder was introduced in the overall economic analysis for the results of analysis of this activity. However, due to a lack of clarity on the activity’s costs and specific design, no such analysis was included in the PAD.

As the OSBP remains under construction at project close, and actual benefits and eventual total costs are unknown, the economic appraisal is similarly omitted here.

Economic Analysis of other Project components



No economic analysis of the road safety and HIV/AIDS activities were included in the PAD due to their relatively small cost. They are similarly omitted here, especially as most remain under construction at project close and no measured benefits are available.

Overall Economic Analysis

As described above, an updated economic analysis was only conducted on the Mafinga – Igawa road rehabilitation. This activity, however, accounted for 78% of final project expenditures, and thus provides reasonable insights into the overall economic efficiency of the project. As stated, the calculated economic benefits of this activity are in line with expectations at appraisal, with an NPV of US\$ 342.74 million (compared to US\$ 358.5 million at appraisal) and an EIRR of 47.3% (compared to an EIRR of 40.1% at appraisal).

Efficiency of Project Implementation

The project’s actual costs were in line with projections made during appraisal, with the rehabilitation of Mafinga – Igawa estimated at US\$135 million as compared to a final cost of US\$136.3 million. Other costs were largely as expected as well, projected overruns at mid term review were addressed by reducing the size of the OSIS construction.

The project suffered from serious delays in the implementation of nearly all activities except for the Mafinga-Igawa road rehabilitation, for reasons outlined in Section III of this document. As a result of these delays, the project was extended twice, first for 18 months and then for an additional 6 months. Together, these two extensions extended the overall period of implementation by about 36% (from an initial implementation period of 5 years and 7 months, to 7 years and 7 months). These extensions were intended to allow for the completion of additional project activities, including the OSBP, the OSIS, the health clinics, the black spot improvements, the EMS pilot, and various smaller studies and technical assistance.

Despite these extensions, however, most of these activities remained incomplete at project closure. Table A4-4 below provides an overview and status of major activities remaining unfinished at project close.

Table A4-4: Major project activities incomplete at project close

Activity	Status at project close (December 2020)	Status at ICR (December 2021)
Construction of One-Stop Border Post at Songwe / Kasumulu border	The works contract was signed on June 12, 2019 and a contract period 12 months. The commencement date was on October 1, 2019 and completion date on September 20, 2020 but as of project closure the progress was at 42%.	Contractor claimed and was awarded Extension of Time of 365 day ending 20 September 2021. This is currently under review. Progress is at 79.8%
Construction of One-Stop Inspection Station (OSIS) at Vigwaza –	The works contract was signed on April 18, 2019 and a contract period of 12 months. At project close, the progress	Progress is at 98.75% with all major works are completed, but not yet operational.



Phase I	was at 95%.	
Refurbishment of 20 Health Facilities Providing HIV/AIDS Services along the Corridor	Allocated into 6 lots, the works were undertaken by 5 contractors, with all contracts signed on November 28, 2018 and a contract period of 12 months. At project close, one of the lots had been completed (refurbishing three of the health centers). The other 5 lots ranged between 60 and 90% complete.	Progress is between 90% and 99% for the remaining lots, with several at final stages. No additional health facilities yet handed over for operations.
Black Spot Improvements	Allocated into 2 lots, the contracts were signed in July and October 2019, with a contract period of 12 months. At close, both lots were approximately 45% complete.	One lot has been completed and handed over, accounting for 5 of the 8 blackspots. The other is at approximately 73% complete.
EMS Pilot	Rehabilitation of the health facilities and call center were allocated into 4 lots, with contracts signed between March and November 2018. At project close they were between 75 and 90% completed, although one health center had begun operations despite not formally being handed over by the contractor. Various smaller contracts (including vehicles, furniture, medical equipment, etc. have either been completed or await completion of the health centers	Lot 3 and 4 have been completed and facilities put into use, including improvements at 4 health facilities. Lots 1 and 2, including the call center and 3 additional health facilities are between 67 and 72% complete

As these activities were not completed within the project implementation period, disbursements already made by the project to pay for uncompleted works were refunded by the Government. In total, US\$ 17.9 million were refunded to the World Bank. It was unclear at project close whether the GoT would be able to allocate its own resources to complete these contracts, although as of the drafting of the ICR, progress had continued on all works, with 5 blackspots and 4 EMS facilities having been completed.

Project implementation costs were in line with expected norms. Over the 7.7 years of implementation, the implementation support to TANROADS totalled US\$ 3.22 million.²⁴ This was higher than originally intended during preparation, reflecting the need to leverage external expertise on several technical and project management topics and the additional costs due to extensions. Regarding the use of World Bank budget for project supervision, the team utilized US\$ 1.3 million over the life of the project's implementation (see Annex 2 for yearly preparation and supervision budgets). Approximately US\$ 250 thousand of this resulted from additional costs due to project extension. These are in line with regional and sector norms for such a project.

²⁴ For comparison, the WB funded Tanzania Transport Sector Support Program (PO55120), implemented over similar years (2010 to 2017) by TANROADS, for a similar project amount and a similar project duration, allocated US\$ 3.5 million for operating costs.



ANNEX 5. BORROWER, CO-FINANCIER AND OTHER PARTNER/STAKEHOLDER COMMENTS

TANZANIA NATIONAL ROADS AGENCY (TANROADS)

COMMENTS ON THE IMPLEMENTATION COMPLETION AND RESULTS REPORT FOR IDA-52480 & IDA H8440

Paragraph Number	Line	Comment/Observation/Suggestion
63	3rd&4	Ministry of Finance complete name is “Ministry of Finance and Planning” and Ministry of Works, Transport and Communication is now “Ministry of Works and Transport”
		We normally referred to the Ministry of Finance and Planning also as “Treasury”, was this the concept here or intended to mean “Bank of Tanzania”
66		We are not entirely sure what the following statement refers to; perhaps it could be explained ...“Beyond the scope of this project to be addressed, TANROADS’s institutional structures introduced delays, with centralized procurement and safeguards teams responsible for executing their functions outside of the oversight of the TANROADS project team. Although such structures likely have benefits as well, this arrangement made it difficult for the implementing agency to react quickly to changes and led to delays in procurement and safeguards.”
		The absence of baselines data was a challenge on several indicators, this reports could reinforce the need for surveys/data collection prior to commencement of work in future projects in order to help define and qualify indicators and better enable measurement. There should be a scope to modify or change weak indicator(s) for the better and not to cause confusion. (See also para 90)
97		The Report is making a good point about the nature of multidisciplinary projects and structuring the implementation agency. The cross-cutting disciplines needed are not always available in a single entity and perhaps greater effort should be made in making sure the interrelated disciplines are brought together more coherently in the designated Project Implementation Team rather than delegating activities on a functional basis



99		<p>Any fatality is tragic and certainly 23 fatalities as reported is horrific. But being referred to as a 'large' number is not evidenced. In fact the report recognises that this level of fatalities is below the National average.</p> <p>However there is no evidence to support the implied conclusion that ...'the number of crashes and fatalities suggests that the contractors' approach to managing traffic was insufficient for the quantity and nature of the traffic on the corridor.</p>
Page 56 of 84	Black Spot	Accounting for 5 (not 4)of the 8 blackspots the other is approximately 73% complete



ANNEX 6. North-South Corridor and Project Map





ANNEX 7. SUPPORTING DOCUMENTS

Project Appraisal Document, Financing Agreement, Mid-Term Review, Aide Memoires, Implementation Status Reports, and other project documents for the Southern Africa Trade and Transport Facilitation Project – APL1 (P120370), World Bank.

Country Assistance Strategy Progress Report for the United Republic of Tanzania for the Period of FY12-FY15, World Bank.

Country Partnership Framework for the United Republic of Tanzania for the Period of FY18-22, World Bank.

Implementation Completion and Results Report (ICR) for Investment Project Financing (IPF) Operations, World Bank Guidance, Catalogue Number OPS5.03-GUID.140. Issued July 5, 2017.

Implementation Completion Report, Tanzania Transport Sector Support Program (P055120), World Bank

Key Implementation Challenges for the World Bank Financed Projects. Tanzania National Roads Agency. September 2016

National Five Year Development Plan 2016/17 – 2020/21. United Republic of Tanzania Ministry of Finance and Planning.

National Five Year Development Plan 2020/21 – 2024/25. United Republic of Tanzania Ministry of Finance and Planning.

National Strategy for Growth and Reduction of Poverty (MUKUKUTA), United Republic of Tanzania Vice President's Office, June 2005

National Strategy for Growth and Reduction of Poverty II, United Republic of Tanzania Ministry of Finance and Economic Affairs, July 2010.

Results Framework and M&E Guidance Note, World Bank. OPSPQ. 2014

Roads Tolls Collections for FY2020/21, Tanzania Roads Fund, <https://www.roadsfund.go.tz/en/revenues>

Supporting Africa's Transformation: Regional Integration and Cooperation Assistance Strategy for the Period FY18-23. World Bank

Supporting Africa's Recovery and Transformation: Regional Integration and Cooperation Assistance Strategy Update for the Period FY21–FY23. World Bank

Tanzania Development Vision 2025, United Republic of Tanzania Planning Commission

United Republic of Tanzania Systematic Country Diagnostic. World Bank. February 23, 2017.