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Report No: PAD 916

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 49.1 MILLION
(US$69 MILLION EQUIVALENT)

TO THE

REPUBLIC OF MALAWI

FOR THE SECOND PHASE OF THE

SOUTHERN AFRICA TRADE AND TRANSPORT FACILITATION PROGRAM

April 8, 2015

Transport and ICT Global Practice
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective February 28, 2015)

Currency Unit	=	Malawi Kwacha (MWK)
MWK 449.77	=	US$1
US$1	=	SDR0.71053510

FISCAL YEAR
July 1 – June 30

ABBREVIATIONS AND ACRONYMS

AADT	Average Annual Daily Traffic
AfDB	African Development Bank
AICD	Africa Infrastructure Country Diagnostic
ASEAN	Association of South East Asian Nations
CAS	Country Assistance Strategy
CBA	Cost-Benefit Analysis
CFA	Clearing and Forwarding Agents
COMESA	Common Market for Eastern and Southern Africa
CPMS	Corridor Performance Monitoring System
DCC	Dar es Salaam Corridor Committee
DPC	Declaration Processing Center
DRC	Democratic Republic of the Congo
DRTSS	Directorate of Road Traffic and Safety Services
EAC	East African Community
EIB	European Investment Bank
EIRR	Economic Internal Rate of Return
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
EU	European Union
FM	Financial Management
GAC	Governance and Anti-Corruption Action Plan
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GRSF	Global Road Safety Facility
HDM	Highway Development and Management Model
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IBM	Integrated Border Management
IDA	International Development Association
IFRs	Interim Financial Reports
IMF	International Monetary Fund
LPI	Logistics Performance Index
MDTF	Multi Donor Trust Fund
MGDS	Malawi Growth and Development Strategy
MIT	Ministry of Industry and Trade
MoFEPD	Ministry of Finance, Economic Planning and Development

MWK	Malawi Kwacha
MoH	Ministry of Health
MoTPW	Ministry of Transport and Public Works, Malawi
MRA	Malawi Revenue Authority
NCB	National Competitive Bidding
NMT	Non-motorized traffic
NPV	Net Present Value
NSC	North-South Corridor
NSW	National Single Window
ODPP	Office of Director of Public Procurement
OSBP	One-Stop Border Post
PDO	Project Development Objective
PFM	Public Financial Management
PIT	Project Implementation Team
PLR	Performance Learning Review
PSC	Project Steering Committee
RA	Roads Authority
RAP	Resettlement Action Plan
RECs	Regional Economic Communities
RFA	Road Fund Administration, Malawi
ROW	Right of way
RMF	Resettlement Management Framework
RSP	Road Sector Program
RTD	Road Traffic Directorate
SADC	Southern African Development Community
SATTFP	Southern Africa Trade and Transport Facilitation Project
SOP	Series of Projects
SSATP	Africa Transport Policy Program
TEU	Twenty Foot Equivalent Unit
TMSA	Trade Mark Southern Africa
TSIP	Transport Sector Investment Program
VOC	Vehicle operating costs
WB	The World Bank
WCO	World Customs Organization

Regional Vice President:	Makhtar Diop
Country Directors:	Colin Bruce
Senior Global Practice Director:	Pierre Guislain
Practice Manager:	Supee Teravaninthorn
Task Team Leaders:	Richard Martin Humphreys/ Sevara Melibaeva

REPUBLIC OF MALAWI
Southern Africa Trade and Transport Facilitation Program - SOP2 (P145566)

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MAP IBRD 41090

PAD DATA SHEET

Republic of Malawi

Southern Africa Trade and Transport Facilitation Program - SOP2 (P145566)

PROJECT APPRAISAL DOCUMENT

AFRICA

Report No.: PAD916

Basic Information			
Project ID P145566	EA Category B - Partial Assessment		Team Leader(s) Richard Martin Humphreys, Sevara Melibaeva
Lending Instrument Investment Project Financing	Fragile and/or Capacity Constraints [ ] Financial Intermediaries [ ] Series of Projects [X]		
Project Implementation Start Date 01-May-2015	Project Implementation End Date 30-Jun-2021		
Expected Effectiveness Date 31-Aug-2015	Expected Closing Date 31-Dec-2021		
Joint IFC No			
Practice Manager/Manager Supee Teravaninthorn	Senior Global Practice Director Pierre Guislain	Country Director Colin Bruce	Regional Vice President Makhtar Diop

Borrower: THE REPUBLIC OF MALAWI	
Responsible Agency: Roads Authority	
Contact: Trevor Hiwa	Title: CEO
Telephone No.: +2651753699	Email: trevorhiwa@ra.org.mw

Project Financing Data(in USD Million)							
[ ]	Loan	[ ]	IDA Grant	[ ]	Guarantee		
[X]	Credit	[ ]	Grant	[ ]	Other		
Total Project Cost:		69.00		Total Bank Financing:		69.00	
Financing Gap:		0.00					

Financing Source	Amount
BORROWER/RECIPIENT	0.00
International Development Association (IDA)	69.00
Total	69.00

Expected Disbursements (in USD Million)

Fiscal Year	2016	2017	2018	2019	2020	2021
Annual	2.50	5.00	11.00	20.00	22.00	8.50
Cumulative	2.50	7.50	18.50	38.50	60.50	69.00

Institutional Data

Practice Area (Lead)

Transport & ICT

Contributing Practice Areas

Cross Cutting Topics

[ ] Climate Change
[ ] Fragile, Conflict & Violence
[X] Gender
[ ] Jobs
[ ] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Transportation	Rural and Inter-Urban Roads and Highways	60		
Public Administration, Law, and Justice	Public administration-Transportation	20		
Industry and trade	General industry and trade sector	15		
Public Administration, Law, and Justice	Public administration-Health	5		
Total		100		

☑ I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information

applicable to this project.

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Trade and integration	Trade facilitation and market access	70
Trade and integration	Regional integration	25
Human development	HIV/AIDS	5
Total		100

Proposed Development Objective(s)

The objective of Southern Africa Trade and Transport Facilitation Program – Phase 2 is to facilitate the movement of goods and people along the North-South Corridor and at the key border crossings in Malawi, whilst supporting improvements in road safety and health services along the corridor.

Components

Component Name	**Cost (USD Millions)**
Component 1: Improving Road Infrastructure	28.00
Component 2: Improving Social Infrastructure	5.50
Component 3: Improving Trade Facilitation	26.80
Component 4: Institutional Strengthening and Implementation Assistance	8.70

Systematic Operations Risk- Rating Tool (SORT)

Risk Category	**Rating**
1. Political and Governance	High
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Substantial
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Substantial
7. Environment and Social	Moderate
8. Stakeholders	Moderate
9. Other	
OVERALL	Substantial

Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes [ ] No [X]
Does the project require any waivers of Bank policies?	Yes [ ] No [X]
Have these been approved by Bank management?	Yes [ ] No [ ]
Is approval for any policy waiver sought from the Board?	Yes [ ] No [ ]
Does the project meet the Regional criteria for readiness for implementation?	Yes [X] No [ ]

Safeguard Policies Triggered by the Project	**Yes**	**No**
Environmental Assessment OP/BP 4.01	**X**	
Natural Habitats OP/BP 4.04		**X**
Forests OP/BP 4.36		**X**
Pest Management OP 4.09		**X**
Physical Cultural Resources OP/BP 4.11	**X**	
Indigenous Peoples OP/BP 4.10		**X**
Involuntary Resettlement OP/BP 4.12	**X**	
Safety of Dams OP/BP 4.37		**X**
Projects on International Waterways OP/BP 7.50		**X**
Projects in Disputed Areas OP/BP 7.60		**X**

Legal Covenants

Name	**Recurrent**	**Due Date**	**Frequency**
Road Levy Structure Change		31-Dec-2015	

Description of Covenant

The Recipient shall by no later than December 31, 2015, ensure that the structure of its road levy, referred to in the Liquid Fuels and Gas (Production and Supply) Act, on petroleum and diesel is converted from one based on a fixed charge to one based on a percentage of the pump price of petroleum and diesel per liter (Section V.B.1 of Schedule 2 of the Financing Agreement).

Name	**Recurrent**	**Due Date**	**Frequency**
Road Levy Increases	**X**		Yearly

Description of Covenant

The Recipient shall increase the road levy each Fiscal Year, and to that end shall: (a) by no later than December 1 of each year commencing in 2015, prepare and furnish to the Association a proposal setting forth the amount of the proposed increase in the road levy for the following Fiscal Year and exchange views with the Association on such proposal; and (b) thereafter, by no later than July 1 of each year during the implementation of the Project commencing on July 1, 2016, adopt and implement such increase in the road levy as shall have been agreed with the Association, all in accordance with the provisions of the Liquid Fuels and Gas (Production and Supply) Act and in a manner satisfactory to the Association (Section V.B of Schedule 2 of the Financing Agreement).

Conditions		
Source Of Fund	**Name**	**Type**
IDA	Project Steering Committee	Effectiveness
Description of Condition		
The Recipient has established a Project Steering Committee (Section 5.01(a) of the Financing Agreement).		
Source Of Fund	**Name**	**Type**
IDA	Project Implementation Plan	Effectiveness
Description of Condition		
The Recipient has prepared and adopted the Project Implementation Plan, in form and substance satisfactory to the Association (Section 5.01(b) of the Financing Agreement).		
Source Of Fund	**Name**	**Type**
IDA	Subsidiary Agreement	Effectiveness
Description of Condition		
The Subsidiary Agreement has been executed on behalf of the Recipient, the Project Implementing Entity, and the RFA. (Section 5.01(c) of the Financing Agreement).		

Team Composition

Bank Staff

Name	Role	Title	Unit
Richard Martin Humphreys	Team Leader (ADM Responsible)	Lead Transport Economist	GTIDR
Sevara Melibaeva	Team Leader	Transport. Economist	GTIDR
Steven Maclean Mhone	Procurement Specialist	Procurement Specialist	GGODR
Trust Chamukuwa Chimaliro	Financial Management Specialist	Financial Management Specialist	GGODR
Anca Cristina Dumitrescu	Peer Reviewer	Sr Transport. Spec.	GTIDR
Annie Kaliati Jere	Team Member	Team Assistant	AFMMW
Benqing Jennifer Gui	Team Member	ICT Policy Specialist	GTIDR
Charles Kunaka	Peer Reviewer	Senior Trade Specialist	GTCDR
Chikondi Clara Nsusa-Chilipa	Team Member	E T Consultant	GFADR
Christiaan Johannes Nieuwoudt	Team Member	Finance Officer	WFALA
Dominic S. Haazen	Team Member	Lead Health Policy Specialist	GHNDR
Evarist F. Baimu	Counsel	Senior Counsel	LEGAM
Helen Z. Shahriari	Safeguards Specialist	Sr Social Scientist	GSURR

James Markland	Team Member	Sr Transport. Spec.	GTIDR
Kazushige Endo	Team Member	Sr Highway Engineer	GTIDR
Maiada Mahmoud Abdel Fattah Kassem	Team Member	Finance Officer	WFALA
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Mombert Hoppe	Team Member	Trade Economist	GTCDR
Said Dahdah	Peer Reviewer	Sr Transport. Spec.	GTIDR
Shingira Samantha Masanzu	Associate Counsel	E T Consultant	LEGAM
Teguest Demissie Bekele	Team Member	E T Temporary	GTIDR

Extended Team

Name	**Title**	**Office Phone**	**Location**
Marco Zambrano	Environmental Specialist		San Jose
Tadatsugu Matsudaira	Senior Trade Facilitation Specialist		

Locations

Country	**First Administrative Division**	**Location**	**Planned**	**Actual**	**Comments**
Malawi	Northern Region	Northern Region	**X**		

Consultants (Will be disclosed in the Monthly Operational Summary)

Consultants Required?	Consulting services to be determined

I. STRATEGIC CONTEXT

A. Regional Context

1. The Eastern and Southern Africa region is highly diverse but with 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, *inter alia* Swaziland, Malawi and the Democratic Republic of the Congo (DRC), respectively. In addition, the region contains a number of countries, such as Zambia, Malawi, Burundi, Lesotho and Rwanda, with untapped agricultural potential and natural resources, and a labor endowment that is trained, relatively inexpensive and well-positioned to compete globally.[1]

2. The region has enjoyed an impressive economic performance over the last decade driven by increasing global demand for primary commodities, but complemented by growing inter-regional trade, albeit from a low base. By 2013, trade within the region (excluding Botswana) and with the rest of the world amounted to US$308 billion, a 17 percent increase from 2011. However, this value falls to about US$74 billion, if South Africa is excluded.[2] Exports from the region include copper, other minerals and agricultural commodities from South Africa, DRC, Zambia, Zimbabwe and Malawi, while imports include chemicals, mining parts and equipment, fertilizer, general consumer goods, etc.

3. Despite this growth, intra-regional trade remains modest: regional trade in Southern Africa amounted to only 13 percent of total trade in 2012, and the region compares poorly in this respect with other world regions. As examples, regional trade in Europe reached 70 percent of total trade in 2011; in North America, 40 percent; and in the Association of Southeast Asian Nations (ASEAN), 30 percent.[3] Trade with South Africa accounts for more than half of total intra-regional trade: for example, 64 percent of Zambia's regional imports and almost 56 percent of Malawi's regional imports. Over 85 percent of Tanzania's regional imports are from South Africa, while South Africa is a destination for only 12 percent of Tanzania's exports.

4. The countries of the region face a number of common problems: the region includes a large number of relatively small states, a number of which are landlocked; it is geographically remote from both the more mature markets of Europe, America and Japan, and the emerging markets of China, India, Indonesia and Brazil; a number of countries have high rates of unemployment and poverty, particularly among the low-skilled, a large informal sector, and an overreliance on primary commodities.[4] From a global perspective, the region represents a number of disparate and relatively small markets, the aggregation of which is complicated by physical and institutional barriers, such as distance, the poor quality of the infrastructure, and

[1] The World Bank Group (2011a) *Harnessing Regional Integration for Trade and Growth in Southern Africa*. Washington DC.
[2] International Monetary Fund (2014), *Direction of Trade Statistics*, (based on goods value of exports in USD millions)
[3] International Trade Center (2014) Trade Map – International Trade Statistics Database.
[4] *Ibid*.

continued intra-regional policy and regulatory discrepancies, despite a number of earlier initiatives.[5]

5. Improving the regional transport network is a necessary condition for both competitiveness and improved regional and global economic integration. High transport prices/costs, including time, are a major obstacle to increasing trade and economic growth: Amjadi and Yeats (1995)[6] concluded that, in Africa, transport costs represent a higher trade barrier than import tariffs and trade restrictions. Freund and Rocha (2011)[7] report an inverse correlation between inland travel time and export performance, with a one day decline in the former leading to a seven percent increase in the latter. Recent research points to predictability as being, at times, even more important for logistic performance. The delivery of exports in Eastern and Southern Africa is twice as unpredictable as in an average emerging country, measured by standard deviation from mean clearance times. The cost of each additional day of delay is estimated to be as much as US$200-400, adding to high transport costs/prices.[8]

The North-South Corridor

6. The broader North-South Corridor (NSC) extends some 3,900 km from Dar es Salaam in Tanzania to Durban in South Africa. The corridor encompasses both road and rail networks, and maritime and inland water ports, and is a very important strategic trade route. The so-called NSC actually comprises two distinct sub-corridors: (a) the northern part of the North – South Corridor (known as the Dar es Salaam Corridor in Tanzania, or more generally the Northern NSC), which extends for 1,768 km from Dar es Salaam in Tanzania to Kapiri Mposhi in Zambia, of which 904 km is in Zambia, 864 km is in Tanzania, with branches to Malawi, Northern Mozambique, and the DRC; and (b) the southern half of the North – South Corridor (hereafter the Southern NSC), from Durban heading straight north to the DRC, via Botswana, Zimbabwe, and Zambia. Annex 6 provides a summary of the trade flows along the corridor.[9]

Trade and Transport Facilitation Challenges

7. The region appears relatively well endowed with physically continuous road and rail networks, linked to maritime and inland ports. However, the infrastructure is often poor or incomplete, inadequately maintained, and there are limitations in organizations, management, and coordination, particularly at the ports, border crossings, and railways. Overall, the core regional road network is in fair condition, but some sections are in poor condition, notably in

[5] The East African Community (EAC) Customs Union and Common Market, the Common Market for Eastern and Southern Africa (COMESA) Free Trade Area, and the SADC, known collectively as the Tripartite, were all designed and established, to a great extent, to facilitate regional trade.

[6] Amjadi A., & A.J. Yeats (1995) *Have Transport Costs Contributed to the Relative Decline of Sub-Saharan African Exports*, World Bank Policy Research Working Paper 1559.

[7] Freund, C., & N. Rocha (2011) What Constrains Africa's Exports? *The World Bank Economic Review*, Volume 25, Number 3, pages 361-386.

[8] Arvis, J.F., G. Raballand and J.F. Marteau (2010) *The cost of being landlocked: logistics costs and supply chain reliability*, The World Bank Group.

[9] This Phase (SOP1) will finance activities on the Dar es Salaam Corridor in Tanzania only.

Zimbabwe, Tanzania, Zambia, Malawi, and Mozambique.[10] Railway services are unreliable, and as a result, 80 percent of all freight on the corridor is moved by road transport. Transport costs along the corridor are some of the highest in the world, requiring almost seven days for the 2,000 km trip by road (carrying one Twenty Foot Equivalent Unit [TEU]) from Dar es Salaam port to Lusaka in Zambia, and costing US$5,000.[11]

8. There are international sea ports at the end points of both rail and road networks on the NSC, with the Port of Dar es Salaam in the north and the Port of Durban in the south. Durban and Dar are the largest ports on the corridor and the only ones with sufficient volumes to justify direct calls by major shipping lines. Secondary ports, such as Maputo, Nacala, and Beira in Mozambique, receive calls from feeder vessels from hub ports in the area, particularly Durban. Beira Port is currently constrained by the limited depth of the port and the allocation of berths to the rapidly expanding coal traffic. By contrast, Nacala Port is located in a deep-water bay which offers natural protection for very large vessels; although it is currently a modest feeder port reflecting infrastructure limitations, the construction of a major coal terminal is underway, together with the construction of a new railway line to Tete province, and an increase in general cargo capacity is planned.

9. The congestion at Dar and Durban ports has eased, reflecting the decline in volume due to the global financial crisis and subsequent economic downturn; nevertheless, port performance remains a crucial issue. During the global commodity price boom, up to mid-2008, the ports were frequently operating above capacity, resulting in severe congestion and serious berthing delays. As one example, Dar Port actually handled 385,000 TEUs in 2008, a volume exceeding its design capacity by 50 percent.[12] The economic downturn in 2009 led to a reduction in volume (in some ports by 15 percent) and alleviated some of the congestion, but the underlying issues of poor capacity utilization and inadequate capacity remain unresolved.[13] A further generic impediment is the port-city interface, reflecting the impact increasing road traffic to/and from the port has on the transport system in the hinterland of the port. This is a major problem in many port cities, not least Dar es Salaam, which can prove intractable due to the significant transaction costs in bringing together all the different stakeholders to define and implement an appropriate solution.[14]

10. The road haulage sector along both parts of the North-South road corridor is one of the more efficient in Sub-Saharan Africa. The corridor stands out both in terms of regulatory regimes and efficiency of logistics services. The transport market and operations in the East and Southern Africa region combine liberalization with reasonable, if not consistent, enforcement of quality standards and axle load control rules applicable to all trucking operators. In addition, the

[10] Nathan Associates (2011) *Definition and Investment Strategy for a Core Strategic Transport Network for Eastern and Southern Africa*. A study funded by PPIAF.
[11] World Bank (2012a) *Connecting to Compete 2012: Trade Logistics in the Global Economy*, Washington D.C.
[12] COMESA-EAC-SADC Tripartite (2012) *NSC Progress Report*, April.
[13] The World Bank, together with the UK Department for International Development and TradeMark East Africa is preparing a project to support the Tanzania Ports Authority in a major program to improve the performance of Dar port. Annex 6 provides a summary of the development plans of the major ports on the corridor.
[14] The first phase of the SATTFP includes technical assistance to support the updating of the urban transport masterplan in Dar es Salaam.

widespread use of direct contracting means that road freight tariffs are highly competitive at around US$0.07 per ton-kilometer. These are the lowest in Sub-Saharan Africa (US$0.07-0.13 per ton-kilometer), reflecting that operations in Southern Africa are governed by bilateral agreements, rather than the quota systems as in West/Central Africa. But the full potential benefits are negated by the impact of the long haul distances, inefficiencies at border posts and Non-Tariff Barriers (NTBs), and a divergence between regional agreements, domestic legislation, and implementation practice, which increase transport costs above the pure freight tariff.

11. Malawi also depends on regional collaboration to improve the infrastructure to allow it to access regional and international markets; harmonize standards and sanitary measures; protect against plant and animal diseases; and generate new technology. However, Malawi also needs to address the problems of low productivity, high cost of inputs, and high costs along the value chain through available regional and national initiatives. Malawi is already simplifying its trade regime and establishing one-stop border posts with Mozambique, Tanzania, and Zambia; the launch of the Second Malawi Growth and Development Strategy (MGDS II) and the Economic Recovery Plan (ERP) present opportunities to push forward regional integration.

The Policy Challenges

12. Through the Common Market for Eastern and Southern Africa – East African Community – Southern African Development Community (COMESA-EAC-SADC) Tripartite Task Force, attempts are being made to harmonize trade facilitation instruments and trade policy issues in the region through ongoing programs for establishment of one-stop border posts, harmonization of customs documentation, a regional axle load control program, improved road safety standards, a regional customs bond system, carriers' license and third party insurance system.

13. To improve the movement of goods across borders by reducing wait time and costs of cross-border transactions, the Tripartite Task Force has launched an Integrated Border Management (IBM) Program. The IBM concept is a multi-agency approach, focusing on the entire transport and supply chain. A diagnostic[15] of the Songwe-Kasumulu border crossing, under this initiative, revealed a lack of interagency co-operation, no structured sharing of information, no co-ordination in operating hours between agencies on the same and opposite sides of the border, insufficient parking space, no Information and Communication Technology (ICT) connectivity, and a lack of coverage and necessary equipment for physical inspections. After the diagnostic phase, the objective is the implementation of One-Stop Border Posts (OSBPs) on all key border crossings in Tripartite countries. The SATTFP is consistent with the IBM program and supports the establishment of OSBPs in participating countries along the NSC countries.

14. A program to harmonize customs procedures and legislation is underway in the region with the support of the Regional Economic Communities (RECs). During the last 10-15 years, the Tripartite member states have been making attempts to reduce the customs duties as part of a

[15] SATH (2011) IBM – Kasumulu/Songwe.

regional coordination agenda by aligning their national customs taxes with the common external tariffs proposed by COMESA and EAC. A number of Tripartite countries have signed the Revised Kyoto Convention, namely Botswana, Lesotho, Malawi, Mauritius, Namibia, South Africa, Uganda, Zambia and Zimbabwe. However, the actual implementation to put in place the Convention provisions following the World Customs Organization (WCO) guidelines is still in question. The Malawi Revenue Authority (MRA), launched in 2000 as a government tax administration agency under the Ministry of Finance, has implemented several reforms since 2008 in order to improve the cross-border trading environment. The MRA introduced the risk management and post clearance audit unit which enabled compliant traders to benefit from pre-clearances. In 2011, remote electronic filing of declarations was introduced which enabled Clearing and Forwarding Agents (CFA) to electronically track the progress of their declarations. Furthermore, MRA also introduced the Declaration Processing Center (DPC) which facilitates on line uploading and declaration processing by all major customs offices. The DPC has ensured the uniform application of customs law, valuation, and classification and reduced corruption. More recently, the MRA has launched non-intrusive inspections and plans to roll out scanners at the major border stations to minimize physical inspections.

15. Although, customs modernization programs are ongoing; border post management reforms lag. For most countries, border clearance processes involve 15+ uncoordinated agencies. Lack of coordination is undermining advances made by the customs reforms. The minimal progress has been undermined by the high costs and administrative difficulties associated with outdated and excessively bureaucratic border clearance processes which are now often cited as more important barriers to trade than tariffs. Inefficient border processing systems, procedures, and infrastructure result in high transaction costs, long delays in the clearance of imports, exports, and transit goods, and present significant opportunities for administrative corruption. They essentially undermine a country's competitiveness in the international marketplace.[16] Border clearance processes by customs and other agencies are among the most important and problematic links in the global supply chain. In the case of Malawi, this issue was recognized by the Government, and a Cabinet order mandated a reduction of the number of agencies at the border from 14 to 5 as part of the introduction of IBM. The implementation of this order is to be supported by the SATTFP SOP2 for all participating border crossings.

16. The lack of a robust 'door to door' transit system is also explicitly recognized as a significant impediment to the movement of transit consignments in Southern African countries.[17] A core element in any effective transit system is a mechanism to guarantee the transit country that either: (a) the goods will indeed leave the country without being put illegally on the market; or (b) that the corresponding taxes and excises will be paid if evidence of the goods leaving the country cannot be produced.[18] Without such a system, traders and forwarders are required to provide nationally executed customs bond (s), often at considerable administrative and financial

[16] The World Bank Group (2010b) *Border Management Modernization: A Practical Guide for Reformers*. International Trade Department. Washington D.C.

[17] The World Bank (2014) *Diagnostics Trade Integration Study (DTIS) Update: Reducing trade costs to promote competitiveness and inclusive growth*, AFTP1 Africa, Report No: ACS7534, March 25.

[18] The best known transit guarantee system is the TIR (*transport international routier*) that relies on a mutually recognized guarantee and a single set of documentation (carnets) in participating countries.

expense, to cover the entire amount of the tax and duty on a consignment in transit. The process of release is difficult and time-consuming, adding considerably to the complexity, tying up working capital, and raising costs and prices. There have been three earlier attempts to pilot a system in the region: one being piloted on the Northern Corridor between Mombasa, Uganda and Rwanda, one that was piloted on the Southern NSC corridor, and one being piloted between Tanzania and Burundi. Each scheme has fundamental differences; the challenge is to identify commonalities, and design and pilot a scheme to facilitate trade. The SATTFP SOP1 in Tanzania includes a study, to be administered by the Dar Corridor Committee (DCC), to define and pilot a suitable scheme on the NSC between Tanzania and Malawi initially.

17. The use of a single carrier permit, included in both the EAC Tripartite[19] agreement on road transport and the COMESA agreement on the single license, remains outstanding. The introduction of a single license would bring a number of advantages, not least mutual recognition of weighbridge certificates, mutual recognition of driving licenses and vehicle road worthiness permits, and the abolition of a transit permit requirement. Such a system has been used on the NSC from South Africa for some years with considerable benefit, but implementation has been held back further north for a number of reasons: (a) institutional overlap between COMESA and the EAC; (b) a lack of domestication of regional agreements in national law in all states; or (c) a lack of resources or commitment to implement on the ground. The first phase of the SATTFP in Tanzania includes support for a study agreed with stakeholders, to be administered by the DCC, to undertake a detailed analysis of policy divergences, the political economy of each, and the identification of realistic remedial actions in the corridor countries. The recommendations will be considered as prior actions in future national or regional policy-based lending series.[20]

18. The countries of the NSC have agreed to harmonize axle loads, with a maximum gross vehicle mass (GVM) of 56 tons allowed on the North-South Corridor trunk road network. The Africa Transport Policy Program (SSATP)[21] has been working with COMESA, EAC and SADC to address the challenge of vehicle overloading and supported the development of guidelines on vehicle overload control in East and Southern Africa.[22] These guidelines were adopted by the three RECs for use in their member countries. Nevertheless, there remain a number of outstanding issues to resolve in the implementation of the common rules and procedures. On some routes, axle loads are de facto restricted because of the poor quality of the infrastructure. For example, if a truck is travelling the North-South Corridor via Kazungula, the GVM of the vehicle will be limited to 45 tons simply because the ferry at Kazungula constrains vehicles to 45 tons. If trucks are using the main route to Malawi from South Africa, via Mozambique, their pay-load is also restricted as the bridge over the Zambezi at Tete in Mozambique has a GVM of 48 tons. In Malawi, management of axle load is problematic due to the absence of portable scales,

[19] The Tripartite comprises the EAC, the COMESA, and the SADC.
[20] This reflects the precedent set by the removal of police road blocks on the Central Corridor as a prior action to PRSC-9.
[21] The Africa Transport Policy Program (SSATP) is an international partnership for strengthening policies and strategies in the transport sector in Africa. It is a partnership of 40 African countries, RECs, African Union Commission, U.N. agencies, multilateral and bilateral development institutions, and is funded by donors, including the African Development Bank, the European Commission, the Islamic Development Bank, the World Bank, Austria, France, Norway, Sweden, and the United Kingdom, and is administered by the World Bank.
[22] Pinard, Michael (2010) *Guidelines on Vehicle Overload Control in Eastern and Southern Africa,* SSATP.

fixed weigh scales strategic parts, and institutional co-ordination. The Ministry of Transport and Public Works (MoTPW) is currently developing a strategy for improved axle load control operation, with the support of the European Union, to be implemented as a pilot.[23] The provision of additional mobile weigh scales to assist in the implementation of the strategy is included in the SATTFP SOP2.

19. Road safety is a major social and economic issue all along the corridor. SSATP also supported the preparation of the *Guidelines for Mainstreaming Road Safety on Regional Trade Road Corridors* (SSATP, 2013), to guide the development of road safety interventions at a corridor level, during the preparation of the SATTFP SOP1. These guidelines were utilized to prepare the NSC road safety strategy, encompassing inter alia engineering solutions, education, enforcement, improved trauma care, the establishment of emergency response services etc., being implemented in pilots along the corridor, under the aegis of the DCC and national stakeholders. These pilots are being designed and implemented in a manner consistent with the results focused national road safety strategies being prepared by the nascent lead agencies in participating countries. A multi-faceted pilot, consistent with the guidelines and harmonized with the intervention in Tanzania under SATTFP SOP1, is to be implemented in Malawi with support from SATTFP SOP2.

The Social Challenge of Trade Corridors

20. Road transport along transit corridors has been identified as 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.[24] This reflects that: (a) the former are often absent from home for prolonged periods, increasing the likelihood of unsafe sexual activity; (b) there is often a lack of knowledge among long-distance truck drivers as to risky and safe behavior; (c) there is often higher than average levels and frequency of alcohol consumption among this group, increasing the incidence of risky behavior; and (d) the increased mobility can itself facilitate HIV transmission from areas of high to low prevalence, nationally, and across borders.

21. In general, fatalities and injuries from road traffic crashes represent a significant and growing economic and social cost in Africa, particularly on the major trade corridors. Africa has one of the highest road traffic death rates in the world, with little difference in rates between those countries categorized as low-income (32.3 deaths per 100,000 head of population per year) and those categorized as middle-income (32.2 deaths per 100,000 head of population per year). These rates are twice the death rates of South East Asia, another region with no high-income countries, and far in excess of the global rate of 18.8 traffic deaths per 100,000 head of population. The range of number of fatalities per 100,000 head of population across the countries of the African Region is not very wide. Nevertheless, 70 percent of all the deaths in the Region have occurred in ten countries that account for 70 percent of the regional population,

[23] MoTPW (2013) *Aide-Memoire for 5th Joint Transport Sector Review Meeting (JTSR)*, November 19-20.
[24] See *inter alia* The World Bank Group (2008) *Lessons Learned from Mainstreaming HIV/AIDS in Transport Sector Projects in Sub-Saharan Africa*. Washington D.C, The World Bank Group (2009) *Transport against HIV/AIDS: Synthesis of Experience and Best Practice Guidelines*. Transport Paper 25, Washington D.C.

such as: Democratic Republic of Congo, Ethiopia, Ghana, Kenya, Madagascar, Mozambique, Nigeria, South Africa, Tanzania, and Uganda. In 2007, over 234,700 people were estimated to have died on roads in the Africa Region, most of them aged between 5 and 44 years. This constitutes one fifth (20 percent) of all the road deaths in that year worldwide, yet the Region has only 2 percent of the world's vehicles.

22. Mortality rates due to road related traffic injuries are significantly higher for men than women. Men have higher mortality rates than women for road traffic at 40 motor road accidents per 100,000 population aged 15-59 for males compared to 9 deaths of females per 100,000 in the same age group. For the region, deaths due to road traffic accidents among males aged 15–59 far exceed those due to malaria, diabetes mellitus, respiratory or digestive diseases. For females, however, almost all other causes of deaths carry more weight than road traffic accidents (the exceptions being malaria and violence).[25]

23. Road safety is a major problem in Malawi. Based on the World Health Organization data (WHO, 2013), in 2010 there were 728 fatalities on Malawian roads, with a vehicle fleet of 130,000, resulting in a rate of 56 fatalities per 10,000 motor vehicles, a rate almost four times the combined rate for all 49 African countries (15 fatalities per 10,000 motor vehicles), 5.6 time that of Botswana, four times that in South Africa, and more than 100 times greater than that of Sweden and United Kingdom.[26] The number of fatalities increased to 925 in 2011, based on data from World Health Organization (WHO). Over the period of 2008-2012, the total of 11,466 accidents were reported and recorded in Malawi, resulting on average in 781 fatal, 579 serious, 643 minor and 290 damage-only accidents (including collisions with animals only) per year.[27] The total number of accidents on the main paved network only was registered at 5,063, of which 2,012 were fatal and 1,237 serious injuries, based on Malawi National Road Safety Council (NRSC) database.[28] The European Union has supported the preparation of the results focused road safety strategy, which includes the development and implementation of a national strategic plan, strengthening the capacity of institutions, improving data collection and dissemination, implementing measures targeted at specific groups at risk such as children and incorporating safety into road designs and development. The road safety activities included in SATTFP SOP2 are consistent with this strategy.

24. An assessment of the capacity of trauma care and emergency medical assistance to respond to road traffic accidents was carried out in 2014 along the NSC in Tanzania and Malawi.[29] The assessment found there was very little pre-hospital care, lack of a coordinated emergency response system, and poor capacity in hospitals to provide adequate trauma care in both countries. SATTFP SOP2 supports the refurbishment of certain trauma care facilities, and the piloting of an emergency response service, in a manner consistent with this strategy.

[25] AfDB (2013) *Mortality in Africa: The Share of Road Traffic Fatalities*. Market Brief. Statistics Department, AfDB Chief Economist Complex, June.
[26] WHO (2013) *Global status report on road safety - supporting a decade of action*, Geneva.
[27] Ministry of Transport and Public Works of Malawi (2014) National Road Safety Strategy and Five-Year Action Plan, DRAFT Version 4, Prepared with support of EU Technical Assistance under the Malawi RSPSP, April.
[28] COWI (2014) *Road Safety Assessment*, Prepared with support of World Bank GRSF TF, August.
[29] Funded through Global Road Safety Facility (GRSF).

B. Country Context

25. Malawi has one of the lowest levels of per capita income in the world. Gross National Income per capita (Atlas Method) was US$320 in 2013. With a population of 15.9 million (2014 World Development Indicators) and a land area of some 118 thousand sq. kilometers, it is one of Africa's most densely populated countries (World Bank, 2013). Malawi is land-locked, has limited natural resources, is highly vulnerable to shocks, given its undiversified production and export structure, and is prone to droughts and floods, particularly in the southern part of the country. Despite improvements in food security nation-wide, the country is still experiencing frequent food shortages.

26. After experiencing a period of uneven growth, episodes of high inflation, high interest rates and unpredictable donor inflows in the early part of the decade, over the period 2006-2010, the economy of Malawi grew by nearly seven percent per annum, inflation remained between 6-8 percent per annum, and there was a relatively stable balance of payments with manageable current account deficits. Since then, while growth has held up, there have been challenges on the fiscal side due to withdrawal of budget support and inflation has remained high. Agriculture remains the backbone of the economy, accounting for about 85 percent of employment, and about 80 percent of the country's foreign exchange, about 60 percent of which comes from tobacco alone. As a landlocked nation, Malawi's economy depends upon the effectiveness of international corridors for the import and export of its goods. Agricultural produce, primarily tobacco, is exported and fuel, fertilizers, processed food products and consumer goods are all imported. Following the elections in mid-2014, a new government has taken office and has articulated its priorities to address these issues.

27. But despite the relatively strong economic performance over the last decade, poverty remains widespread and concentrated in rural areas. According to the Third Integrated Household Survey (IHS3 2010/11), the incidence of poverty as measured through the headcount index has declined only slightly from 52.4 percent (IHS2 2004/05) to 50.7 percent. The poverty levels for urban areas declined from 25.4 percent in 2005 to 17.3 percent in 2011, whereas it picked up slightly in rural areas from 55.9 percent to 56.6 percent during the same period. Income also remains unevenly distributed (the Gini-coefficient deteriorated from 0.39 in 2005 to 0.45 in 2010), reflecting inequities in access to assets, services and opportunities across the population. The proportions of poor and ultra-poor people were found to be highest in rural areas of the south and northern parts of the country. The main drivers of poverty were found to be limited access to education, production assets, shocks affecting agricultural productivity, and lack of diversification, and access to markets. Poverty is also being exacerbated by high population growth rate (about 3 percent), high population density, and HIV/AIDS prevalence.

28. Poverty in Malawi is not gender neutral. Women's weak position in Malawian society often means that, generally, they have less access to income and credit and no voice in decision-making, making it difficult for them to find other sources of income or influence action. These factors make it more difficult for women to resist economic shocks or the effects of climate change that may disturb local economic activities or livelihood opportunities.[30] The Ministry of Gender, Children, Disability and Social Welfare has been making efforts to address gender

[30] Oxfam (2009) The Winds of Change: Climate change, poverty and the environment in Malawi.

issues and good improvement has been made in closing the gender gap in non-agriculture sector employment with a twofold increase in the share of women in wage employment from 15 to 33.3 percent during 2004-2011. This can be attributed to improved women's education, gender mainstreaming in the public sector and presence of private training institutions which are providing opportunities to women.[31]

29. The country ranks 129 out of 144 countries in the Global Competitiveness Index (GCI), with the ranking of 136 for macroeconomic environment and 135 for infrastructure. The 2013 Doing Business report ranks Malawi 157 out of 185 economies, which is low in comparison with some of its SADC neighbors (10th out of 14 SADC countries). Enabling Malawi to benefit more fully from the large export and growth opportunities offered by the regional and global economy requires improving the business environment; reducing the infrastructure deficit, especially energy and water supply; facilitating trade and regional integration; making credit more available and affordable, especially to smallholders; and addressing the skills gap. While the new Government has made commendable efforts to stabilize the economy, improving the business environment will depend on policy certainty and predictability, and the removal of legal and regulatory hurdles.

C. Sectoral and Institutional Context

30. Malawi's public road network covers 15,451 km of classified roads of which 4,312 km are paved (main, secondary, tertiary, district, and urban designated roads), the rest being unpaved and earth surfaced (Roads Authority Data). The 2,809 km of Malawi's main trunk roads form part of the SADC Regional Trunk Route Network with such corridors as the Dar es Salaam (part of North-South) corridor, Nacala corridor and Beira (Sena) corridor. The paved proportion of the 15,451 km classified network (4,312 km or 28 percent) is above the regional average of 20 percent. A road reclassification study carried out in 2006 identified a further 9,478 km of currently undesignated roads that serve rural communities (district and community roads), that are instrumental for rural access and connectivity with the higher level network. The GoM intends to classify these roads, bringing the total classified network to 25,000 km.[32]

31. In terms of condition, the network is deteriorating: A 2011 road survey found 98 percent of the paved road network to be in good or fair condition, while the unpaved network condition declined from 83 percent in good and fair condition in 2007 to 63 percent in 2011. The proportion of roads in good/fair condition in 2014 is lower, with approximately 49 percent of the total road network being in a "good" or "fair" condition, and the proportion of roads in 'poor' condition increasing from 7 percent in 2011 to 17 percent in 2014. This reflects the premature deterioration on many sections due to inadequate maintenance, as the resources available are inadequate to maintain the network in a sustainable shape.

[31] Ministry of Gender, Children, Disability and Social Welfare of Malawi (2014) *Implementation of ohe Beijing Declaration And Platform For Action and the Outcomes of the 23rd Special Session of the General Assembly in the Context of the 20th Anniversary of the Fourth World Conference on Women and the Adoption of the Beijing Declaration and Platform for Action 2015*, Malawi Country Report, July.
[32] *Malawi Transport Sector Policy Note – Study Options*, World Bank, 2011.

32. Institutional reforms in the road sector in 2006 led to the creation of the Roads Fund Administration (RFA) and Roads Authority (RA) to administer the collection and use of fuel levies and other eligible charges, for road maintenance respectively. The RA reports to the MoTPW responsible for policy and strategy development, regulatory and legislative functions. Road passenger transport and road safety regulation is within the jurisdiction of Directorate of Road Traffic and Safety Services (DRTSS),[33] formerly the Road Traffic Directorate (RTD) under the MoTPW. The RFA is responsible for GoM's annual road sector budget implementation and reports to the Ministry of Finance, Economic Planning and Development (MoFEPD). The RFA currently receives revenue from the fuel levy (road levy) and international transit fees to finance the maintenance and rehabilitation of public roads, along with related surveys and monitoring activities. Its income may also be supplemented by Government grants and loans, and negotiations are underway to receive Parliamentary appropriations and a percentage of the road user charges. The allocation the RFA makes to the RA is covered by an annual financing agreement, which identifies the work program for the coming year and a budget for each component. However, the income of the RFA is insufficient to meet the routine and periodic maintenance needs of the network. This has posed a major challenge for the road sub-sector leading to reduced maintenance levels and accumulated contractual arrears. The RFA/RA and MoTPW are currently engaged in discussion with the MoFEPD to change the scale and structure of the road levy to address this problem.

33. Rail transport is underutilized as a potentially lower cost alternative to road transport due to the poor condition of the infrastructure and shortages of rolling stock. The construction of the new rail line through Malawi, following the Public-Private Partnership (PPP) agreement between the Governments of Malawi and Mozambique and the Brazilian mining company Vale, part of a US$2 billion investment to connect the province of Tete, through Malawi, to a new coal terminal at Nacala port, offers a significant opportunity to stimulate development in both countries. This line runs west-east and could potentially serve the bottom half of the country, and Blantyre and Lilongwe. A feasibility study to examine the case to rehabilitate the branch to Lilongwe is ongoing, funded by the United Kingdom Department for International Development. However, the protection of the public interest in Malawi will require the establishment of an effective regulator.

34. The M1 road is a backbone of Malawi road network and provides an important link in the regional North-South Corridor, connecting the port of Dar es Salaam with the Malawi economic centers of Lilongwe and Blantyre as well as Mzuzu on the border with Mozambique. It supports regional trade and tourism with Mozambique in the south, Tanzania and Zambia to the west and north, and with the wider SADC region. The pavement condition along the 970 km of the NSC (M1) in Malawi between Songwe, Blantyre, Lilongwe and Mwanza is generally in good to fair condition, with some localized sections in worse condition. South of Lilongwe, a 159 km section benefitted from periodic maintenance with localized reconstruction, funded by the GoM and the European Union (EU).

[33] The DRTSS was established by the merger of the RTD and the National Road Safety Council.

35. The RA has identified the following three sections of the M1 road as their priorities for intervention:[34] in order of decreasing priority (a) Karonga – Songwe (46 km), (b) Kacheche - Chiweta (70 km), and (c) Mzimba Turn off - Mzuzu - Kacheche (147 km). The Karonga – Songwe section is an important section of M1 that provides a shortest route for Zambia's Eastern Province to the port of Dar for imports of agricultural inputs and export of agricultural produce, and carries 22 percent of Malawi's foreign trade to the border point at Songwe. The road section also provides access for local communities engaged in intensive rice cultivation along the road, much of which is sold in markets on the Tanzanian side of the border. The road section is currently in poor to fair condition, with considerable edge break, and some short sections of failed pavement.

[34] These priorities have been confirmed by a strategic assessment of priorities on the entire NSC commissioned by TMSA and undertaken by the University of Birmingham in 2013/14, and pre-feasibility and feasibility studies undertaken as part of project preparation for SATTFP SOP2.

D. Higher Level Objectives to which the Project Contributes

36. The project contributes to the World Bank Group's twin goals of reducing extreme poverty and enhancing shared prosperity through the following interventions on the North-South Corridor in Malawi that will create indirect benefits for the bottom 40 percent of Malawi's population living in extreme poverty, such as: (a) improvement of road infrastructure quality and of border post operations will facilitate the growth of employment generating industries and agricultural production through the provision of improved connection to Tanzania, Mozambique, and the sea port and reduction of trade and transport costs for local exporters of agricultural products and regional imports; (b) road safety interventions to accommodate safe movement of pedestrians and non-motorized traffic along the corridor will help boost shared benefits through improved access to markets and to services for the rural population living in the northern part of Malawi with one of the highest concentrations of agricultural activity; and (c) increasing overall transport capacity will lead to greater traffic volumes that will facilitate the development of economic activities and job creation along the corridor areas. Since the project is the second phase in the broader program for rehabilitation of the NSC and regional trade facilitation, its effects and benefits are expected to amplify over time, as transport synergies develop with the global transport capacity growth.

37. The three RECs established the Tripartite in 2006 with the objective of accelerating economic integration amongst the constituent countries. The integration process is anchored on three pillars: (a) market integration to stimulate intra-regional trade and move towards a free-trade area; (b) infrastructure development to enhance connectivity and reduce costs of doing business across borders; and (c) industrial development. One of the main themes of the market integration pillar is the removal of NTBs and the introduction of trade facilitation programs. Intervention under this pillar commenced with the pilot North-South Corridor Aid for Trade Program (NSC-AfT). The proposed infrastructure improvements in the SATTFP are acknowledged priorities under the NSC-AfT program, and have been confirmed with key stakeholders. They are also consistent with the relevant articles on trade facilitation, within the SADC Protocol on Transport, Communication and Meteorology, and the EAC Protocol.

38. The SATTFP and SOP2 in Malawi are also supported by the recommendations of the Africa Infrastructure Country Diagnostic (AICD) and the World Bank's Africa Strategy. The AICD highlights that Africa's infrastructure networks increasingly lag behind those of other developing countries and are characterized by missing regional links and limited access. It notes that regional integration can contribute significantly to reducing infrastructure costs, by allowing countries to capture scale economies and manage regional public goods effectively. The Africa Strategy advocates regional integration and regional solutions. It notes that many of Africa's challenges can best be addressed through cooperation and integration at the regional level. Such an approach offers the prospect of larger scale and lower unit costs in the provision of key infrastructure; more efficient risk-sharing mechanisms; bigger and more competitive markets; and enhanced regulatory coherence, effectiveness, and credibility.

39. The SATTFP and SOP2 are consistent with the Regional Integration Assistance Strategy (RIAS) for sub-Saharan Africa. The RIAS focuses on the creation of open, unified, regional economic spaces, as a means of creating an enabling environment to foster a competitive and

efficient private sector in Africa. The proposed program and the SOP2 project in Malawi directly support three pillars of this strategy: (a) development of regional infrastructure to improve cross-border interconnectivity, by developing an integrated, efficient, cost-effective and adequate transport system for economic growth and trade facilitation; (b) institutional cooperation and economic integration, by focusing on strengthening the corridor management and monitoring institution; and (c) coordinated interventions to provide regional public goods for improved regional environmental, health, and social conditions, by reducing the expansion of HIV/AIDS among vulnerable populations along the intra-transport corridor.

40. The SATTFP SOP2 is fully aligned with the MGDS II adopted in April 2012, and the 2004 National Transport Policy recently reviewed and updated by the GoM. The MGDS II (2011–2016) is the country's second plan to reduce poverty by creating wealth through sustainable economic growth and infrastructure development over the medium term. It identifies infrastructure development among top six thematic areas and emphasizes an export-led growth strategy. The MGDS II has been the overarching document for transport sector management and development in Malawi, within the framework of the 2004 National Transport Policy. The goal of the National Transport Policy is "to ensure the provision of a coordinated transport system environment that fosters safe and competitive operation of commercially viable, financially sustainable, and environmentally friendly transport services and enterprises." Other important transport and health sector documents to which this project contributes include the following: (i) the 2010-2020 Road Sector Program (RSP), (ii) the Transport Sector Investment Program (TSIP) of June 2012, (iii) the RA's Five Year Strategic and Business Plan 2011-2016; and (iv) GoM Ministry of Health (2014) National Action Plan for Prevention and Management of Non-Communicable Diseases in Malawi (2012-2016).

41. The SATTFP and SOP2 are consistent with the Country Assistance Strategy (CAS) for Malawi[35] for the period FY13-FY16 and the Performance Learning Review (PLR) of the CAS recently distributed to the Board. The CAS responds to recent developments in the economic and governance context in Malawi, and prioritizes WBG support around three themes: (1) Promoting Sustainable, Diversified and Inclusive Growth; (2) Enhancing Human Capital and Reducing Vulnerabilities; and (3) Mainstreaming Governance for Enhanced Development Effectiveness. The three priority themes of the CAS have been structured around six results areas: Result Area 1: Structural and macroeconomic policies to restore internal and external balance. Result Area 2: A business environment that promotes competitiveness and enhances productivity. Result Area 3: Improved delivery of public services. Result Area 4: Lowering vulnerability and enhancing resilience. Result Area 5: Improving public sector management systems. Result Area 6: Strengthening social accountability for service provision. The SATTFP SOP2 will be contributing under Result Area 2 and is consistent with the objectives of Theme 1 - Improved ease of doing business, through better economic infrastructure, regional integration, and access to demand-responsive skills development. These will finally lead to diversified and inclusive growth.

42. The SOP2 is also aligned with Malawi's broad objectives to increase agricultural productivity and diversification. It is intended to complement overall benefits to be generated

[35] Malawi CAS for the period FY13-FY16 (2012) Number 74159, discussed by the Board in January 2013.

from other Bank supported projects such as the proposed Shire Valley irrigation project[36] and a Multi Donor Trust Fund (MDTF) funded project in agriculture.[37]

II. PROJECT DEVELOPMENT OBJECTIVES

A. The Program Objective and Indicators

43. The SATTFP has been developed as a regional, multi-sector, and multi-phase program to facilitate trade integration in the region by contributing to the alleviation of institutional, social, and physical constraints along the constituent parts of the NSC. The program design involves the identification of a framework to address institutional, social and physical priorities for the NSC, within which the design and implementation of suitable interventions at a national level, can be implemented in sequence country by country.

44. The SATTFP has been broken down into two broad parts: Part 1 of the SATTFP will focus on the Northern NSC, which extends for 1,768 km from Dar es Salaam in Tanzania to Kapiri Mposhi in Zambia, of which 904 km is in Zambia, 864 km is in Tanzania, and the branches linking Malawi to the ports of Nacala, Beira and Maputo in Mozambique. Part 1 will consist of three sequential phases, and will include the countries of Tanzania, Malawi and Mozambique. Part 2 will proceed as and when other corridor countries are considered ready for implementation. Tanzania and Malawi are signatories to the constitution of the DCC, the corridor committee established with the responsibility to manage, monitor and improve performance on the Dar es Salaam Corridor. Zambia has also signed the constitution, but no formal request for inclusion in the program has been received yet. The fact that the DRC has not signed the constitution of the DCC, or that Zambia is not yet formally participating in the SATTFP, will not limit the functioning of the DCC or reduce the benefits to the participating countries in Part 1 of the program. Mozambique has not yet signed the existing Memorandum of Understanding (MoU) to establish a NSC committee for the southern end of the NSC, or a corridor committee for the Nacala branch. However, in the latter case, a request for assistance has been submitted to SSATP to assist in the establishment. The DCC and the NSC Committee are expected to co-operate closely under the auspices of the Tripartite.

45. Accordingly, Part 1 of the SATTFP focuses on one of the highest priority transport corridors, and its key branches, in the sub-region. Well-functioning access to the maritime ports of Tanzania and Mozambique is essential for trade movements to/from the three landlocked countries (Zambia, Malawi and the DRC), both in terms of improved service, but also increased corridor competition. Freight forwarders are expected to benefit from greater choice and hence competition between ports as a direct result of improved corridor performance, enhancing the quality of service and lowering charges. Without well-functioning corridors, inter-port competition is reduced, increasing the costs of trade to/from landlocked countries. The program is expected to contribute to more efficient trade and transport systems, the design and implementation of improved health services and road safety activities, the formation of a

[36] Shire Valley Irrigation Project, with a tentative date of Board submission in December 2015.
[37] Agriculture Sector-Wide Approach Project, ASWAp-SP / P105256 / Cr. 4476, approved on May 21, 2012.

platform for policy dialogue on trade facilitation, including customs and port efficiency, and improvement of corridor management and monitoring.

46. ***The Program Objective.*** The objective of the SATTFP is to facilitate the movement of goods and people along the NSC, whilst supporting improvements in the services for HIV/AIDS and road safety. This objective will be realized through a sequential improvement in the physical, institutional and social infrastructure in participating countries, and the strengthening of the management of the corridor, in participating countries.

47. ***The Program Level Indicators.*** Progress towards the attainment of the program objective will be assessed through the program indicators outlined in the following text box.

Box 1: Program Outcome indicators

- Reduction in average journey time for an imported container (TEU) from port gate to destination;
- Reduction in total time required at police road blocks along the corridor in participating countries;
- Reduction in total time required to cross defined border crossings along the corridor in participating countries;
- Proportion of the road infrastructure in good and fair condition as a share of the corridor length;
- Improved corridor management and performance monitoring;
- Number of users benefitting from new/improved health facilities and HIV clinics, percentage of which female; and
- Reduction in number of accident black spots on the corridor.

B. The Project Development Objective (PDO)

48. The objective of the SATTFP SOP2 is to facilitate the movement of goods and people along the North-South Corridor and at the key border crossings in Malawi, whilst supporting improvements in road safety and health services along the corridor.

Project Beneficiaries

49. The beneficiaries of the project will include the mobile population along the corridor, representing passengers, haulers, traders from all the corridor countries, and the immobile population, employees in supportive business and their families, residents along the road corridor, tradable sectors of the economy and ultimately, consumers and producers both inside and outside the sub-region.

PDO Level Results Indicators

50. The project development objective will be realized through the following components: (a) the rehabilitation and upgrading of the Karonga – Songwe section of the M1 road, and the mitigation of key accident blackspots on the road network, (b) the introduction of interventions in the area of road safety and improvements in trauma care, road accident emergency response, and local health services; (c) the upgrading and modernization of border post facilities at Songwe, Dedza, Muloza, and Mwanza, and technical assistance to improve the facilitation of

trade; and (d) other necessary implementation assistance, institutional support, and priority studies. Progress towards the achievement of the PDO of SOP2 will be assessed through the following key results indicators (detailed in Annex 1):

Box 2: SOP2 Project Outcome Indicators

- Reduction in average journey time for an imported container (TEU) from the Songwe/Kasumulu border with Tanzania to Lilongwe in Malawi on the corridor;
- Reduction in average time required for trucks to cross the borders from/to Malawi to Tanzania at Songwe, and to Mozambique at Dedza, Mwanza, and Muloza;
- Reduction in total VOC on Karonga – Songwe road section;
- Number of users benefitting from new/improved health centers on Lilongwe – Blantyre section, percentage of which female; and
- Reduction in the number of fatal accidents on the M1 corridor per year.

III. PROJECT DESCRIPTION

A. Project Components

51. **Component 1: Improving Road Infrastructure (US$28 million equivalent).** The first component comprises three sub-components to strengthen asset management, improve the condition of the road network, and mitigate accident blackspots:

(a) ***Component 1(a): The Karonga – Songwe Section of the M1 Corridor (US$25 million equivalent).*** This sub-component will support the improvement of the 46 km Karonga – Songwe section of the M1 road. The interventions will include a mix of reconstruction and overlay with surface dressing and widening with drainage improvements to complete rehabilitation to 7 meter carriageway and 2 meter shoulders on each side to accommodate safe movement of the non-motorized traffic. To mitigate increased road safety risks to local population and non-motorized road users due to increased volumes and traffic speeds along the section, the interventions will include implementation of proper road safety measures and will be subjected to an independent road safety audit in the design stage. The European Investment Bank (EIB) has confirmed their interest in potentially funding the remaining priority sections of the M1 corridor (70 km Kacheche-Chiweta section and 147 km Mzimba Turn off - Mzuzu – Kacheche section); and

(b) ***Component 1(b): Accident Blackspot Intervention (US$3 million equivalent).*** This sub-component will support the mitigation of priority accident blackspots on the north-south corridor. A risk based Road Safety Assessment carried out on the 2,809 km paved road network in Malawi with grant funding from the Global Road Safety Facility (GRSF), identified 70 accident blackspots. The blackspots have been ranked according to the Benefit-Cost ratio where the blackspot treatment with highest reduction in fatality and serious accident costs per investment is ranked highest (see Annex 8 for assessment of blackspots). At a workshop in Lilongwe on March 12, 2014, seven out of 70 priority blackspots, five of which are between Lilongwe and Blantyre, were confirmed with stakeholders for inclusion in the project. Almost 400

fatal accidents and 250 serious accidents have been registered on these 70 blackspots over the period of 2008-2012. The improvement of road safety at these locations is important for reducing fatalities on Malawian roads, and are a key part of the DRTSS strategy.

52. **Component 2: Improving Social Infrastructure (US$5.5 million equivalent).** The second component comprises two sub-components to mitigate the social costs associated with increased transport volumes on key regional trading corridors:

(a) ***Component 2(a): Improving management of road safety (US$2 million equivalent).*** This sub-component involves supporting the implementation of the recommendations of the draft results focused road safety strategy, which is now being prepared with support from the European Union. Specifically, it proposes to fund the design and implementation of pilot road safety projects in support of defined targets, including those implemented under component 1(b) above. It is provisionally expected to include (i) the purchase of equipment for the DTRSS (handheld speed detection radars, breathalyzers), (ii) the undertaking of baseline surveys (seatbelt wearing, speeding, drunk driving, etc.), (iii) an educational road safety campaign, (iv) a study to estimate the socio-economic cost of road traffic accidents, (v) the purchase and installation of accident analysis software; (vi) the procurement of mobile weigh scales; and (vii) technical assistance to design and support the DRTSS in implementing the pilot; and

(b) ***Component 2(b): Improving health services and emergency response (US$3.5 million equivalent).*** This sub-component will refurbish and extend priority health facilities in trauma care, and provide technical assistance to develop the capacity of the staff in the local health facilities, in HIV/AIDS awareness, counseling and testing. It will also support the piloting of an emergency response service for road traffic accidents as a pilot on a defined section of the NSC. This sub-component is intended to mitigate the impact of the growth in transit traffic, facilitated by the SATTFP, on the resident population along the corridor.

53. **Component 3: Improving Trade Facilitation (US$26.8 million).** The objective of this component is to reduce the cost of cross border transport by modernizing, simplifying and harmonizing the trade and transit procedures and policies. This is expected to be realized by the following provisional list of sub-components:

(a) A feasibility study to assess options for establishing a National Single Window (NSW) facility. This study will identify options, and the processes and additional resources required to establish the NSW;

(b) Support for establishment of NSW based on the option, key elements of development, the approach, and operational models recommended in the context of Malawi. With support from the African Development Bank (AfDB), the GoM is implementing the migration of its Customs clearance system from the current ASYCUDA++ to ASYCUDA World. This upgrade provides a flexible interface with different ICT

systems and could potentially become an option for the platform of the NSW. The National single window is part of a regional customs interconnectivity;

(c) A feasibility study of the upgrading and modernization of border post facilities at Mwanza, Dedza and Muloza. This study will identify and assess options to improve the physical infrastructure, the processes and the procedures, to implement the Cabinet Order to reduce the number of agencies at the border from 14 to 5 on the Malawi side of the border, and the establishment of IBM; and

(d) The upgrading and modernization of border post facilities at Songwe on the Tanzania border, and Dedza, Mwanza, and Muloza[38] border crossings on the Mozambique border, and the introduction of IBM to address lack of interagency co-operation, no structured sharing of information, no co-ordination in operating hours between agencies on the same and opposite sides of the border, insufficient parking space, no Information and Communication Technology (ICT) connectivity, and a lack of coverage and necessary equipment for physical inspections. For Songwe-Kasumulu crossing, the Malawi Revenue Authority (MRA), the body responsible for border post operation and development, has signed a Bilateral Agreement with their Tanzanian counterparts (Tanzania Revenue Authority, TRA) on March 10, 2014, confirming the willingness of all parties to work towards the agreed objective and establishment of OSBP. A copy of the signed Agreement has been provided to the Bank. For the border posts at Mozambique border, a similar agreement with Mozambique will be needed to realize the full benefits, and the Ministry of Industry and Trade (MIT) is currently preparing a draft for signature. For the Dedza OSBP, a Memorandum of Intent was signed between Malawi and Mozambique in 2008. The Bank will support the signing of the Bilateral Agreements for all participating border crossings through the ongoing regional integration dialogue facilitated under the SATTFP program.[39] The physical infrastructure investments in border post improvements will be implemented in parallel with the necessary institutional and operational reforms to reduce the number of agencies at the border from 14 to 5, in a manner consistent with the Cabinet order of the GoM, and commence the establishment of IBM.

54. **Component 4: Institutional Strengthening and Implementation Assistance (US$8.7 million equivalent).** The fourth component will provide necessary project management, implementation assistance and capacity building to the RA, and strengthening of the institutional framework for transport. This complements the substantial ongoing program of technical assistance being provided by the EU in the sector. The specific activities to be funded through the project include:

[38] The Muloza border crossing was inundated and badly damaged in the recent flooding.

[39] In the event Bilateral Agreements are not prepared and in place with Mozambique for the participating crossings the project would support physical and institutional improvements on one side of the border only. These would be less than the total potential benefits from a fully functioning OSBP with IBM, but would still be significant for Malawi.

(a) The procurement of consultants to prepare a National Transport Master Plan, to guide the sustainable development of the transport sector to 2030;

(b) The procurement of qualified consulting engineers to assist RA in the preparation of designs and supervision of works to mitigate the accident blackspots;

(c) The procurement of qualified consulting engineers to assist RA in the supervision of the implementation of civil works on the Karonga – Songwe section;

(d) The procurement of consultants to prepare the feasibility study, detailed design, Environmental and Social Impact Assessment (ESIA)/Environmental and Social Management Plan (ESMP) and Resettlement Action Plan (RAP), if required, for the works on the other remaining priority sections of the M1 (Kacheche – Chiweta and Mzimba Turn off – Mzuzu – Kacheche), to be potentially funded by the EIB;

(e) The procurement of consultants to undertake a quality review of the processes of scheme identification, design, implementation, supervision and handover, together with the independent technical audit of works undertaken in the project;

(f) The procurement of consultants to operationally establish the road asset management system in the RA;

(g) The procurement of integrated accounting and contract management software to the RA;

(h) Support to the RA to assist the Project Implementation Team (PIT) in project implementation;

(i) A study to ascertain the structure, responsibilities and necessary resources for a network manager in the rail sector; and

(j) Capacity building and training in the Ministry of Transport and Public Works.

55. All equipment and training financed by the Project in respect of the border agencies and DRTSS is directly related to trade facilitation activities and road safety and do not include weapons, lethal equipment or any other police or military equipment of such nature or support for specific case investigations.[40] The equipment consists of physical facilities, office and information technology equipment, road safety equipment, and/or vehicles. The intervention is critical to the project at the regional level and to the overall economic development of Malawi and falls within the Bank's development mandate.

B. Project Financing

[40] World Bank (2012b) *Staff Guidance Note: World Bank Support for Criminal Justice Activities*, A note prepared by the Justice Reform Unit of the Legal Vice Presidency.

56. The lending instrument selected to support the SATTFP is an Investment Project Financing (IPF) as part of a SOP. The proposed Project is the second phase of the first Part of a ten-year SOP (see paragraph 57 in Section C below). Each subsequent SOP will be described in a separate Project Appraisal Document (PAD). The financing for SOP2 in Malawi is an IDA Credit of SDR 49.1 million (US$69.0 million equivalent), two-thirds from regional IDA allocation, and one-third from the national IDA allocation, under standard country terms to the Republic of Malawi.

Project Cost and Financing

Table 1: Project Cost and Financing[41]

Project Components	**Project cost (US$ M)**	**IDA Financing**	**% Financing (inclusive of taxes)**
1. Improving road infrastructure[42]	28.0	28.0	100
2. Improving social infrastructure	5.5	5.5	100
3. Improving trade facilitation	26.8	26.8	100
4. Institutional strengthening and implementation assistance	8.7	8.7	100
Total Project Costs	69.0	69.0	100
Interest During Implementation	0	0	-
Total Financing Required	**69.0**	**69.0**	**100**

C. Series of Project Objective and Phases

57. ***The Prospective Phasing***. The SATTFP program is intended to be implemented in two parts, as detailed earlier, and in sequential phases over a 5-10 year period, based on country demand, and country readiness. Part 1 will consist of three sequential phases, covering Tanzania, Malawi, and Mozambique totaling US$423 million. The proposed project is Phase 2 of ongoing SATTFP Part 1. The SATTFP SOP1 Phase 1 (P120370), with US$210 million of regional IDA Credit to Tanzania and US$3 million regional of IDA Regional Grant to DCC, was approved on May 21, 2013 and is currently ongoing. Part 2 is provisionally expected to amount to US$185 million. The indicative phasing reflects readiness in each country, but any phase can be advanced to meet client demand.

58. ***The Program Components***. In order to implement the shared objective and approach, each phase in the Program will finance activities that would be implemented nationally in each participating country. In parallel, regional activities will be coordinated and implemented by DCC and a prospective NSC Committee (NSCC).[43] Each phase will include investments for both 'physical' goods, works and services, as well as 'soft' activities such as technical assistance. The physical infrastructure and border crossings proposed for inclusion in Part 1 of the SATTFP is considered vital for the movement of the sub-region's international trade. More specifically, the

[41] A detailed breakdown of activities and costs in the project is provided in Table 1 in Annex 2.
[42] Physical contingencies of 15 percent are included in the estimated capital costs.
[43] This first phase will also support the implementation of a sustainable financial mechanism to DCC, to ensure that the DCC can continue to fulfill its regional role. Similar support could be provided to the NSCC in subsequent phases.

Mafinga – Igawa road section in Tanzania supports the movement of international traffic from Dar es Salaam to Malawi, Zambia and the DRC. Nearly one-third of traffic volume on this corridor is commercial traffic to the landlocked countries. The Karonga – Songwe road section in Malawi is adjacent to the Songwe – Kasumulu border crossing. This section also represents an alternative link to Dar port for Zambia's Eastern Province, for the import of agricultural inputs and the export of agricultural produce, and is currently in very poor condition. The border crossings at Mwanza, Dedza, and Muloza between Malawi and Mozambique are key crossing points and remain in need of improvement. The Beira – Machipanda rail link and much of the Nacala rail link are in poor condition as well as the road links between Nampula in Mozambique and Malawi.[44] Parts of the road linking Beira to Malawi, Zambia and Zimbabwe are in urgent need of improvement. Lastly, the road safety and health sub-components have been specifically designed to deal with the externalities of accident risk, incidence of HIV/AIDS, and injuries from road traffic accidents, created by the movement of international transit traffic.

59. In terms of each country in Part 1, Malawi has met all the readiness requirements: (i) Malawi governmental bodies have signed the DCC Constitution, (ii) Malawi has confirmed its willingness to define and introduce a sustainable funding plan for DCC and to share trade and transport data by relevant government agencies with the DCC; and (iii) the Bilateral Agreement to establish the OSBP has been signed with Tanzania and is being pursued for the participating crossings with Mozambique (see details in paragraph 53(d)). Mozambique has issued a formal request to join the program. As of March 2015, none of the other countries formally confirmed their desire to join the program at this stage.

60. ***Justification for IDA Regional Credit.*** The proposed SATTFP program meets the eligibility criteria contained in the Guidelines for IDA Regional Program Funding in IDA 17 as: (a) the program involves a minimum of three contiguous economically interdependent countries (Tanzania, Malawi and Mozambique); (b) the expected trade efficiency gains cannot be fully achieved without the direct and integrated involvement of the three countries; (c) the social and economic benefits spill over countries' boundaries and can only be achieved through the coordinated implementation of an integrated set of infrastructure and facilitation measures in the three countries along the NSC corridor; and (d) the operational establishment and mandated role of the DCC indicates that there is a platform for regional policy harmonization with a high degree of country and regional ownership and it is consistent with the objectives of the Tripartite.

D. Lessons Learned and Reflected in the Project Design

61. The major lessons learned from the earlier trade facilitation projects, both in West, Central and East Africa and elsewhere in the world, are the following: (a) the need to recognize the multi-sector and multi-agency dimensions of trade facilitation; (b) a simple project objective and design are critical in light of the inherent complexity of trade facilitation operations and the large number of stakeholders and countries involved; (c) the implementing arrangements need to be as simple as possible, and capacity of the implementing agency should be fully assessed and if

[44] The AfDB and other partners are financing the improvement of the Nacala Corridor Road and the border posts at Mandimba and Mwami. Upgrading of the Nacala Corridor rail line is being financed by the concessionaire to permit the transport of large volumes of coal.

required, strengthened to ensure smooth implementation; (d) adequate resources must be provided to ensure robust preparation and strong supervision; (e) project preparation and implementation will only move at the speed of the slowest country involved; (f) the need to set up efficient and sustainable monitoring tools to evaluate outputs and outcomes; and (g) the need to recognize that the full benefits of trade facilitation often take more time to materialize than the life of any single project.

62. In addition, a review[45] noted that the majority of regional programs supported by the World Bank over the period 1995-2005 were more effective where the countries' interests were compatible. The report notes five design features that have proved vital: (a) there needs to be a strong country commitment to regional cooperation; (b) the scope of objectives should match national and regional capacities; (c) there needs to be clear delineation and close co-ordination between the regional and national stakeholder institutions; (d) accountable and well-designed governance and management arrangements are essential; and (e) it is important to plan to ensure sustainability after external support ends.

63. The first phase of the SATTFP in Tanzania, which has been under implementation for 18 months, provides important lessons in the design, preparation, and implementation of the second phase in Malawi. Specifically, the simplified implementation arrangements enabling one implementing agency to take full responsibility for fiduciary and safeguard requirements and for ensuring coordination among key stakeholders has proven to be effective in Tanzania in terms of compliance with World Bank procedures and more manageable supervision and monitoring. Other lessons from the first phase taken into consideration in the preparation of the proposed SOP2 include: (a) the use of a phased approach within a consistent program framework; (b) the simplification of project objectives, implementation arrangements, design and components; (c) early preparation of engineering, social, environmental, and institutional aspects to ensure quality at entry; (d) extensive consultation with key stakeholders to ensure increased ownership; (e) close collaboration with the ongoing donor activities, specifically technical assistance of European Union to the Ministry of Transport to support necessary institutional reforms; (f) provision of support to establish a regional stakeholder body, tasked with a monitoring role, and supported to introduce sustainable funding to ensure sustainability; and (g) careful selection of the physical infrastructure to ensure maximum economic and social impact.

64. An important lesson was also drawn during the preparation of SATTFP SOP2. Relying on other donors to support the preparation of major project components may delay project delivery, especially if the preparation schedule is tight. While preparation for SATTFP SOP2 commenced early, the team relied on another donor (Trade Mark Southern Africa, TMSA) to fund the feasibility studies, detailed design and safeguard documents for the major road infrastructure component. The sudden suspension of TMSA activities in the region resulted in delays of the necessary technical studies and consequently postponement of project delivery.

[45] The World Bank Group (2007a) *The Development Potential of Regional Programs. An Evaluation of World Bank Support of Multi-country Operations*. A report by the Independent Evaluation Group.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

65. Phase 2 of the SATTF Program will be implemented by a dedicated team (Project Implementation Team, or PIT) of full-time employees of the RA supported by officials from the Treasury and RFA. The RA was established by an Act of Parliament No. 3 of 2006. Though it is an independent statutory company, the organization reports to the MoTPW. The PIT consists entirely of full-time employees of RA and comprises a project manager, a procurement specialist, financial management specialist and project accountant. The RA will be the main implementing entity for the project activities, responsible for overall project management, formal reporting requirements, procurement, contract administration, safeguards, and work in combination with the RFA on the financial management, and the preparation and submission of disbursement requests. The PIT will draw on technical expertise both from in-house sources and from other relevant stakeholder bodies, including MRA for the border crossings and the NSW options study, MIT for the trade facilitation activities, DRTSS for the road safety improvements, Ministry of Health (MOH) for the health services and emergency response improvements, and MoTPW for the development of National Transport Masterplan. The responsibility for monitoring environmental and social aspects will lie with RA's Environmental Management Unit (EMU), who will support the project in the environmental and social safeguard issues and coordinate with the PIT to ensure compliance with national regulations and the Bank's Safeguard policies. The responsibilities of RFA will include, *inter alia*: (a) the management of the designated accounts; (b) financial management reporting of the overall project; (c) ensuring the execution of the audit of the project; and (d) preparation of quarterly financial reports.

66. The PIT will report to a Project Steering Committee (PSC) chaired by the MoTPW with representation from the MOH, DRTSS, MRA, and MIT. The PSC will be responsible for, *inter alia,* the review and validation of: (a) Annual Work Plans; (b) the Project's evaluation and supervision reports; and (c) the Project's financial management and accounting reports. The MoFEPD confirmed these arrangements to the Bank by letter dated February 7, 2014. The RA identified the named employees in the PIT by e-mail on March 13, 2014.

Regional Coordination

67. The DCC remains responsible for the regional co-ordination, and the monitoring of corridor performance for the Dar es Salaam corridor countries. The DCC was originally established in an interim form in 2003, with a constitution signed by Malawian and Tanzanian private and public stakeholders. It was signed by Zambian private and public stakeholders in 2008, formally establishing the DCC in terms of the constitution. The fourth country of the DCC, the DRC, is still to sign the constitution although participates in the DCC meetings as an observer.[46] But this will not limit the functioning of the DCC or reduce the benefits to the other

[46] In order for any private or quasi-government institution in the DRC to sign a regional agreement, there is need for the respective governments to make commitments to each other through government to government agreements. Since DCC Constitution was not signed by Governments, DRC requires government to government agreements

three participating countries. The DCC is being established with support of an IDA grant in parallel with SATTFP SOP1. There are now eight employees, and premises have been leased.

68. The DCC has an Executive Committee, which has representation from the donor community and the relevant RECs, to oversee its affairs, and an Executive Director who heads the DCC Secretariat was appointed with effect from May 2009. National Corridor Committees have been established to implement DCC programs at national level. In addition, under the DCC, two working groups, one on transport operations and the other on customs have been established to address issues impeding efficient operations along the corridor. These groups have commenced stakeholder meetings and identified certain impediments to trade and transport in their respective areas. The Annual Work Plan and Budget for 2015 has recently been approved by IDA. The DCC has also been active in the Port Consultative Committee in Dar es Salaam, working on an Action Plan to improve the operational efficiency of the port.

B. Results Monitoring and Evaluation

69. The project has designed and includes a set of monitoring indicators both at the program and project levels. The chosen indicators are replicated in each phase to allow the effective measurement of the outcome and results of the project(s) and are aggregated to provide results for the program as a whole. These indicators together with the monitoring and evaluation arrangements are detailed in Annex 1. The corridor indicators will be collected, monitored, reported and disseminated by the DCC, utilizing the Corridor Performance Monitoring System (CPMS) which is being established with support from the SOP1 project.

70. The overall responsibility for monitoring and evaluation of outcomes of the Phase 2 project will formally lie with the MoTPW. RA will prepare quarterly progress reports, with contributions from other stakeholders, and forward these to IDA, via the Steering Committee, within 45 days from the end of the reporting period. These reports will detail physical progress of the various sub-projects and progress in respect of the monitoring indicators in the results framework (see Annex 1). The reports will also contain a summary of the status of the implementation of the ESMPs and RAPs in respect of the improvement of the physical infrastructure.

C. Sustainability

71. The sustainability of the various facilitation measures supported by the project depends on the continuing efforts of public and private stakeholders. Positive signals of collaboration between the different corridor countries have been demonstrated in the signing of the Constitution of the DCC by the governmental authorities of three Dar es Salaam Corridor countries (Tanzania, Malawi and Zambia), and the establishment of the DCC. The DCC is already active in the Port Consultative Committee, organized and chaired by the Tanzania Ports Authority (TPA), and is identifying impediments in the functioning of the corridor, from stakeholder meetings. These functions will be strengthened by continued support to ensure the

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among the relevant countries to be executed in order to allow its governmental institutions to sign the DCC Constitution.

operational establishment of the DCC under ongoing SATTFP SOP1, additional assistance to fund investigation of key issues to be addressed, the introduction of a sustainable funding levy, and the establishment of the CPMS.

72. Expenditures in road maintenance in Malawi remain below what is required to sustain the primary and secondary road network at its current condition. The unpaved network, important for reaching areas with high agricultural production, receives insufficient attention and has deteriorated from 83 percent in good/fair condition in 2007 to 63 percent in 2011. The paved road network condition is relatively good by regional standards, but with current expenditure on maintenance it will not remain so for long. Malawi is facing a great challenge to restore the Roads Fund income stream to a level at which it can make a significant contribution to the core network preservation needs. In practice, RFA income has been insufficient to fund periodic maintenance, resulting in a backlog of repair and rehabilitation works.

73. Currently the RFA's sources of revenue are only from road levy and international transit fees but negotiations are at an advanced stage with Government for additional appropriations, a larger percentage of the road user charges, and changes in the structure and scale of the road levy. The current level of revenue is estimated to cover 60 percent of the routine and periodic maintenance needs of the network. In addition, the average annual amount Malawi spends on maintenance and rehabilitation represents 1.5 percent of the network asset value, while the benchmark amount required to sustain the road network is at least 3.3 percent of the asset value. The road levy which is currently a fixed amount per liter has decreased nearly 70 percent in the relative share from its 2009 level due to depreciation of the Kwacha (from $.019 and $0.16 per liter for petrol and diesel respectively in 2009 to $0.08 and $0.07 per liter now), while the maintenance costs have increased in line with currency depreciation. RFA has submitted a proposal to the Government to revise the road levy structure to a percentage of the pump prices to gradually reach the 2009 levels of 14 percent of the fuel price. This proposal will be supported through a covenant in this project. Currently, the maintenance management systems use short term input based contracts on both paved and unpaved roads. To improve the efficiency and efficacy of maintenance, the RA is considering the introduction of output and performance based contracting methods, as part of the development of a more strategic approach to asset management.

74. The road safety and emergency response interventions have been designed to build on existing services along the corridor, within the existing health facilities through the refurbishment of trauma care facilities, the provision of appropriate equipment, training and capacity building of medical personnel. The sustainability of this support will in large part depend on the definition of an appropriate mechanism for emergency services provision, with options currently being discussed by the MoH. For the health centers themselves, if there is no commitment on the part of a local authority to fund the recurrent maintenance costs of the refurbished trauma care facilities, or equipment, support will not be provided in that location.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

75. The overall risk is considered to be **Substantial.** The key risks are mostly related to the multi-country, multi-sectoral dimension, reflecting that the full benefits will not be realized until all the phases have been implemented, in parallel with the more difficult changes in the institutional framework necessary for effective trade facilitation, and the cross border agreement and inter-agency co-operation for the effective establishment of OSBPs. The risks associated with the national activities, the rehabilitation of the Karonga – Songwe road, the alleviation of accident black spots and other road safety interventions, and implementation of trauma care and emergency response pilot, are considered to be moderate.

76. ***Political and Governance and Fiduciary Risks.*** The political and governance risk is considered to be high due to the recent "cashgate" crisis. Malawi has had serious challenges in its management of public resources. A national Public Financial Management (PFM) reform program is in place but implementation over the last three years has been highly uneven. The "cashgate" scandal of 2013 resulted in a massive theft of public resources. This incident eroded public confidence in the use of public resources and governance and called for bold actions from the Malawian authorities. The new administration has expressed commitment to both PFM and Public Sector Reforms (PSR), to be spearheaded by the MoFEPD and Vice President respectively. The new administration has also started taking legal action against some of the accused in "cashgate". This was welcomed by donor partners and citizens, but in order to restore confidence, these commitments will need to translate into concrete actions. The MoFEPD intends to focus on strict implementation of the policies and systems already in place and pursue this within the framework of the ongoing Bank-supported Financial Reporting and Oversight Improvement Project (FROIP) MDTF and with support from the International Monetary Fund (IMF).

77. The fiduciary risk for the project is substantial. To mitigate the potential financial risks at the project level, the implementing agency, which is quasi-government, will not be using the Integrated Financial Management Information System (IFMIS), which was at the heart of "cashgate". In addition, its fiduciary systems and procedures will be strengthened through a Governance and Anti-Corruption action Plan (GAC Plan) (details are provided below and in Annex 7). The proposed mitigation measures are aligned with the lessons of the Performance Learning Review (PLR) of the CAS (2015) highlighting the need to introduce smart accountability approaches into Government and projects while also keeping sight of the need for better country ownership. Discussions on the broader governance risks are being taken forward through the Bank's increased policy engagement on governance issues. As proposed by the PLR, the Bank will support the Government's PFM and PSR reform programs through the ongoing FROIP MDTF project and other activities.

78. ***The risk of political interference*** has been properly assessed and managed, after taking into account any mitigation measures. The risk of abuse of authority by border agencies in utilizing equipment provided under the project to repress citizens is low. Mitigation measures to be implemented by the project are: (a) improving customs internal reporting systems; (b) improving transparency, simplification and harmonization of customs procedures with the aim of, *inter alia*, reducing the opportunities for bribe demands at border crossing points; and (c) monitoring, reducing and disclosing publicly the number of road blocks.

79. ***Macroeconomic Risk.*** Threats to the country's macro-fiscal framework stem from external factors, such as the terms of trade and other exogenous shocks, including shortfalls in donor support. Risk of export related shocks remains, given Malawi's limited sources of foreign exchange and reliance on rain-fed agriculture. Additional risks include the loosening of policies as a response to the decline in the volume of donor support, which could further erode donor confidence and jeopardize the resumption of aid. Risks of negative financing shocks in the form of delayed or lower donor support, or lower than expected tax revenue may require additional fiscal restraint, but should not compromise the medium-term debt sustainability of the country. The IMF and the Bank are maintaining an on-going dialogue with the authorities on macro-fiscal policy issues, which will help detect potential threats early on. The new Government is currently prioritizing actions to ensure support from development partners is restored.

80. ***Sector Strategies and Policies Risk.*** The implementation of the trade facilitation component will require stakeholders outside the implementing agency and sometimes outside Malawi, to make decisions which may impact the activities (e.g., establishment of one-stop border posts at border crossings). To mitigate this risk, effective coordination will be required between various government agencies on both sides of the borders with Tanzania and Mozambique. Specifically, Bilateral Agreements will be signed between Malawi and a neighboring country with respect to specific interventions at border crossings. Such Bilateral Agreement has already been signed with Tanzania Revenue Authority (TRA) and MRA for the Songwe/Kasumulu OSBP, and with Mozambique for the Dedza border crossing. Similar agreements will be signed for the remaining participating border crossings with Mozambique.

81. ***Institutional Capacity for Implementation and Sustainability.*** While institutional capacity to implement the project is adequate, there is a substantial sustainability risk for the project financed roads, as road maintenance expenditures in Malawi have been below the requirements, resulting in a backlog of repair and rehabilitation works. This risk will be mitigated through a covenant supporting the RFA's proposal to the Government to increase the road levy to fund the periodic and routine maintenance (sustainability is discussed in Section IV-C above).

82. ***Environment and Social Risk.*** To mitigate against the risk of increased road safety risks for non-motorized road users due to increased transport volumes on the Karonga – Songwe road section as a result of improved road infrastructure and resulting higher speeds, measures have been incorporated in the design of the road, including (a) appropriate vertical and horizontal road signing and signaling; (b) traffic calming measures in trading center and densely populated areas; and (c) widening of the road with 2 meter shoulders on each side to provide appropriate space for pedestrians and non-motorized traffic (NMT). To mitigate the social risks associated with potential increase of infection and transmission risks of HIV/AIDS and increased incidence of mortality and morbidity from road traffic crashes due to increased transport and trade volumes along the road, component 2 includes both measures to improve health facilities to improve services in HIV/AIDS, increase awareness, counseling and testing targeting truck drivers, and affected local populations, and measures to pilot an emergency response service, and improving trauma care. The WB's policy on Involuntary Resettlement (OP/BP 4.12) has been triggered and appropriate safeguards instruments have been incorporated to mitigate associated risks, including

preparation of a RAP for the Karonga – Songwe road section (details are provided in section E of this PAD on Social Safeguards).

Governance and Anti-Corruption Action Plan

83. The GAC Action Plan is designed to improve governance in the RA and RFA by strengthening the procurement and financial management systems and procedures, together with additional specific actions to improve governance. In addition, the Recipient(s) will be required to implement the project in accordance with the Anti-Corruption Guidelines.[47] These will be supported by greater emphasis on ensuring a strong detailed design, strengthened contract and financial management and other controls in project implementation, as summarized below:

(a) Careful support by the Bank team during tender preparation to ensure robust investigation and a strong detailed design for all civil works interventions, to minimize the scope for contractors to negotiate unjustified contract variations;

(b) Procuring consultants to support RA, as necessary, in the administration and implementation of the project, and the application of transparent procedures for administering the designated accounts and producing more efficient, equitable and needs-based expenditure programs;

(c) Procuring consultants to review the entire process, from a quality perspective, of project identification, design, implementation, supervision and handover, and define an action plan for future remedial interventions;

(d) Procuring consultants to undertake an independent technical audit of the procurement process and the completed civil works in the project to ensure the quality and sustainability of investments; and

(e) Strengthened technical control by RA, with the support of the Bank team, to ensure the reliability of cost estimates, detect over-pricing through bid analysis, close supervision control in respect of contract variations; enhanced supervision by the Bank through field-based fiduciary, safeguards and technical staff, with frequent missions by staff from headquarters.

84. The use of hotlines to report corruption and other forms of fraudulent activities has also been proposed to RA, as they are not in use currently. Malawi was one of the pilot countries in the Construction Sector Transparency Initiative, but a detailed implementation plan for the national office has not been prepared yet, due to funding uncertainty, so currently CoST Malawi is less active.

[47] "Anti-Corruption Guidelines" means the "*Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants",* dated October 15, 2006, revised in January 2011*."*

VI. APPRAISAL SUMMARY

A. Economic Analysis

85. ***The primary economic impacts of the SATTFP SOP2 have been identified as the following***: (a) a reduction in journey time for passengers and freight along the corridor reflecting the improved infrastructure, and the improvements at the border crossings; (b) a reduction in vehicle operating costs along the corridor from the improved infrastructure; (c) a reduction in the unpredictability of journey times along the corridor reflecting the improvement in the infrastructure, improvements at the border crossings; and (d) a reduction in the incidence and severity of road traffic accidents along the corridor, reflecting the improvements to the infrastructure, the removal of accident black spots and the corridor safety strategy. Over the medium term, the program would also be expected to contribute to a reduction in the cost of transportation, and hence prices for goods, an improvement in the quality of transport, and a reduction in the size and cost of inventory when the improved reliability of transport is recognized. In the long term, the program is expected to contribute to trade expansion, both for imports and exports.

86. ***The value added of World Bank Support***. The World Bank has been consistent in promoting the removal of barriers to trade and regional integration as key development priorities for the region. More specifically, the former is explicit in noting that insufficient and unreliable infrastructure services increase input costs, raise transaction costs, and lower productivity, and it is supportive of regional integration. The SATTFP SOP2 in Malawi will build on the First Phase (SOP1) in Tanzania, currently under implementation, and will realize significant synergies for Malawi from the implementation of a consistent program, particularly in terms of trade facilitation, along the entire corridor.

87. ***The rational for public sector financing***. Given the modest levels of demand on the road sections, and currently at the border crossings, and the lack of a market for many of the interventions (e.g. road safety, health), private finance is not an option at this stage.

Summary of cost-benefit analysis

(a) The rehabilitation and upgrading of the Karonga – Songwe Road Section

88. The economic analysis was undertaken during the feasibility study for the rehabilitation and upgrading of the Karonga – Songwe road section of the M1 corridor in Malawi in Component 1, reflecting that this sub-component accounts for 36 percent of total project costs. The proposed intervention is reconstruction and overlay with widening to a seven meter carriageway with a two meter sealed shoulder on each side. The following project options were considered in the economic analysis and feasibility stage: (a) Option 1: Do nothing (except repairing Iponga section); (b) Option 2: Patch and reseal; (c) Option 3: Patch, reseal and widening of trading centers; (d) Option 4: Reconstruction and widening with Double Surface Dressing; (e) Option 5: Reconstruction with Double Surface Dressing and widening at trading centers; and (f) Option 6: Reconstruction with Asphalt Concrete Surface.

89. The economic analysis was undertaken using the Highway Development and Management Model, Version 4 (HDM-IV), using the conventional approach of comparing the estimated road users and agency benefits and costs of five possible options for rehabilitating the road, against the "do-nothing" scenario, involving the status quo, and the continuation of the current maintenance regime.[48] The most economically viable option for the section has been found to be Option 5, to carry out reconstruction with double surface dressing and widening at trading centers with a base case Net Present Value (NPV) of US$2.5 million at 12 percent discount rate and an Economic Internal Rate of Return (EIRR) of 16.6 percent. Appropriate sensitivity analysis has been undertaken predicating defined changes in key parameters of interest, suggesting that the economic viability is robust and not significantly sensitive to the variations in key parameters.

(b) The improvements at the Border Crossings

90. This component proposes to design and introduce enhancements for improvements in infrastructure and operations at the Songwe border crossing between Tanzania and Malawi, and at the Dedza and Mwanza border crossings between Malawi and Mozambique, to allow potential operations as OSBP. A diagnostic[49] of the Songwe border crossing revealed a lack of interagency co-operation, no structured sharing of information, no co-ordination in operating hours between agencies on the same and opposite sides of the border, insufficient parking space, no Information and Communication Technology (ICT) connectivity, and a lack of coverage and necessary equipment for physical inspections. Average crossing times for imports into Malawi are 24/19 and 6.5 hours respectively for the three border crossings, but with a significant standard deviation.

91. The costs and benefits have been valued at 2014 prices. The former include the capital costs necessary for the physical and institutional improvements at the border. The resulting benefits are the time savings from loaded commercial traffic entering Malawi, realized from the improved efficiency at the border crossing. The benefits to empty commercial traffic, exiting commercial traffic, and leisure/passenger traffic are omitted at this stage. The cost of each additional day of delay has been estimated to be as much as US$200-400, according to earlier research.[50] Based on this work, we assume the time savings to loaded commercial traffic to be valued at US$12.50 per hour. Traffic studies carried out over the last twenty years have revealed that Malawi has an Average Annual Daily Traffic (AADT) growth rate of four percent. The stylized assumption is that the traffic at the border crossings will grow at the same rate over the appraisal period.

92. A 20-year appraisal period has been selected for the analysis of this component, following a four year construction period commencing in 2016. Project benefits have therefore been forecast for twenty years after the new OSBPs have been opened. A discount rate of 12 percent was applied. In the analysis, all project costs and benefits have therefore been

[48] Further details on the economic analysis are presented in Annex 5.
[49] SATH (2011) *IBM – Kasumulu/Songwe*.
[50] Arvis, J.F., G. Raballand and J.F. Marteau (2010) *The cost of being landlocked: logistics costs and supply chain reliability*, The World Bank Group.

discounted back to 2014 at the selected discount rate. The simplistic analysis assumes no residual value for the facilities at the upgraded border crossings at the end of the appraisal period, which is considered to be a conservative assumption. The results of the economic analysis are presented in Table 2.

Table 2: Economic Appraisal Summary: Improvements at the border crossings[51]

Option	EIRR (%)	NPV (US$ mln)
Improvements at Dedza border crossing	41	27.6
Improvements at Mwanza border crossing	21	2.35
Improvements at Songwe border crossing	35	7.47
Total for the investments in the border crossings	**33**	**12.47**

93. The indicative NPV for the proposed investments at the border crossings, using a 12 percent discount rate, has been estimated at US$12.47 million with an EIRR of 33 percent. Appropriate sensitivity analysis has been undertaken and has revealed the results to be robust to changes in the key parameters of interest. More detailed economic analysis will be undertaken for this component as the detailed design is completed, during implementation, when the specific interventions are known.

Summary of the economic analysis of the SATTFP

94. The following table summarizes the economic analysis of the two main components of the SATTFP SOP2 in Malawi:

Table 3: Economic Appraisal Summary: SATTFP SOP2
(NPV US$ millions, EIRR %)

	NPV	EIRR
Karonga – Songwe road section	2.5	16.6%
Border crossings at Songwe, Dedza, and Mwanza	12.47	33%
Total	**14.97**	

Source: Bank staff.

95. The total NPV for the SATTFP – SOP2, using a 12 percent discount rate, has been estimated at US$14.97 million, and EIRRs of 16.6 percent for the road section rehabilitation and 33 percent for the border crossing improvements.

96. ***Greenhouse Gas (GHG) Accounting.*** The rehabilitation of Karonga – Songwe road section using Option 5 would result in 2 percent savings in GHG emissions, with estimated

[51] Muloza border crossing has not been included in the economic analysis at this stage, due to its late inclusion in the project, and the lack of an a priori diagnostic. However, the latter, and a robust economic analysis, will be undertaken before moving forward with any investment in the infrastructure at the crossing.

decrease in total vehicle emissions of -4,028 t-CO2 over a 20 year period. In monetary value, the NPV of carbon emissions from the investment in road improvements is estimated at US$98,000.

B. Technical

97. ***The Karonga – Songwe section of the M1 Road.*** The 46 km Karonga-Songwe section of the North-South Corridor (M1 road in Malawi) is located near the northern border between Malawi and Tanzania. The existing road was constructed between 1987 and 1990. The first half of the road from Karonga is on an embankment following the lake shore across the flat alluvial plains. The second half of the road enters rolling terrain at the edge of the rift valley, ending at the Border Post on the Songwe River. Currently the road is in poor condition with some sections remaining in fair condition. The existing pavement comprises a crushed stone base on a gravel sub-base of varying quality. It is evident that the base was not well compacted on some sections. The surfacing is double surface dressing which has become brittle and cracked and has been resealed in some places. Typical distress seen includes: (a) aged surface and brittle bitumen binder no longer providing an effective seal; (b) signs of cracking which has resulted in water ingress into the pavement leading to all forms of distress; (c) curbs on high embankments which have restricted the flow of water off the road due to inadequate maintenance of the embankment chutes, leading to significant rut development combined with all other distress indicators in the outer wheel path; (d) poor drainage which leaves runoff ponded against the embankment for extended periods of time, thus inducing seepage into embankment, and (e) uncut grass which has encroached on the shoulders resulting in reduced available width and danger to pedestrians and cyclists. There are three multi-span concrete bridges along the road, but all of these structures are in good condition, though requiring minor repairs. The pavement rehabilitation solution requires an overlay in order to accommodate the anticipated traffic load expected during the design period. In addition, approximately one third of length of the road pavement will need to be reconstructed. The interventions will include a mix of reconstruction and overlay with widening and surface dressing with drainage improvements to complete rehabilitation to 7 meter carriageway and 2 meter shoulders on each side.

98. ***Accident Blackspot Intervention*** will support the alleviation of seven priority accident blackspots along the North-South Corridor to mitigate the risk of increased road accidents. Five of the seven blackspots are located on the section of the M1 road between Lilongwe and Blantyre. The proposed road safety measures include: (a) speed management and traffic calming in trading centers and villages (i.e. speed limit signs and road markings, gateway and rumble strips indicating to the driver that he is entering a village, access control speed humps, narrowing by central traffic islands, and bus bay and parking areas); and (b) provisions for pedestrian facilities (i.e. footpaths, shoulders, and pedestrian crossing facilities).

C. Financial Management

99. The RA will be the implementing agency for the IDA credit. The RA will act as the operational link between the IDA and GoM on matters related to implementation aspects of the project. The RFA will manage the funds under the proposed project to be implemented by the RA. As part of project preparation, a full financial management assessment was carried out for the RFA in accordance with the Financial Management Practices Manual issued by the Financial

Management Sector Board on March 1, 2010. The assessment indicates that the RFA has adequate financial management arrangements to manage SATTFP SOP2 financial operations. The RFA and the RA are currently involved in implementing a World Bank funded project and are therefore already familiar with Financial Management (FM) and disbursement requirements for World Bank funded projects. Overall, the Financial Management assessment concluded that the RFA's financial management arrangements meet the Bank's minimum requirements under OP/BP 10.00. Therefore, the residual risk rating for the RFA is Moderate. The details of the assessment are in Annex 3.

D. Procurement

100. All Procurement will be carried out in accordance with the World Bank *Guidelines: Procurement of Goods, Works, and Non Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers,* dated January 2011, Revised July 2014; *Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers,* dated January 2011, Revised July 2014; *Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD* Loans *and IDA Credits and Grants*, dated October 15, 2006 and revised in January 2011, and provisions stipulated in the Financing Agreement. The RA will be responsible for all procurement activities and will also carry out the oversight function in procurement and contract management activities.

101. Public Procurement in Malawi is governed by the Public Procurement Act of August 2003. The Act requires procurement Regulations to provide, *inter alia*, threshold for use of various procurement methods, bidding and bid evaluation procedures and contract management. The Law further established the Office of Director of Public Procurement (ODPP) with oversight for public procurement. The Office became operational in 2005 with the appointment of the Director and other substantive officers. The GoM also established Internal Procurement Committees (IPC) and Specialized Procurement Units (SPU) in all Procuring Entities including the Reserve Bank of Malawi as the responsible bodies for procurement. Procurement Regulations and Desk Instructions have been distributed to all procuring entities. The Office of Director of Public Procurement has also established a dedicated website for sharing of information, placing of adverts and notification of awards to the general public.

102. Procurement under the Roads Authority is guided by the Malawi Public Procurement Law of August 2003. The Office of Director of Public Procurement issued a number of standard bidding documents (SBD), the use of which is mandatory, covering works, goods, and services. The Office further issued desk instructions, RFP and form of contract for Consulting Services as well as request for quotations for goods, works and services. The Bank had reviewed the documents and they were found to be generally consistent with Bank Guidelines and may be used under National Competitive Bidding (NCB) procedures with due attention to some issues related to clarity of the evaluation criteria, award to the lowest evaluated responsive and qualified bidder, participation of foreign bidders, domestic preference and advocacy for artificial division of lots to promote participation of small enterprises in National Competitive Bidding and the Registration or Classification that should not be used as criteria for bidding.

103. An assessment of the capacity of the implementing agency, RA, to implement all procurement actions for SOP2 was undertaken on December 8, 2013. The assessment reviewed the organizational structure, functions, staff skills and experiences, and adequacy for implementation of the project. The RA has previous experience with World Bank financed projects (Road Maintenance and Rehabilitation Project (2000- 2004) and Infrastructure Service Project, which closed in 2012, and the ongoing Additional Financing under Agriculture Development Support Project. The RA's procurement team has adequate knowledge of World Bank procurement procedures as they are implementing a road component under the Additional Financing of Agriculture Development Support Project. However, the existing procurement staff need to improve their skills through short courses on procurement organised by ESAMI or other institutions within the region. There is also need to include in the training program staff from other key departments who will be closely associated with the Road Component to support procurement in terms of preparation of the required documents, such as bid specifications and Terms of Reference. The overall project risk for procurement was assessed Moderate, as procurement systems are in place but they need improvement.

E. Social (including Safeguards)

104. The main adverse social impacts are site specific and transient and relate to Components 1, 2 and 3 of the project: (i) removal of illegal structures (business buildings, private houses, fences, public amenities, crops); (ii) temporary loss of business by traders along the highway due to construction obstruction; (iii) loss of income by farmers along the road due to crop removal from encroached plantings in the right of way (ROW); (iv) utility services such as water supply pipes, electrical reticulation and telecommunications lines will also need to be relocated due to the construction works; (v) increased risk of traffic accidents for road users and residents during the construction period and possible increase in road traffic injuries following improvements of the road as drivers may increase speed and engage in more risky behavior; and (vi) increased incidence of HIV/AIDS given interactions between transient construction workers, road users, commercial sex works and local residents.

105. The Involuntary Resettlement Policy (OP/BP 4.12) is triggered despite the fact that the interventions are expected to be within the existing ROW for the road infrastructure component and within the footprint of the existing facilities at the border crossings as well as the health facilities for the trade facilitation and social infrastructure components respectively. However, the design for the road works is ongoing and some of the related infrastructure such as access roads and queries, etc. could potentially require additional land. Moreover, there are encroachments within the ROW in terms of crops, trees, and a limited number of dwelling/buildings. Finally, there are currently settlements within the road reserve, which includes area extending 30 meters from the middle to both sides of the road (in line with the Malawian legislation for highways). A RAP has been prepared for the Karonga – Songwe road rehabilitation project. Currently, it is estimated that there are a total of 230 affected people whose houses, farms and/or other property will be affected by the anticipated land acquisition, and displacement for the project will affect shelter and livelihood of some of the local community members. Also, 240 ha of cultivable land will be required for the project. A Resettlement Management Framework (RMF) has been developed by the RA for the Project and will guide the preparation of all RAPs in relation to other works financed under the project if any additional

land acquisition is found to be required based on the respective designs. All costs associated with expropriation or compensation is to be borne by the GoM. The RMF has been disclosed both in the country and in the Infoshop on February 10, 2015; and the RAP has been completed, consulted upon and disclosed in the country on February 24, 2015 and in the Infoshop on February 25, 2015.

106. The project also presents many social and health benefits including.: (i) reduced risk of HIV/AIDS transmission; (ii) reduction in road fatalities and injuries; (iii) increased employment and opportunities for income generation for skilled and unskilled workers during the construction phases; (iv) better access to market for farm producers along the road and growth in services provision; (v) indirect employment opportunities and opportunities for income generation for local residents close to the works sites from the provision of food and beverages to construction workers; and (vi) indirect employment opportunities and opportunities for income generation for local residents in the hinterland of the reconstructed roads and border crossings from the provision of food and beverages to users.

107. In addition, it is anticipated that road improvements will help improve access to both health facilities and emergency health services. Road improvements can contribute to lowering transportation costs that may deter many poor people and HIV infected patients from accessing proper care. Evidence from Malawi has revealed that transportation costs can add significant economic burden to accessing needed care. For example, the payment of even just one US$1.00 for a return trip to access an HIV-related intervention like an anti-retroviral treatment (ART) site will account for at least 25 percent of weekly net-revenue.[52]

F. Environment (including Safeguards)

108. The main adverse environmental impacts are site specific and transient and relate to the proposed reconstruction of the Karonga – Songwe road. The main negative impacts include the following: a) creation of nuisance in the form of dust and noise due to the construction activities for road users, residents, and avifauna and fauna in the hinterland; b) final disposal of excess material; c) use of borrow pits; d) dumping of construction material and spillage of machine oil, lubricants, etc.; e) loss of ecological and productive values; f) hydrological and water resources; g) water pollution; and h) effects post project maintenance. In some locations, the works may require the contractor to establish diversion for the traffic, but these diversions, even where necessary, are also envisaged to fall entirely within the ROW. The detailed design requires the contractor to use existing borrow pits for all works, but if some new sites are identified, they will be accessed by the construction of temporary access roads. The interventions to address the identified accident blackspots are also expected to be entirely within the 30 meter ROW. The proposed refurbishment of the health centers and the improvements at the border crossings are also envisaged to take place either within the footprint of the existing facilities, or on publicly owned land.

[52] Zachariah R, Harries AD, Manzi M, Gomani P, Teck R, et al. (2006) Acceptance of Anti-Retroviral Therapy among Patients Infected with HIV and Tuberculosis in Rural Malawi Is Low and Associated with Cost of Transport. PLoS ONE 1(1): e121. doi:10.1371/journal.pone.0000121

109. The Project has been assigned the Environmental Category B - Partial Assessment, since it encompasses the reconstruction of the Karonga – Songwe road section, minor new construction for accident blackspots, and the refurbishment of existing facilities at the health centers and at the border crossing. All interventions are within the existing ROW of the road, or within the footprint of the current facility, or on public land. The prevention, mitigation and/or compensation measures are also known and easily implementable.

110. The project triggers OP/BP 4.01 (Environmental Assessment) and Physical and Cultural Resources (OP/BP 4.11). An Environmental and Social Management Framework (ESMF) was developed by the RA in order to ensure the compliance with the Bank's environmental assessment policy (OP/BP 4.01). The Physical and Cultural Resources Policy (OP/BP 4.11) is triggered given Malawi's rich archaeological and cultural resources and the likelihood of the Project to support works requiring excavations. The ESMF includes Chance Find Procedures (CFP) as well as measures to screen for and manage potential impacts on cultural heritage or property that could be affected by neighborhood development plans. In addition, some investments under the project are expected to take place near the international border between Malawi and Tanzania, but no impact on the river is expected. Therefore, the OP/BP 7.50 (Projects on International Waterways) is not triggered. The location of the project interventions is not expected to have any negative impacts on natural habitats, including critical or sensitive areas; therefore, the OP/BP 4.04 (Natural Habitats) is not triggered.

111. The following safeguard documents have been prepared and under preparation for the project: An ESIA for the Karonga – Songwe road section is currently under preparation, including a detailed Environmental Management Plan (EMP). The EMP specifies mitigation measures for various potential adverse impacts in the pre-construction, construction and operation phases of the project. Funds for implementing the EMP are also included in the project cost estimates. The ESIA for the Karonga – Songwe section has been completed, consulted upon, and disclosed in the country on February 24, 2015 and in the Infoshop on February 25, 2015.

112. In addition, as mentioned before, an ESMF has been prepared consistent with Malawian law and World Bank Safeguards Policies. This instrument should be applied in the alleviation of accident black spots and the refurbishment of health centers and facilities at the border crossing. The ESMF was consulted upon with the main stakeholders on September 24, 2014, in Lilongwe, Malawi, and disclosed in the country and in the Infoshop on February 10, 2015. The environmental studies required for other project interventions will be developed once the respective feasibility studies and designs for these sub-projects are known.

113. ***Climate Change Co-benefits.*** The project has been screened for short and long-term climate change and disaster risk using the Climate and Disaster Risk Toolkit. Given the relatively low exposure to climate and geophysical hazards at project location, the risk has been found low. However, the climate resilience related specifications will be incorporated in the design of all physical interventions under the project.

G. Gender Issues

114. The program and project will benefit both women and men, children and the elderly by improving access to markets, health services, and better access to additional social services (school, administration). Particular attention will be given to border crossings and health facilities, where the designs will be prepared cognizant of the needs of women. In the former case particularly, the emphasis will be on ensuring safe and enhanced access to markets for rural women, which represent the majority engaged in informal cross-border trade.

115. Due to the gendered nature of the impact of both the HIV/AIDS epidemic and road traffic injuries, it is expected that the project specific activities will benefit both women and men. The HIV/AIDS awareness activities will contribute to limit the behavioral risks that can be associated with increased HIV transmission, with a likely greater impact on women as they tend to be a more vulnerable group for HIV transmission in Malawi. Likewise, limiting road traffic fatalities will likely have a greater impact on men, who tend to bear the heavier burden of fatalities than women in Malawi.

H. World Bank Grievance Redress

116. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

I. Other Safeguards Policies Triggered

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment (OP/BP 4.01)	[X]	[ ]
Natural Habitats (OP/BP 4.04)	[ ]	[X]
Pest Management (OP 4.09)	[ ]	[X]
Indigenous Peoples (OP/BP 4.10)	[ ]	[X]
Physical Cultural Resources (OP/BP 4.11)	[X]	[ ]
Involuntary Resettlement (OP/BP 4.12)	[X]	[ ]
Forests (OP/BP 4.36)	[ ]	[X]
Safety of Dams (OP/BP 4.37)	[ ]	[X]
Projects on International Waterways (OP/BP 7.50)	[ ]	[X]
Projects in Disputed Areas (OP/BP 7.60)*	[ ]	[X]

* *By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas*

Annex 1: Results Framework and Monitoring
Project Name: Southern Africa Trade and Transport Facilitation Program - SOP2 (P145566)

Project Development Objectives

PDO Statement

The objective of the Project is to facilitate the movement of goods and people along the North-South Corridor and at the key border crossings in Malawi, whilst supporting improvements in road safety and health services along the corridor.

These results are at | Project Level

Project Development Objective Indicators

Indicator Name	Baseline	Cumulative Target Values						
		YR1	YR2	YR3	YR4	YR5	YR6	End Target
Reduction in average journey time for an imported container (TEU) from the Songwe/Kasumulu border with Tanzania to Lilongwe in Malawi on the corridor (Hours)*	6	6	6	6	6	5	5	5.00
Reduction in average time required for trucks to cross the borders from/to Malawi to Tanzania at Songwe, and to Mozambique at Dedza, Muloza and Mwanza (Hours)	TZ border: 24 MZ border: 6 (avge)	24/6	22/6	20/6	16/5	12/5	12/5	12/5
Reduction in total vehicle operating costs (VOC) on Karonga – Songwe road section (Percentage)	0.00	0.00	0.00	0.00	5.00	10.00	15.00	15.00

Number of users benefitting from new/improved health centers on Lilongwe – Blantyre section, percentage of which female* (Number)	0	0	0	0	500	1000	1500	1500
Reduction in the number of fatal accidents on the M1 corridor per year (Number)	859	859	775	641	579	550	500	500

Intermediate Results Indicators

Indicator Name	Baseline	Cumulative Target Values						
		YR1	YR2	YR3	YR4	YR5	YR6	End Target
Roads rehabilitated, Non-rural (Kilometers) - (Core)	0.00	0.00	0.00	10.00	20.00	30.00	46.00	46.00
Roads in good and fair condition as a share of total classified roads (Percentage) - (Core)	83.00	83.00	83.00	83.00	85.00	85.00	87.00	87.00
Size of the total classified network (Kilometers - Sub-Type: Supplemental) - (Core)	2809.00						2,809.00	2,809.00
Reduction in the number of accident black spots on the corridor in Malawi (Number)	70	0	0			63	63	63
Health facilities constructed, renovated, and/or equipped (Number) - (Core)	0	0	0	5	10	15	20	20
Number of Emergency Vehicles	0	0	0	0	5	10	10	10

provided (Number)								
The modernization of the physical infrastructure at key border crossings - Songwe, Dedza, Muloza, and Mwanza (Number)	0	0	0	0	1	2	4	4
Reduction of number of border agencies (Number)	14	0	0			5	5	5
Establishment of National Single Window (Yes/No)	No					Yes	Yes	Yes
National Transport Masterplan adopted (Yes/No)	No			Yes	Yes	Yes	Yes	Yes
Integrated accounting and contract management software installed and operationalized in the RA (Yes/No)	No			Yes	Yes	Yes	Yes	Yes
Establishment of Road Asset Management System in the RA (Yes/No)	No			Yes	Yes	Yes	Yes	Yes
Number of RA and MoTPW staff trained (Number)	0				3	5	10	10

Indicator Description

Project Development Objective Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Reduction in average journey time for an imported container (TEU) from the Songwe/Kasumulu border with Tanzania to Lilongwe in Malawi on the corridor	Core indicator intended to measure progress towards travel time savings.	Annual	- Survey of truck companies & freight forwarders - Trip surveys	RA/MRA/DCC
Reduction in average time required for trucks to cross the borders from/to Malawi to Tanzania at Songwe, and to Mozambique at Dedza, Muloza and Mwanza	Progress towards reduction of non-tariff barriers to trade and transit along the NSC Corridor	Annual	- Survey of truck companies & freight forwarders - Trip surveys	RA/MRA/DCC
Reduction in total vehicle operating costs (VOC) on Karonga – Songwe road section	Progress towards improved quality of the Karonga - Songwe road section and benefits to the road users.	Annual	Data from road surveys collected by road agencies	RA
Number of users benefitting from new/improved health centers on Lilongwe – Blantyre section, percentage of which female*	Core indicator intended to measure progress towards improvements of access of local population to health services for HIV/AIDS and trauma care	Annual	Supervision missions & project progress reports	RA/MoH
Reduction in the number of fatal accidents on the M1 corridor per year	Progress towards improved road safety measures along the NSC corridor in Malawi	Annual	- Supervision missions & project progress reports - DRTSS database	RA/DRTSS

Intermediate Results Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Roads rehabilitated, Non-rural	Kilometers of all non-rural roads reopened to motorized traffic, rehabilitated, or upgraded under the project. Non-rural roads are roads functionally classified in various countries as Trunk or Primary, Secondary or Link roads, or sometimes Tertiary roads. Typically, non-rural roads connect urban centers/towns/settlements of more than 5,000 inhabitants to each other or to higher classes of road, market towns and urban centers. Urban roads are included in non-rural roads.	Annual	Supervision mission & project progress reports	RA
Roads in good and fair condition as a share of total classified roads	Percentage of the total classified road network in the project area that is in good and fair condition depending on the road surface and the level of roughness. Classified roads are the roads that have been included in the roads legislation as public roads. Please note that this indicator requires supplemental information Supplemental Value: Total classified network in the project area (KM). The supplemental value is the total classified network in the project area. Classified roads are the roads that have been included in the roads legislation as public roads.	Annual	Data from road surveys collected by road agencies	RA
Size of the total classified network	Classified roads are the roads that have been included in the roads legislation as	No description	No description provided.	No description provided.

	public roads.	provided.		
Reduction in the number of accident black spots on the corridor in Malawi	Measurement of progress towards improved road safety measures on the corridor	Annual	- Supervision missions & project progress reports - DRTSS database	RA/DRTSS
Health facilities constructed, renovated, and/or equipped (number)	This indicator measures the cumulative number of health facilities constructed, renovated and/or equipped through a Bank-financed project.	Annual	- Data requested from MoH; - Three surveys (baseline, midterm and completion)	RA/MoH
Number of Emergency Vehicles provided	Measurement of progress towards improved emergency response to road traffic accident victims and piloting of emergency response along the Lilongwe-Blantyre section of Corridor	Once	Supervision missions & project progress reports	RA/DRTSS
The modernization of the physical infrastructure at key border crossings - Songwe, Dedza, Muloza, and Mwanza	Progress towards improved transit processing at border crossings	Once	Supervision missions & project progress reports	RA/MRA
Reduction of number of border agencies	Progress towards improved transit processing at border crossings	Annual	Supervision missions & project progress reports	RA/MRA
Establishment of National Single Window	Measure of progress towards improved transit processing at border crossings.	Once	Supervision missions & project progress reports	RA/MRA
National Transport Master Plan adopted	Progress towards strengthened institutional framework for transport	Once	Supervision missions & project progress reports	MOTPW
Integrated accounting and contract management software installed and operationalized in the RA	Progress towards strengthened capacity in accounting and management of road contracts	Once	Supervision missions & project progress reports	RA
Establishment of Road Asset Management System	Progress towards more sustainable and improved road asset management and	Once	Supervision missions & project progress reports	RA

in the RA	maintenance			
Number of RA and MoTPW staff trained	Measurement of improved capacity of RA and MoTPW	Annual	Supervision missions & project progress reports	RA/MoTPW

*Confirmed as a Core Sector Indicator (see further http://coreindicators)

Annex 2: Detailed Project Description
MALAWI: Southern Africa Trade and Transport Facilitation Program - SOP2 (P145566)

1. The Second phase of the SOP will focus on Malawi and the NSC, which enters Malawi at Songwe on the border with Tanzania and provides a strategically important road connection for Malawi to the port of Dar es Salaam. In addition to offering an alternative to the ports in Mozambique, the corridor also provides Zambia with a link to the port of Nacala and Beira. The components of this second phase include:

Component 1: Improving Road Infrastructure (US$28 million equivalent)

2. The first component comprises two sub-components to strengthen asset management and improve the condition of the road network:

3. ***Component 1(a): The Karonga – Songwe Section of the M1 Corridor (US$25 million equivalent).*** This sub-component will support the improvement of the 46 km Karonga – Songwe section of the M1 road, which forms part of the North-South Corridor. The road is classified as a Main Road (M1) reflecting its importance as an international corridor. The pavement condition along the 970 km of the NSC (M1) in Malawi between Songwe, Lilongwe, Blantyre and Mwanza is generally in fair to good condition, except for (i) Karonga – Songwe (46 km), (ii) Kacheche - Chiweta (70 km), and (iii) Mzimba Turn off - Mzuzu - Kacheche (147 km), which are now in need of a full structural intervention to return them to an economically maintainable condition. Of the three sections, the GoM has requested the funding for the rehabilitation of the Karonga – Songwe Road, which has been identified as the highest priority.

4. The Karonga – Songwe Road was constructed between 1987 and 1990 with funding from the European Development Fund (EDF). Currently the road is in poor condition with some sections remaining in fair condition. The existing pavement comprises a crushed stone base on a gravel sub-base of varying quality. It is evident that the base was not well compacted on some sections. The surfacing is double surface dressing, which has become brittle and cracked and has been resealed in some places. Typical distress seen includes: (a) aged surface and brittle bitumen binder no longer providing an effective seal; (b) signs of cracking which has resulted in water ingress into the pavement leading to all forms of distress; (c) curbs on high embankments which have restricted the flow of water off the road due to inadequate maintenance of the embankment chutes, leading to significant rut development combined with all other distress indicators in the outer wheel path; (d) poor drainage which leaves runoff ponded against the embankment for extended periods of time, thus inducing seepage into embankment, and (e) uncut grass which has encroached on the shoulders resulting in reduced available width and danger to pedestrians and cyclists. There are three multi-span concrete bridges along the road, but all of these structures are in good condition, though requiring minor repairs.

5. The Karonga – Songwe section is divided into two sections in terms of road geometric design. The first subsection (14 km) from south to north was constructed with a 3.5 meter carriageway and 1.5 meter shoulder, and the second subsection (32 km) was constructed with a 3.3 meter carriageway and 1.5 meter shoulder. The horizontal and vertical alignments comply with the minimum requirements of the Southern Africa Transport Communication Commission

(SATCC) standards. However, since the traffic on the road is characterized by significant numbers of non-motorized road users including pedestrians and cyclists, it is recommended that it should be widened to include 2 x 3.5 meter wide lanes and 2 meter wide sealed shoulders to accommodate safe movement of the non-motorized traffic. This option will provide a safer environment for all road users. To mitigate increased road safety risks to local population and non-motorized road users due to increased volumes and traffic speeds along the section, the interventions will include implementation of proper road safety measures and will be subjected to an independent road safety audit in the design stage.

6. A number of investigations have been carried out to analyze the existing pavement conditions, to select the materials to be used in the road rehabilitation, and to determine the structure required to carry the traffic load expected during the design period. The results of the Dynamic Cone Penetrometer (DCP) Survey, the Falling Weight Deflectometer (FWD) Deflection Survey, the Rut depth measurements and the Laboratory tests have showed that there are large variations in the quality among all the layers of pavement. Consequently, a pavement structure has been designed, taking into account a maximized re-use of the existing asset through partial reconstruction, remedy of the pavement drainage system, overlaying and resealing. The proposed intervention will include reconstructing failed sections (41 percent of the road) and overlaying to strengthen sections (59 percent of the road) with double surface dressing in the range of 9.5 mm – 19.0 mm and widening with drainage improvements to complete rehabilitation.

7. The EIB has confirmed their interest in potentially funding the rehabilitation of the other priority sections of the M1 road – the 70 km between Kacheche and Chiweta and the 147 km between Mzimba Turn off, Mzuzu and Kacheche. The funding for the feasibility studies for these sections is included in component 4, including detailed design and Environmental Impact Assessment.

8. ***Component 1(b): Accident Blackspot Intervention (US$3 million equivalent).*** This sub-component will support the mitigation of seven priority accident blackspots along the North-South Corridor to mitigate the risk of increased road accidents. The road safety study funded by the GRSF completed the following: (a) a risk based Road Safety Assessment of the paved Main Road network in Malawi (approximate length 2,809 km) to identify a prioritized list of accident blackspots based on economic criteria; (b) preliminary designs and cost estimates for the priority blackspot interventions; and (c) a Manual for Safe Road Design, suitable for the Malawian context, for local stakeholder agencies to use to identify, prioritize and design priority interventions to address blackspots on the network.

9. The study identified 70 accident blackpots. Almost 400 fatal accidents and 250 serious accidents have been registered on these 70 blackspots over the period of 2008-2012. The improvement of road safety at these locations is important for reducing fatalities on Malawian roads, and are a key part of the DRTSS strategy. The blackspots have been ranked according to the Benefit-Cost ratio where the blackspots treatment with highest reduction in fatality and serious accident costs per investment is ranked highest as described in the methodology. If all blackspots were to be implemented, almost 30 registered fatal accidents and 17 serious accidents

could be saved annually. Furthermore, the safety measures will reduce the number of accidents not registered by the police.

10. The consultants presented their provisional findings at a workshop in Lilongwe on March 12, 2014, to 25 stakeholders, including Ministry of Transport and Public Works, Roads Authority, Road Traffic Directorate, National Road Safety Council, Ministry of Health, and relevant private associations. The stakeholders identified and confirmed seven blackspots from the prioritized list of over 70 as the most important and to be included in the project. Given that five of the seven blackspots are on the section of the M1 road between Lilongwe and Blantyre, the option of focusing all the road safety interventions on this section and carefully measuring outcomes was proposed and agreed. The proposed road safety measures include: (a) speed management and traffic calming in trading centers and villages (i.e. speed limit signs and road markings, gateway and rumble strips indicating to the driver that he is entering a village, access control speed humps, narrowing by central traffic islands, and bus bay and parking areas); and (b) provisions for pedestrian facilities (i.e. footpaths, shoulders, and pedestrian crossing facilities).

11. This sub-component will also include: (a) the preparation of detailed designs of interventions on the identified blackspots, subjected to independent road safety audit; (b) the preparation of tender documents for the proposed intervention measures; and (c) the subsequent implementation of the priority blackspot treatments.

Component 2: Improving Social Infrastructure (US$5.5 million equivalent)

12. The second component comprises two sub-components to mitigate the social costs associated with increased transport volumes on key regional trading corridors:

13. ***Component 2(a): Improving management of road safety (US$2.0 million equivalent).*** The first sub-component involves supporting the implementation of the recommendations of the draft results focused road safety strategy, which is now being prepared with support from the European Union. The draft strategy covers all the important road safety management areas such as: (a) institutional coordination on road safety management, (b) traffic law enforcement, (c) accident analysis and data management, (d) road safety education and a nation-wide campaign, (e) emergency response, and (f) physical road environment.

14. This sub-component proposes to provide support to the design and implementation of pilot road safety projects in support of defined targets, including those implemented under component 1(b) above. It is provisionally expected to include: (a) the purchase of equipment for the DRTSS (handheld speed detection radars, breathalyzers), (b) the undertaking of baseline surveys (seatbelt wearing, speeding, drunk driving, etc.), (c) an educational road safety campaign, (d) a study to estimate the socio-economic cost of road traffic accidents, (e) the purchase and installation of accident analysis software, (f) the procurement of mobile weigh scales; and (g) technical assistance to design and support the DRTSS in implementing the road safety pilot on Lilongwe-Blantyre section (under component 2(b)).

15. ***Component 2(b): Improving health services and emergency response (US$3.5 million equivalent).*** This sub-component will refurbish and extend priority health facilities in trauma

care, and provide technical assistance to develop the capacity of the staff in the local health facilities, in HIV/AIDS awareness, counseling and testing. It will also support the piloting of an emergency response service for road traffic accidents as a pilot on the Lilongwe - Blantyre road section of the M1 corridor, as recommended by the assessment of trauma care and emergency response to road traffic accidents (RTAs) carried out with funding from the GRSF.

16. The assessment covered the following aspects of provision of emergency services and trauma care: (a) communications, (b) first response, (c) pre-hospital emergency medical services, and (d) in-hospital trauma care. The costed improvement plan developed by the study will be implemented as a pilot along the Lilongwe – Blantyre section to complement the road safety interventions envisioned under component 1(c) and 2(a) above. The consultants presented their findings and recommendations to the Stakeholders in Malawi and Tanzania, and agreed on the implementable action plan for inclusion in the project. This sub-component is intended to mitigate the impact of the growth in transit traffic, facilitated by the SATTFP, on the resident population along the corridor.

Component 3: Improving Trade Facilitation (US$26.8 million equivalent)

17. The objective of this component is to reduce the cost of cross border transport by modernizing, simplifying and harmonizing the trade and transit procedures and policies. This is expected to be realized by the following provisional list of sub-components:

18. ***A feasibility study to assess options for establishing a NSW facility.*** This study will identify options, and the processes and additional resources required to establish the NSW.

19. ***Support for establishment of NSW.*** The sub-component will provide support to the GoM to establish NSW based on the option, key elements of development, the approach, and operational models recommended in the context of Malawi national situations. With support from the AfDB, the GoM is implementing the migration of its Customs clearance system from the current ASYCUDA++ to ASYCUDA World. This upgrade provides a flexible interface with different ICT systems and could potentially become an option for the platform of the NSW.

20. ***A feasibility study of the upgrading and modernization of border post facilities at Mwanza, Dedza, and Muloza.*** This study will identify and assess options to improve the physical infrastructure, the processes and the procedures, to implement the Cabinet Order to reduce the number of agencies at the border from 14 to 5 on the Malawi side, and the establishment of IBM. The study will also determine the enabling environment for Customs system interconnection between Malawi and Mozambique and will record actual and forecast volumes, the pattern of cross-border traffic, and a list of options with pros and cons as well as anticipated time and cost for realization. It will include preparation of a feasibility study, detailed design and necessary safeguard documents for three crossings at Mwanza, Dedza, and Muloza, and technical supervision and monitoring of civil works and safeguards for four crossings at Songwe, Mwanza, Muloza, and Dedza. Detailed feasibility study, design and safeguard documentation for the crossing at Songwe is being financed through ongoing SATTFP SOP1 in Tanzania for both sides of the border.

21. ***The upgrading and modernization of border post facilities at Songwe, Dedza, Muloza, and Mwanza border crossings.*** This sub-component encompasses improvement of infrastructure and operations of border post facilities at the Songwe on the Tanzania border, and at Mwanza, Muloza, and Dedza at the Mozambique border, and the introduction of IBM to address lack of interagency co-operation, no structured sharing of information, no co-ordination in operating hours between agencies on the same and opposite sides of the border, insufficient parking space, no Information and Communication Technology (ICT) connectivity, and a lack of coverage and necessary equipment for physical inspections. This component proposes to introduce enhancements at the four crossings to allow potential operation as OSBP. It will look to implement the recommendations of the DTIS Update (2014), the establishment of a functioning joint border committee, an OSBP, IBM, and address the problems of ICT connectivity at each border post. For Songwe-Kasumulu crossing, the Malawi Revenue Authority (MRA), the body responsible for border post operation and development, has signed a Bilateral Agreement with their Tanzanian counterparts (Tanzania Revenue Authority, TRA) on March 10, 2014, confirming the willingness of all parties to work towards the agreed objective and establishment of OSBP. A copy of the signed Agreement has been provided to the Bank. For the border posts at Mozambique border, a similar agreement with Mozambique will be needed to realize the full benefits, and the MIT is currently preparing a draft for signature. For the Dedza OSBP, a Memorandum of Intent was signed between Malawi and Mozambique in 2008. The Bank will support the signing of the Bilateral Agreements for all participating border crossings through the ongoing regional integration dialogue facilitated under the SATTFP program. This component will also include the provision of support to identify and draft any required amendments to the legal framework for the introduction of the improvements at the border crossing. Gender issues will be considered carefully during the design phase, to ensure that any intervention offers adequate protection for users, irrespective of gender.[53] The physical infrastructure investments in border post improvements will be implemented in parallel with the necessary institutional and operational reforms to reduce the number of agencies at the border from 14 to 5, in a manner consistent with the Cabinet order of the GoM, and commence the establishment of IBM.

Component 4: Institutional Strengthening and Implementation Assistance (US$8.7 million equivalent)

22. The fourth component will provide necessary project management, implementation assistance and capacity building to the RA, and strengthening of the institutional framework for transport. This complements the substantial ongoing program of technical assistance being provided by the EU in the sector. The specific activities to be funded through the project include:

(a) The procurement of consultants to prepare a National Transport Master Plan, to guide the sustainable development of the transport sector to 2030;

(b) The procurement of qualified consulting engineers to assist RA in the preparation of designs and supervision of works to mitigate the accident blackspots;

[53] The World Bank Group (2011d) *Gender Dimensions of Trade Facilitation and Logistics: A Guide Note* – Draft. International Trade Department, Washington D.C.

(c) The procurement of qualified consulting engineers to assist RA in the supervision of the implementation of civil works on the Karonga – Songwe section;

(d) The procurement of consultants to prepare the feasibility study, detailed design, ESIA/ESMP and RAP, if required, for the works on the other remaining priority sections of the M1 (Kacheche – Chiweta and Mzimba Turn off - Mzuzu - Kacheche), to be potentially funded by the EIB;

(e) The procurement of consultants to undertake a quality review of the processes of scheme identification, design, implementation, supervision and handover, together with the independent technical audit of works undertaken in the project;

(f) The procurement of consultants to operationally establish the road asset management system in the RA;

(g) The procurement of integrated accounting and contract management software to the RA;

(h) Support to the RA to assist the PIT in project implementation;

(i) A study to ascertain the structure, responsibilities and necessary resources for a network manager in the rail sector; and

(j) Capacity building and training in the Ministry of Transport and Public Works.

23. All equipment and training financed by the Project in respect of the border agencies and DRTSS is directly related to trade facilitation activities and road safety and do not include weapons, lethal equipment or any other police or military equipment of such nature or support for specific case investigations.[54] The equipment consists of physical facilities, office and information technology equipment, road safety equipment, and/or vehicles. The intervention is critical to the project at the regional level and to the overall economic development of Malawi and falls within the Bank's development mandate. The risk of political interference has been properly assessed and managed, after taking into account any mitigation measures. The risk of abuse of authority by border agencies in utilizing equipment provided under the Project to repress citizens is low. Mitigation measures to be implemented by the Project are: (a) improving customs internal reporting systems; (b) improving transparency, simplification and harmonization of customs procedures with the aim of, *inter alia*, reducing the opportunities for bribe demands at border crossing points; and (c) monitoring, reducing and disclosing publicly the number of road blocks.

[54] World Bank (2012b) *Staff Guidance Note: World Bank Support for Criminal Justice Activities*, A note prepared by the Justice Reform Unit of the Legal Vice Presidency.

Annex 3: Implementation Arrangements
MALAWI: Southern Africa Trade and Transport Facilitation Program - SOP2 (P145566)

Project Institutional and Implementation Arrangements

1. The project will be implemented by a dedicated team (Project Implementation Team, or PIT) of full-time employees of the RA supported by officials from the Treasury and RFA. The RA will be responsible for overall project management, procurement, and work in combination with the RFA on the financial management, and the preparation and submission of disbursement requests, as is the norm.

2. The RA was established by an Act of Parliament No. 3 of 2006. Though it is an independent statutory company, the organization reports to the MoTPW. The PIT consists entirely of full-time employees of RA and comprises a project manager, a procurement specialist, financial management specialist and project accountant. The RA will be the main implementing entity for the project activities, responsible for overall project management, formal reporting requirements, procurement, contract administration, safeguards, and work in combination with the RFA on the financial management, and the preparation and submission of disbursement requests. The PIT will draw on technical expertise both from in-house sources and from other relevant stakeholder bodies, including MRA for the border crossings and the NSW options study, MIT for the trade facilitation activities, DRTSS for the road safety improvements, MOH for the health services and emergency response improvements, and MoTPW for the development of National Transport Masterplan. The responsibility for monitoring environmental and social aspects will lie with RA's Environmental Management Unit (EMU), who will support the project in the environmental and social safeguard issues and coordinate with the PIT to ensure compliance with national regulations and the Bank's Safeguard policies.

3. The responsibilities of RFA will include, *inter alia*: (a) the management of the designated accounts; (b) financial management reporting of the overall project; (c) ensuring the execution of the audit of the project; and (d) preparation of quarterly financial reports..

4. The PIT will report to a PSC chaired by the MoTPW with representation from the MOH, DRTSS, MRA, and MIT. The PSC will be responsible for, *inter alia*, the review and validation of: (a) Annual Work Plans; (b) the Project's evaluation and supervision reports; and (c) the Project's financial management and accounting reports. The MoFEPD confirmed these arrangements to the Bank by letter dated February 7, 2014. The RA identified the named employees in the PIT by e-mail on March 13, 2014.

Financial Management, Disbursements and Procurement

Financial Management

5. A financial management assessment was carried out of the Road Fund Administration which will manage the funds under the proposed project to be implemented by the Roads Authority. The objective of the assessment was to determine: (a) whether the entity has adequate FM arrangements in place to ensure the funds will be used for the purposes intended in an

efficient and economical manner and the entity is capable of correctly and completely recording all transactions and balances related to the Project; (b) the Project's financial reports will be prepared in an accurate, reliable and timely manner; (c) the entity's assets will be safely guarded; and (d) the Project will be subjected to auditing arrangements acceptable to the Bank. The assessment complied with the Financial Management Manual for World Bank-Financed Investment Operations that became effective on March 1, 2010 and AFTFM Financial Management Assessment and Risk Rating Principles.

6. RFA FM systems are in place to enable project implementation and ensure funds are used for the intended purpose with efficiency and economy. The RFA and the RA are currently involved in implementing a World Bank funded project and are therefore already familiar with FM and disbursement requirements for World Bank funded projects. The Financial Management assessment concluded that the RFA's financial management arrangements meet the Bank's minimum requirements under OP/BP 10.00. The residual risk rating for the RFA is Moderate. The details of the assessment are summarized below.

7. ***Financial Management Arrangements:***

(a) **Budgeting arrangements:** RFA'S budgeting process is deemed to be adequate. The budgeting process will be informed by the project's annual work plans that will be agreed between the Bank and the project. The budget will be incorporated into the Sun accounting package, which RFA uses.

(b) **Accounting arrangements:** The RFA uses Sun accounting system for its operations and the same will be used for project operations. The system has a chart of accounts capable of capturing project components and disbursement categories. The staffing is adequate with three qualified staff. The procedures and policies are documented in an accounting manual.

8. ***Internal control and internal auditing arrangements***

(a) **Internal Auditing:** The RFA does have an internal audit department that is properly staffed consisting of both accounting and operational personnel. The Internal Audit Department reports to a committee of the Board of RFA.

(b) **Internal Control Systems:** Policies, procedures and internal controls are in the accounting manual. The recent audit report does not have serious accountability and control issues.

9. ***Financial Reporting Arrangements.*** The RFA will produce quarterly unaudited Interim Financial Reports (IFRs) for the designated accounts and the related project accounts. The IFRs are to be produced on a quarterly basis and submitted to the Bank within 45 days after the end of the calendar quarterly period. The reporting requirements will be incorporated into the accounting package to enable automatic generation of the IFRs.

10. The IFRs submitted to the Bank will have a section on Financial Reporting and Disbursement containing the following:

11. Reporting Section includes:

(a) Statement of Sources and Uses of Funds; and
(b) Statement of Uses of Funds by Project Activity/Component.

12. Disbursement Section includes:

(a) Designated Account (DA) Activity Statement;
(b) Bank Statements for both the Designated and Project Account;
(c) Summary Statement of DA Expenditures for Contracts subject to Prior Review; and
(d) Summary Statement of DA Expenditures not subject to Prior Review.

13. The project will also prepare the projects annual audited accounts/financial statements which must be submitted to the Bank within 6 months after the end of the accounting year, i.e. not later than December 31. The project will prepare its accounts in accordance with International Public Sector Accounting Standards.

14. The accounts/financial statements will comprise of:

(a) A **Statement of Sources and Uses of Funds/Cash Receipts and Payments,** which recognizes all cash receipts, cash payments and cash balances controlled by the entity; and separately identifies payments by third parties on behalf of the entity.

(b) The **Accounting Policies Adopted and Explanatory Notes**. The explanatory notes should be presented in a systematic manner with items on the Statement of Cash Receipts and Payments being cross referenced to any related information in the notes. Examples of this information include a summary of fixed assets by category of assets, and a summary of IFR Withdrawal Schedule, listing individual withdrawal applications; and

(c) A **Management Assertion** that Bank funds have been expended in accordance with the intended purposes as specified in the relevant World Bank Legal Agreement.

15. ***Auditing Arrangements.*** RFA and the Bank will agree on the ToRs to be used for recruitment of external auditors. The audited financial statements will be submitted to the Bank within 6 months after the end of the fiscal year along with the management letter.

16. ***Conclusion of the assessment.*** The conclusion of the assessment is that the financial management arrangements meet the Bank's minimum requirements under OP/BP10.02. The residual risk rating for the RFA is Moderate; hence the project will have an on-field supervision at least twice a year. The financial management action plan outlines the mitigating measures, which, if implemented, would strengthen the financial management arrangements.

Disbursements

Banking and Funds Flow Arrangements:

17. Funds flow arrangements for the project (through the bank accounts above) are as follows:

(a) The RFA will open a USD Designated Account with the Reserve Bank of Malawi or a commercial Bank acceptable to IDA and a corresponding Malawi Kwacha Holding Account at the Reserve Bank of Malawi. The authorized signatories for these accounts will be officials of the RFA and of the Ministry of Finance, Economic Planning and Development (MoFEPD). RFA will also open an operating bank account with a commercial bank acceptable to IDA.

(b) RFA in conjunction with RA will prepare a six-month cash flow forecast based on agreed work plans then submit a withdrawal application request to the Bank (IDA) through the MoFEPD. The forecast will include funds requirements for road construction to be implemented by RA.

(c) IDA will process the withdrawal application and the amount for road construction will be disbursed into the USD Designated Account.

(d) The funds will be transferred from the USD Designated Account into the Kwacha Holding Account as and when required in local currency.

(e) Project expenditure can be paid from either the Designated Account or Project Account.

IDA Disbursement Methods:

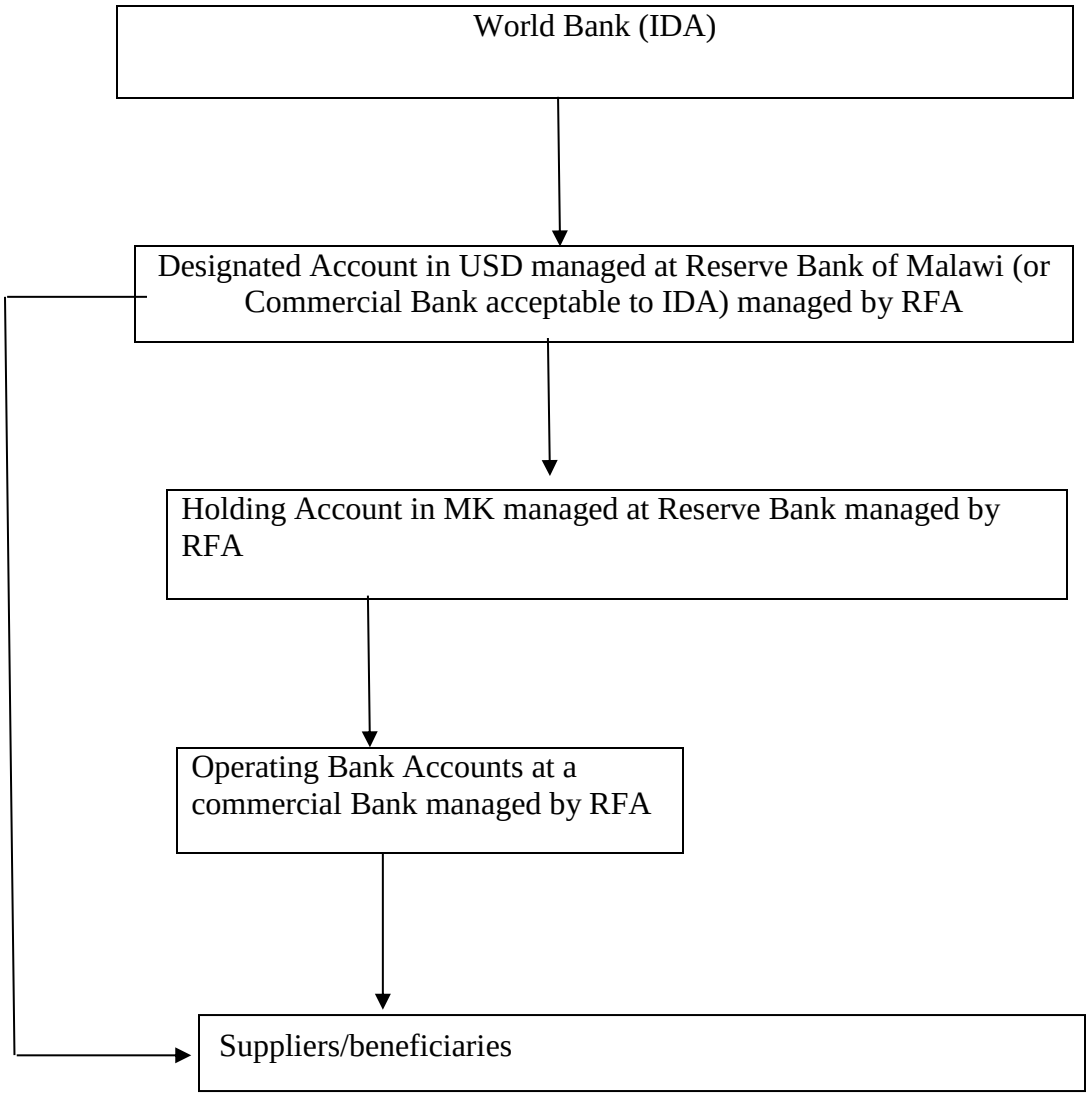
(a) **Special Commitments and Direct Payments:** Special Commitments using irrevocable letters of credit may be used as well as direct payments to suppliers for works, goods and services upon the Borrower's request.

(b) **Report-based Disbursements**: The project will also receive funds into the designated account using the report based disbursement method. IDA will make the initial disbursement to the project after receiving a withdrawal application with a six months cash flow forecast. This withdrawal application should be prepared within one month after project effectiveness. Thereafter, IDA will disburse into the respective Designated Account based on quarterly IFRs, which would provide actual expenditure for the preceding quarter (3 months) and cash flow projections for the next 2 quarters (6 months). The IFR will be reviewed by the Bank's Financial Management Specialist (FMS) and approved by the Task Team Leader (TTL) before the request for disbursement is processed by the Bank's Loan Department.

(c) **Reimbursements:** These can also be made to the Designated Account. These payments will also be reported in quarterly IFRs.

18. The IDA Disbursement Letter will provide details about each of the above disbursement arrangements.

Funds Flow Chart



Procurement

19. ***Legal Aspects and Procurement Practices.*** Public procurement in Malawi is governed by the Public Procurement Act of August 2003. The Act requires procurement regulations to provide, inter alia, threshold for use of various procurement methods, bidding and bid evaluation procedures and contract management. The Law further established the Office of Director of Public Procurement (ODPP) with oversight for public procurement. The Office became

operational in 2005 with the appointment of the Director and other substantive officers. The GoM also established Internal Procurement Committees (IPC) and Specialized Procurement Units (SPU) in all Procuring Entities including the Reserve Bank of Malawi as the responsible bodies for procurement. Procurement Regulations and Desk Instructions have been distributed to all procuring entities. The Office of Director of Public Procurement has also established a dedicated website for sharing of information, placing of adverts and notification of awards to the general public.

20. Procurement under the Roads Authority is guided by the Malawi Public Procurement Law of August 2003. The Office of Director of Public Procurement issued a number of standard bidding documents (SBD), the use of which is mandatory, covering works, goods, and services. The Office further issued desk instructions, RFP and form of contract for Consulting Services as well as request for quotations for goods, works and services. The Bank had reviewed the documents and the were found to be generally consistent with Bank Guidelines and may be used under NCB procedures with due attention to some issues related to clarity of the evaluation criteria, award to the lowest evaluated responsive and qualified bidder, participation of foreign bidders, domestic preference and advocacy for artificial division of lots to promote participation of small enterprises in National Competitive Bidding, and the Registration or Classification that should not be used as criteria for bidding.

21. ***Organization, Functions and Staffing.*** The RA was established under the Laws of Malawi and is governed by the Roads Authority Act (No3 of 2006) and it operates as an independent institution. RA has an Internal Procurement Committee (IPC), which is chaired by an appointee of the Chief Executive Officer.The current arrangements are that the Director of Finance and Administration is the Chairperson. The IPC has the responsibility for award of contracts. Other members of the IPC include Directors of Construction, Maintenance, Planning and Design. The Procurement Specialist is the Secretary.

22. The Procurement Division has an establishment of two posts, comprising one Procurement Specialist (Grade 3), and one Procurement Officer (Grade 5). The Procurement Specialist serves as Head of the Division and reports to the CEO. Both officers are engineers by profession and in RA service for over 10 years. At the time of assessment, the Procurement Specialist had been in the Procurement Section for over ten years and as head of the Section for four years, whilst the Procurement Officer had been in the post for over five years. Both the Procurement Specialist and Procurement Officer have adequate knowledge and experience, in the use of World Bank guidelines and procedures as both have been involved in two World Bank financed projects – Road Maintenance and Rehabilitation Project (2000-2004) and Infrastructure Service Project (2006-2012), and ongoing Additional Financing under Agriculture Development Support Project.

23. The assessment of the current staff in terms of procurement requirements for the Road Component under SATTFP SOP2 is that the current staff has adequate knowledge of World Bank procurement procedures as they are already implementing a road component under Additional Financing under the Agriculture Development Support Project. However, the existing procurement staff should have their skills improved through attending short courses on procurement organised by ESAMI or other institutions within the region. There is also need to

include in the training program staff from other key departments to support procurement in terms of preparation of the required documents, such as bid specifications and Terms of Reference.

24. ***Facilities and Support Capacity.*** The procurement division has adequate office space as well computer facilities for its proper functioning and these will be adequate for the start of implementation of the project.

25. ***Record Keeping and Filing System.*** The assessment findings are that the procurement filing at the procurement division is done in a satisfactory manner overall but retrieval of files is a problem as there is no document computerized retrieval system.

26. ***Procurement Planning.*** The Public Procurement Act provides in section 21, and the Regulations confirm, that procuring entities shall plan procurement as a prerequisite step before initiating procurement proceedings. The Bank carries out a procurement assessment to determine the level of reputational risk to the World Bank and the contract value thresholds at which the World Bank should exercise its fiduciary obligation through prior review.

27. The assessment of the Roads Authority to carry out procurement planning is adequate. An 18 month procurement plan has been provided at appraisal.

28. ***Monitoring/Control Systems.*** The Roads Authority has the Internal Procurement Committee as its oversight institution which is in place and operational, with well understood and clearly defined mandates. The IPC will continue oversight functions under the project.

29. ***Capacity to meet reporting Requirements and Publication of Contract Awards.*** The Procurement Act requires project agencies to submit to ODPP Quarterly reports on procurement undertaken. Report formats have been provided by the ODPP. Based on ODPP annual reports, the Roads Authority has been reporting procurement undertaken and advertised contract awards in the local press.

30. ***Overall capacity of the Roads Authority to carry out procurement under the proposed project.*** The overall capacity of Roads Authority to carry out procurement under the proposed operation Risk is Moderate as procurement systems are in place but they need improvements. This is based on the fact that the Roads Authority has already a procurement system that has integrity, procurement staff are already knowledgeable in Bank procedures, it is already using standard bidding documents from the Office of Director of Public Procurement which were reviewed and found acceptable by the World Bank and there is an ongoing Bank financed project which is using Bank procedures. As a mitigating factor, procurement staff will be attending refresher courses within the Region and be trained in the use of Bank systems such as Procurement Cycle Tracking System (PROCYS) and Client Connection.

31. ***Issues to be addressed:***

(a) **Procurement Planning.** There is need to have a provision mandating the preparation of a Procurement Plan along the Annual Work Plan. The procurement plan should include as many contracts as possible that are planned to be processed within the

following 18 months period. The 18-month procurement plan will include relevant information on all goods and consulting services expected to be procured, and their estimated cost; procurement or selection method as well as timing in the procurement/selection process. The overall procurement plan will be updated on an annual basis in conjunction with the preparation of the Annual Work Program and Budget in accordance with the Regulations.

(b) **Prior Review and Associated Thresholds.** Based on the initial assessment, all goods contracts estimated to cost US$1,000,000.00 equivalent or more will be subject to IDA review in accordance with the procedures in Appendix I of the Procurement Guidelines.

Consultancy contracts with firms estimated to cost US$200,000 equivalent or more, and consultancy contracts with individuals estimated to cost US$100,000 equivalent or more will be subject to IDA review in accordance with the procedures in Appendix I of the Consultant Guidelines.

IDA will review the Procurement Plan as well as the set of Bidding Documents to be used for goods and consulting services. The format of procurement plan, standard bidding documents, the procurement methods and the thresholds for prior review should be reviewed and jointly agreed by Roads Authority and IDA.

Contracts that are not subject to prior review will be selectively reviewed by IDA or on its behalf by an independent Procurement Auditor during project implementation and will be governed by the procedures set forth in paragraph 4 of Appendix I to the relevant Guidelines. All documentation used for the procedures of contracting, recruitment of consulting services, evaluation and award shall be retained for subsequent examination by auditors and IDA supervision missions.

It is also envisaged that there will be annual procurement post review with the aim to: (i) verify that the procurement and contracting procedures and processes followed by the project are in accordance with the agreed procedure manual; (ii) verify technical compliance, physical completion and price competitiveness of each contract in the selected representative sample; (iii) review and comment on contract administration and management issues as dealt with by executing agencies; (iv) review capacity of executing agencies in handling procurement efficiently; and (v) identify improvements in the procurement process in the light of any identified deficiencies.

(c) **Use of World Bank Guidelines.** Procurement of ICB contracts for goods will be carried out in accordance with the *Guidelines: Procurement of Goods, Works and Non Consulting Services under IBRD Loans and IDA Credits & Grants by World Bank Borrowers; January 2011 (Revised July 2014).* The World Bank's Standard Bidding Documents and Standard Bid Evaluation Forms for goods under International Competitive Bidding (ICB) will be used. Since the ODPP has prepared Standard Bidding Documents for procurement of goods under NCB, procurement of

goods under NCB will be carried out using these documents. World Bank's Standard Bid Evaluation forms would be used for NCB contracts with necessary modifications.

Selection of Consultants estimated at US$200,000 equivalent or above, will be carried out in accordance with the *Guidelines: Selection and Employment of Consultants IBRD Loans and IDA Credits & Grants by World Bank Borrowers, January 2011 (Revised July 2014).* The Bank's Standard Request for Proposals (RFP) and evaluation forms will be used where applicable.

(d) **Use of National Standard Bidding Documents.** Procurement below the prior review thresholds shall be carried out through NCB in accordance with the Malawi Public Procurement Act and shall include: (i) an explicit statement to bidders of the evaluation criteria; (ii) award to the lowest evaluated responsive and qualified bidder; (iii) rejection of bids outside a range of bid values shall not be permitted; (iv) foreign bidders would not be precluded for participation in National Competitive Bidding; (v) Registration and Classification of bidders may be used for establishing bidder qualification or preparing a list for use under price comparison procedure but not as criteria for bidding; and (vi) artificial division of lots into small quantities and set aside for small and medium enterprises will not be used.

Summary of Procurement Assessment

Overall Assessment of Risk: Moderate **Date of the Assessment:** December 8, 2013	GOODS: US**$1,000,000** WORKS: **US$5,000,000**	Consultancy Services Firms: US**$200,000** Works Supervision: US**$300,000** Individuals: US$**100,000**	**Actions to be taken**
Analysis of Procurement Capacity	**Issues/Risks**	**Mitigation Measures**	**By When/Who**
Staff Professional Training	Staff to update knowledge on the use of World Bank guidelines, RFPs and bidding documents.	Training in World Bank procedures is needed and a training plan to be agreed with IDA should be prepared by Roads Authority.	By effectiveness / Roads Authority
Procurement Planning	Need to be adopted and used as a monitoring instrument and should follow the Annual Activity Plan.	An initial procurement plan covering first 18 months has been produced.	Completed

Environmental and Social (including safeguards)

32. The Project has been assigned the Environmental Category B - Partial Assessment, since it encompasses the reconstruction of the Karonga – Songwe road section, minor new construction for accident blackspots, and the refurbishment of existing facilities at the health centers and at the border crossing. All interventions are within the existing ROW of the road, or within the footprint of the current facility, or on public land.

33. The main environmental and social negative impacts relating to the activities within the Project include the following: a) effects related to the road sitting; b) social effects; c) loss of ecological and productive values; d) hydrological and water resources; e) traffic impacts; f) air, water and noise pollution; and g) effects Post project maintenance. In some locations, the works

may require the contractor to establish diversion for the traffic, but these diversions, even where necessary, are also envisaged to fall entirely within the ROW. The detailed design requires the contractor to use existing borrow pits for all works, but if some new sites are identified, they will be accessed by the construction of temporary access roads. The interventions to address the identified accident blackspots are also expected to be entirely within the 30 meter ROW. The proposed refurbishment of the health centers and the improvements at the border crossings are also envisaged to take place either within the footprint of the existing facilities, or on publicly owned land.

34. The Karonga – Songwe road section does not cross any sensitive or critical areas and the interventions do not require any new alignments. Some minor negative environmental impacts are expected during the construction that should be prevented and mitigated in accordance with the Environmental Management Plan (EMP) included in the ESIA. The environmental and social issues if any in the case of the border crossing interventions and refurbishment of health facilities will be confirmed during the preliminary assessment using the ESMF and RMF developed by the RA during the project preparation.

35. In accordance with the Bank's Environmental Assessment Policy (OP/BP 4.01), the project is classified as Category B; therefore, the environmental and social studies will be developed as part of the feasibility studies of the sub-projects. The ESIA for the Karonga – Songwe road section has been completed and consulted upon. The interventions at the border crossings and health facilities potentially will require a preparation of an ESMP, which, as mentioned before, will be included as part of the feasibility studies of the respective works.

36. In order to strengthen the environmental capacity of the RA and ensure adequate environmental and social management during project implementation, an ESMF was developed by RA as part of the Bank's requirements during project preparation. The ESMF includes appropriate screening provisions and management measures in case any critical areas are identified during project preparation or implementation, and potential affectation of the physical and cultural properties (chance finds procedures) is revealed. In regards to the involuntary resettlement issues, the RA with the support and coordination with the Bank's safeguards specialists, developed a RMF, based on the Malawi's law and the World Bank Involuntary Resettlement Policy (OP/BP 4.12). The RMF will guide the preparation of future RAPs in relation to all works under the project if any additional land take is found to be required based on the respective designs.

37. The Involuntary Resettlement Policy (OP/BP 4.12) is triggered despite the fact that the interventions are expected to be within the existing ROW for the road infrastructure component and within the footprint of the existing facilities at the border crossings as well as the health facilities for the trade facilitation and social infrastructure components respectively. However, the design for the road works is ongoing and some of the related infrastructure such as access roads and queries, etc. could potentially require additional land. Moreover, there are encroachments within the ROW in terms of crops, trees, and a limited number of dwelling/buildings. Finally, there are currently settlements within the road reserve, which includes area extending 30 meters from the middle to both sides of the road (in line with the Malawian legislation for highways). A RAP has been prepared for the Karonga – Songwe road

rehabilitation project. Currently, it is estimated that there are a total of 230 affected people whose houses, farms and/or other property will be affected by the anticipated land acquisition and displacement for the project will affect shelter and livelihood of some of the local community members. Also, 240 ha of cultivable land will be required for the project. A Resettlement Management Framework has been developed by the RA for the Project and will guide the preparation of all RAPs in relation to other works financed under the project if any additional land take is found to be required based on the respective designs. All costs associated with expropriation or compensation is to be borne by the GoM. The RMF has been disclosed both in the country and in the Infoshop on February 10, 2015; and the RAP has been completed, consulted upon and disclosed in the country on February 24, 2015 and in the Infoshop on February 25, 2015.

38. The Physical and Cultural Resources Policy (OP/BP 4.11) is triggered given Malawi's rich archaeological and cultural resources and the likelihood of the Project to support works requiring excavations. The ESMF includes Chance Find Procedures (CFP) as well as measures to screen for and manage potential impacts on cultural heritage or property that could be affected by neighborhood development plans. In addition, some investments under the project are expected to take place near the international border between Malawi and Tanzania, but no impact on the river is expected. Therefore, the OP/BP 7.50 (Projects on International Waterways) is not triggered. The location of the project interventions is not expected to have any negative impacts on natural habitats, including critical or sensitive areas; therefore, the OP/BP 4.04 (Natural Habitats) is not triggered.

39. The ESIA and RAP for the Karonga – Songwe road section were disclosed accordingly in the country on February 24, 2015 and in the Infoshop on February 25, 2015. The draft ESMF and RMF have been completed and consulted upon in line with the Bank's requirements on September 24, 2014. The final versions of these documents were disclosed in the country and Infoshop on February 10, 2015.

40. The RA's Environmental Management Unit (EMU) has only one staff person to manage the environmental and social issues in the institution. In order to address properly the social issues and specifically to follow-up and monitor the implementation of the RAPs in the SATTFP SOP2, the Bank's safeguards team recommended hiring a social specialist to support the EMU. Additionally, RA with the support of the Bank's safeguards specialists is preparing a Safeguard Strengthening Plan (SSP) in order to identify the activities for improving the environmental and social capacity in the RA. The budget for the SSP implementation can be financed as part of the component 4 of the SATTFP SOP2. Institutional arrangements for environmental and social management will be included in relevant safeguards documentation.

41. In regards to the reporting arrangements, the EMU and Consultant's appointee to deal with environmental management will cooperate with other experts such as District Land Officers, District Valuers, Community Development Officers and District Environmental Officers to provide the Environmental and Social Planner at the RA with environmental reports of the project implementation as part of the progress reports and annual environmental monitoring reports. The reports will be part of the quarterly progress reports (QPR).

42. **Gender Issues.** The program and project will benefit women and men, children and the elderly by improving access to markets, health services, and better access to additional social services (school, administration). Particular attention will be given to border crossings and health facilities, where the designs will be prepared cognizant of the needs of women. In the former case particularly, the emphasis will be on ensuring safe and enhanced access to markets for rural women, who represent the majority engaged in informal cross-border trade.

43. Due to the nature of the impact of both the HIV/AIDS epidemic and road traffic injuries, it is expected that the project specific activities will benefit both women and men. The HIV/AIDS awareness activities will contribute to limit the behavioral risks that can be associated with increased HIV transmission, with a likely greater impact on women as they tend to be a more vulnerable group for HIV transmission in Malawi. Likewise, limiting road traffic fatalities will likely have a greater impact on men, who tend to bear the heavier burden of fatalities than women in Malawi.

Monitoring & Evaluation

44. The project design includes an agreed set of Project Monitoring Indicators to effectively measure the outcome and results of the project and program. The indicators (Annex 1) will be collected, monitored, reported and disseminated by/with the support of RA, MRA, DRTSS, Ministry of Health, and MoTPW. The baseline data for the SOP2 has been collected during the preparation phase by RA, MRA, DRTSS (formerly Road Traffic Directorate), and the Bank team, from secondary sources, and supplemented with limited primary data collection for road safety and emergency response services component. Baseline and target indicator data has been collected systematically from the databases of Roads Authority, MRA, and DRTSS (e.g. percentage of roads in good condition); and/or through annual surveys and studies launched by MRA (e.g. border crossing times; number of road blocks). RA shall monitor and evaluate the progress of the Project and prepare Project Reports at the end of each calendar quarter and submit them not later than 45 days after the end of the period covered by such report.

45. The capacity for data collection for the whole corridor will be developed in DCC during the implementation of the SOP1 in Tanzania. The SATTFP SOP1 is currently funding the establishment of a Corridor Performance Monitoring System in DCC. The DCC will be responsible for data collection and contribute to the reporting for this and subsequent operations on the corridor. The cost for establishing data collection, monitoring and reporting is embedded in the grant to DCC under SOP1, and subsequent costs will be borne from its own operational resources.

Role of Partners

46. The World Bank has been working in close coordination with other development partners in East and Southern Africa on transport and transit facilitation issues to ensure complementary support along the corridor. SATTFP SOP2 is currently funding the feasibility and detailed design for the other priority road sections of the M1 corridor (70 km Kacheche – Chiweta road section and 147 km Mzimba Turn off - Mzuzu – Kacheche section), which will be potentially implemented with EIB financing. The Global Road Safety Facility has funded the road safety

assessment, preliminary designs for accident blackspots, road safety manuals, and trauma care and emergency services assessment, and South Africa Trade Hub (SATH) funded the diagnostic of the Songwe/Kasumulu border crossing. In addition, donor programs on the NSC are significant and range from national level road rehabilitation, port and Customs reforms, to regional integration projects.

47. The EU has also supported the preparation of the results focused road safety strategy, which includes the development and implementation of a national strategic plan, strengthening the capacity of institutions, improving data collection and dissemination, implementing measures targeted at specific groups at risk such as children and incorporating safety into road designs and development. The EU technical assistance to the Ministry of Transport supports the necessary institutional reforms, including development of a strategy for improved axle load control operation.[55]

48. The World Bank administers and manages the Africa Transport Policy Program (SSATP), which is an international partnership of 40 African countries, RECs, African Union Commission, U.N. agencies, multilateral and bilateral development institutions united to strengthen policies and strategies in the transport sector in Africa. SSATP is funded by donors, including the African Development Bank, the European Commission, the Islamic Development Bank, the World Bank, Austria, France, Norway, Sweden, and the United Kingdom, and is administered by the World Bank. The SSATP has been working with COMESA, EAC and SADC to address the challenge of vehicle overloading and supported the development of guidelines on vehicle overload control in East and Southern Africa.[56] SSATP also supported the preparation of the *Guidelines for Mainstreaming Road Safety on Regional Trade Road Corridors* (SSATP, 2013), to guide the development of road safety interventions at a corridor level, during the preparation of the SATTFP-SOP1, and utilized to prepare the NSC road safety strategy, encompassing inter alia engineering solutions, education, enforcement, improved trauma care, the establishment of emergency response services etc., being implemented in pilots along the corridor, under the aegis of the DCC and national stakeholders. These pilots are being designed and implemented in a manner consistent with the results focused national road safety strategies being prepared by the nascent lead agencies in participating countries.

[55] MoTPW (2013) *Aide-Memoire for 5th Joint Transport Sector Review Meeting (JTSR),* November 19-20.
[56] Pinard, Michael (2010) *Guidelines on Vehicle Overload Control in Eastern and Southern Africa,* SSATP,

Annex 4: Implementation Support Plan
MALAWI: Southern Africa Trade and Transport Facilitation Program - SOP2 (P145566)

Strategy and Approach for Implementation Support

1. The strategy for implementation support has been developed based on the nature of the project and its risk profile. It will aim at making implementation support to the client more flexible and efficient, and will focus on implementation of the risk mitigation measures defined in the Systematic Operations Risk-Rating Tool (SORT), namely the delivery quality and design risk which are rated as Moderate, as well as the traditional supervision focus areas including safeguards and fiduciary aspects.

2. Formal supervision and field visits will be carried out semi-annually, and will focus on:

(a) **Technical inputs**. Engineering inputs are required to review bid documents to ensure fair competition through proper technical specifications and fair assessment of the technical aspects of bids. A very experienced highway engineer will review the detailed designs for the road rehabilitation, the accident black spots and the proposed civil engineering works at the border crossings. During construction and commissioning, close technical supervision will be provided to ensure technical, environmental and social contractual obligations are met. The team's engineer will conduct site visits on a semi-annual basis throughout project implementation. Inputs will also be provided by a trade facilitation specialist on implementation of trade facilitation interventions, and ICT specialist on implementation of ICT connectivity at the selected border crossings. The technical specialists will support the Task Team Leader (TTL) in following up on the quality of implementation and oversight of the GAC action plan.

(b) **Fiduciary requirements and inputs**. Training will be provided by the Bank's financial management specialist and the procurement specialist. The team will support RA and the RFA in their financial management capacity and to improve procurement management efficiency. The financial management specialist and the procurement specialist will both be based in the country office to provide timely support. Supervision of financial management arrangements will be carried out semi-annually as part of the project supervision plan and support will be provided on a timely basis to respond to client needs. Procurement supervision will be carried out on a timely basis as required by the client. The financial management and procurement specialists will support the TTL in following up on the quality of implementation and oversight of the GAC action plan.

(c) **Safeguards.** The environment and social specialist will support relevant counterpart staff and provide any necessary training. On the social side, supervision will focus on the implementation of the agreed RAP and gender aspects. The social and environmental specialists will travel to Malawi as needed to ensure close follow-up. Inputs will also be provided by a road safety expert and health specialist on

implementation of health and road safety components. Field visits will be made on a semi-annual basis.

(d) **Financial review of RA and RFA**. A financial specialist will conduct regular reviews of the financial status of the RA and RFA to monitor progress in establishing commercial financial management and accounting practices. This exercise will be combined with regular supervision missions. The financial specialist will support the TTL in following up on the quality of implementation and oversight of the GAC action plan.

(e) **Client Relations**. The Task Team Leader will coordinate the Bank team to ensure project implementation is consistent with Bank requirements, as specified in the legal documents. He/she will meet with senior officials on a regular basis to keep them apprised of project progress and issues requiring resolution at their level. The Task Team Leader will also discuss readiness and interest with potential participant countries in the program, and liaise as necessary with the RECs and other stakeholders. The TTL, with support of the team, will be responsible for following up on the quality of implementation and oversight of the GAC action plan.

Implementation Support Plan

3. The main focus in terms of support to implementation would be as follows:

Time	Focus	Skills Needed	Resource Estimate (Staff Weeks/year)	
First twelve months	Team Leadership	Management, supervision, coordination, dialogue with potential country members of program	Task Team Leader	8
	Project Support	Supervision, coordination	Transport Specialist Transport Economist	4 4
	Technical	Road engineering, design, technical supervision, trade facilitation expertise	Road Engineer Trade Facilitation Specialist ICT Specialist	4 2 1
	Social	Social safeguards, land acquisition and resettlement, gender, HIV/AIDS, health, and road safety	Social Specialist Gender Specialist Health Specialist Road Safety Specialist	3 1 2 3
	Environment	Bank norms knowledge, environmental safeguards	Environmental Specialist	3
	Procurement	Procurement experience, Banks procurement norms knowledge, training	Procurement Specialist	4
	Financial Management	FM experience, knowledge of Bank FM norms, training	FM Specialist	4
12-48 months	Team Leadership	Management, supervision, coordination, dialogue with potential country members of program	Task Team Leader	6

Time	Focus	Skills Needed	Resource Estimate (Staff Weeks/year)	
	Project Support	Supervision, coordination	Transport Specialist Transport Economist	4 2
	Technical	Road engineering, supervision, trade facilitation expertise	Highway Engineer Trade Facilitation Specialist ICT Specialist	4 3 1
	Social	Social safeguards, land acquisition and resettlement, gender, HIV/AIDS, health and road safety	Social Specialist Gender Specialist Health Specialist Road Safety Specialist	3 1 2 3
	Environment	Environmental safeguards, supervision and monitoring, training as needed	Environmental Specialist	3
	Procurement	Procurement reviews and supervision, training as needed	Procurement Specialist	4
	Financial Management	FM reviews and supervision, training and monitoring	FM Specialist	4
48-60 months	Team Leadership	Project management, supervision, coordination	Task Team Leader	6
	Project Support	Supervision, coordination	Transport Specialist Transport Economist	4 2
	Technical	Road engineering, supervision, trade facilitation expertise	Highway Engineer Trade Facilitation Specialist ICT Specialist	3 3 1
	Social	Social safeguards, land acquisition and resettlement, gender, HIV/AIDS, health and road safety	Social Specialist Gender Specialist Health Specialist Road Safety Specialist	3 1 2 3
	Environment	Environmental safeguards, supervision and monitoring, training as needed	Environmental Specialist	2
	Procurement	Procurement reviews, training as needed	Procurement Specialist	4
	Financial Management	FM reviews, training and monitoring	FM Specialist	4

4. The following skills mix is required for implementation support:

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
Task Team Leader	8 Staff Weeks/year	Two/year	HQ based
Highway Engineer	4 Staff Weeks/year	Two/year	Region based
Trade Facilitation Specialist	2 Staff Weeks/year	n/a	HQ based
ICT Specialist	1 Staff Week/year	Once	Region based
Transport Economist	4 Staff Weeks/year	Two/year	HQ based
Transport Specialist	4 Staff Weeks/year	Two/year	Country based
Social Specialist	3 Staff Weeks/year	Two/year	Country based
Environmental Specialist	3 Staff Weeks/year	Two/year	Country based
Procurement Specialist	4 Staff Weeks/year	n/a	Country based
FM Specialist	4 Staff Weeks/year	n/a	Country based
Health Specialist	2 Staff Weeks/year	n/a	Country based
Road Safety Specialist	3 Staff Week/year	Once	HQ based
Gender Specialist	1 Staff Week/year	n/a	Country based

Annex 5: Economic Analysis
MALAWI: Southern Africa Trade and Transport Facilitation Program - SOP2 (P145566)

Introduction

1. The overall objective of the SATTFP is to facilitate the movement of goods and people along the NSC, while supporting improvements in the services for HIV/AIDS and road safety. This is to be realized through improvements in the physical, institutional and social infrastructure in the participating countries, and the strengthening of the management of the corridor. The overall impact is a reduction in the impediments to trade and transport on the corridor, and the mitigation of the associated social costs from the trade flows along the corridor.

The Economic Impact of the Program

2. The key question in measuring the economic impact of any intervention is to decide on the scope of the analysis: In theory, a cost-benefit analysis (CBA) should identify the costs and benefits to whoever and wherever they accrue. Ideally, a comprehensive assessment would measure the total benefits from increased output across all final product sectors and would measure impacts on the level of employment and the wage rate in the labor market, the prices of goods and services in the product market and the value of property in the land market. In practice, analysis at such a level, or what is termed a general equilibrium assessment, is typically beyond the available resources except for the very largest infrastructure investments. In practice, an analyst is trusted to make an assumption on the scope of assessment, and the range of impacts that can be efficiently measured given the available resources. The general guidance is that the scope should be the smallest area that will provide robust results.[57] Hence, the orthodoxy is the use of what is termed as a 'partial equilibrium' CBA[58] that concentrates on the "primary" or direct impacts, rather than the indirect or secondary impacts, avoiding the risk of double counting of benefits. The following paragraph summarizes the primary impacts expected under the SATTFP.

3. The primary economic impacts of the SATTFP have been identified as the following: (a) a reduction in journey time for passengers and freight along the corridor reflecting the improved infrastructure, or the improvements at the border crossings, the introduction of an effective transit management guarantee scheme, and/or a reduction in the number of road blocks; (b) a reduction in vehicle operating costs along the corridor from the improved infrastructure and/or the removal of the road blocks and establishment of one-stop inspection stations; (c) a reduction in the unpredictability of journey times along the corridor reflecting the improvement in the infrastructure, improvements at the border crossings, removal of the road blocks, and establishment of one-stop inspection stations; (d) a reduction in the incidence and severity of road traffic accidents along the corridor, reflecting the improvements to the infrastructure, the removal of accident black spots and the corridor safety strategy; and (e) an improvement in the delivery of health services and HIV/AIDS programs for the mobile and resident population along

[57] World Bank (2005) *Economic Evaluation Note, TRN 5*, Page 6.
[58] Which predicates that all transport using sectors are in perfect competition, and there are no significant scale effects in production.

the corridor. Over the medium term, the program would also be expected to contribute to a reduction in the cost of transportation, and hence prices for goods, an improvement in the quality of transport, a reduction in the size and cost of inventory when the improved reliability of transport is recognized,[59] and a reduction in activities that are considered to contribute to increased incidence of HIV/AIDS and other STI. In the long term, the program is expected to contribute to trade expansion, both for imports and exports.

The Economic Model

4. The economic model defined to measure the impact of the SATTFP is a partial equilibrium CBA, which sums the primary benefits and costs which realized annually over the defined appraisal period of 25 years, discounted back to the base year by a 12 percent discount rate.[60] The intention has been to design a consistent framework that can be applied incrementally, and will aggregate, phase by phase, to allow the estimation of the primary economic impact of the program, as and when the detailed information about the primary benefits and costs of discrete interventions in each phase is known. The model is defined as follows:

$$\text{Net Present Value} = \sum_{t=0}^{n} \frac{B^t - C^t}{(1+r)^t}$$

Where: B^t = Benefits in year t
C^t = Costs in year t
r = Discount rate
n = horizon year

5. B^t can be decomposed as sum of the benefits of the interventions as follows:

Improvement in road infrastructure	$½ ((H_0-H_1)*VoT)(T_0-T_1) + ½ (VoC_0-VoC_1)(T_0-T_1) + {}_{1/2}((U_0-U_1)(T_0-T_1) + ½ ((SD_0-SD_1)*VoTTV)(T_0-T_1)$
Removal of road blocks	$(H_0-H_1)*VoT)(T_0) + (U_0-U_1)(T_0) + (VoC_0-VoC_1)(T_0) + (SD_0-SD_1)*VoTTV)(T_0)$
Improvement of border crossing	$((H_0-H_1)*VoT)(T_0) + ((SD_0-SD_1)*VoTTV)(T_0)$

6. Where H_0 is assumed to represent journey time per trip in year zero (before the intervention), and H_1 represents journey time per trip in year 1 (after the intervention); VoT represents the value of time; T_0 represents the demand in year zero (before the intervention), and T_1 represents demand in year 1 (after the intervention); VoC_0 represents vehicle operating costs per trip in year zero (before the intervention), and VoC_1 represents vehicle operating costs per trip in year 1 (after the intervention); U_0 represents user charges (legal and illegal) per trip in year zero (before the intervention), and U_1 represents user charges per trip in year 1 (after the intervention); SD_0 represents the standard deviation of the travel time in year zero (before the intervention) and SD_1 represents the standard deviation of the travel time in year 1 (after the

[59] Following Fafchamps, M., (2004) *Market Institutions in Sub-Saharan Africa*, Cambridge (MA) MIT Press, Chapter 7, pp. 137-149, who demonstrated the empirical link between delay in delivery and inventory build-up.
[60] A discount rate of 12 percent is generally used in the World Bank, as a rationing device. In this case, it is also considered a reasonable proxy to the opportunity cost of capital.

intervention); and VoTTV is the value of travel time variability. Additional subscripts to distinguish different origin (i) and destination (j), mode, including non-motorized transport (m), and trip purposes are omitted for simplicity.

7. The above decomposition reflects the assumption that the improvement of the physical infrastructure is of a sufficient scale to induce a demand response, in the form of generated traffic, so the orthodox rule of a half is utilized to assess the scale of the benefits to induced traffic. By contrast, the improvements at the border crossing and the removal of non-tariff barriers in the form of the road blocks, and the consolidation of services at the one stop inspection stations, are assumed not, in these specific interventions, to induce significant demand. Additionally, despite the potential significance of reliability (or travel time variability) particularly for commercial freight,[61] the evidence on the value of travel time variability so far is limited even in developed countries, the results rather mixed,[62] and a number of fundamental questions remain. Hence, the benefits from improved reliability are excluded from the analysis. The lack of reliable data at preparation stage has also resulted in the exclusion of the economic benefits, which are likely to be substantial given the number and seriousness of road traffic crashes currently, resulting from the reduction in the risk of accidents along the corridor.

The Economic Impact of the SATTFP SOP2 Project in Malawi

8. The economic analysis of the Phase 2 (SOP2) focuses on those primary costs and benefits quantifiable at this stage, from the following interventions: (a) the Karonga – Songwe road section of the M1 Corridor; and (b) the improvement at the border crossing at Songwe on the border with Tanzania, and Dedza, Muloza, and Mwanza on the border with Mozambique. The below is an economic analysis based on the preliminary feasibility study.

(a) The rehabilitation and upgrading of the Mafinga- Igawa Road Section

9. The proposed rehabilitation and upgrading of the Karonga – Songwe road section in Malawi accounts for 36 percent of the total costs under SOP2. The interventions include a mix of reconstruction and overlay with widening and surface dressing with drainage improvements to complete rehabilitation over 46 km of road. The existing alignment will be followed as much as possible. The evaluation process will consider geometric improvements to improve road safety and level of service provided by the roads. The existing carriageway is 6.6-7.0 meters wide with 1.5 meter shoulders. The existing pavement is in poor condition with some sections remaining in fair condition, and displays typical distress signs in the form of aged surface and brittle bitumen binder, cracking resulting in water ingress into the pavement, significant rutting, ponded water runoffs seeping into embankment, and uncut grass encroachment on the shoulders.

10. The proposed intervention is a seven meter wide carriageway, with a two meter sealed shoulder on each side. The proposed rehabilitation will include reconstructing failed sections (41

[61] Recent research suggests it might amount to as much as 10-15 percent of total benefits: See Eliason, J. (2009) *A cost-benefit analysis of the Stockholm congestion charging system*. Transportation Research Part A 43:468-480.
[62] See Carrion, C., and D. Levinson, (2012) *Value of Travel Time Reliability: A review of the current evidence*. Transportation Research Part A 46:720-741.

percent of the road) and overlaying to strengthen sections (59 percent of the road) with widening, drainage improvements, and the installation of traffic and roadside safety devices. For the economic evaluation the following project design options were considered:

(a) Option 1: Do nothing (except repairing Iponga section);
(b) Option 2: Patch and reseal;
(c) Option 3: Patch, reseal and widening of trading centers;
(d) Option 4: Reconstruction and widening with Double Surface Dressing;
(e) Option 5: Reconstruction with Double Surface Dressing and widening at trading centers; and
(f) Option 6: Reconstruction with Asphalt Concrete Surface.

11. The economic appraisal of the options of rehabilitating the study road was completed using the World Bank's HDM IV. The economic analysis was undertaken using the conventional approach of comparing the estimated road user and agency benefits and costs in the "do-something" scenarios with "do-nothing" scenario, when the new road is constructed against the maintenance regime. The main inputs for the evaluation are: (a) capital investment and maintenance costs; (b) the benefit stream, comprising savings in VOC derived from reduced roughness on the road, passenger time savings derived from increase in speed due to improved road conditions, reduction in road accident costs, and reductions in infrastructure maintenance costs due to the repair of the existing road; and (c) a 22 month construction period, and an evaluation of benefits over a 20 year appraisal period. Road projects in Malawi are considered economically viable and acceptable for inclusion in the Public Sector Investment Program if they have an Economic Internal Rate of Return of at least 12 percent which is the opportunity cost of capital.

Traffic Forecasts

12. The current traffic on the road was assessed by traffic count surveys undertaken in June-July 2014 at two locations along the project section: (a) near Karonga Town, and (b) at Iponga village. The counts were conducted for five days, including weekends and comprising four 12-hour counts and one 24-hour count on a weekday. The surveys included counting of non-motorized traffic (NMT) and showed high flow of pedestrians and cyclists, with over 3,500 cyclists recorded at the counting station daily at one of the locations. The results were converted into AADT estimates presented in Table 5-1.

Table 5-1: Composition and volume of traffic (2014)

Vehicle Class	AADT
Non-Motorized Transport	
Pedestrian	353
Bicycle	3,578
Animal Cart	24
Total NMT	3,955
Motorized Transport	
Motorcycle	48
Passenger Car	233
4 WD/Pickup	319

Vehicle Class	AADT
Minibus Taxi	212
Light Goods Vehicle	139
Heavy Goods Vehicle	61
Total motorized transport	1,012

13. Traffic studies carried out over the last twenty years have revealed that Malawi is estimated to have an AADT growth rate of four percent. For the purposes of this analysis, the normal traffic growth rate is assumed at six percent for the first five years, five percent for the second five years, and four percent for the last ten years. The following factors have been taken into account as potentially contributing to traffic growth:

(a) Potential for growth can come from the mining sector, agriculture and manufacturing in the surrounding areas, such as coal mining in Karonga, Chitipa and Rumphi districts;
(b) Potential growth of Mzuzu and Lilongwe City can lead to greater demand for construction materials and supplies, over 40 percent of which is transported from Tanzania and other EAC countries; and
(c) The road also connects to the Mzuzu – Nkhata Bay road, which is expected to bring more traffic to the M1 road from increased exports of sugar and rubber to neighboring eastern countries and Far East as a result of production growth.

14. An axle load survey was conducted at North Rukuru, several kilometers from Karonga, from 06:00 a.m. on November 12, 2014, until 06:00 a.m. on November 15, 2014.

Summary of the economic analysis

15. The economic analysis includes the benefits derived from: (a) vehicle operating costs (VOC) savings on the road; (b) time savings from reduced journey times; (c) crew time costs; (d) reduced agency costs; and (e) reduced road accident costs. Table 5-2 presents the vehicle operating cost inputs employed:

Table 5-2: Vehicle Operating Costs – Economic Unit Costs by Vehicle Type[63]
(US$ 2011 Prices)

Vehicle Type	Economic Cost	Total Tax	Financial Cost
Private Car	26,389	42%	37,472
Rural Vehicles	27,083	27%	34,395
Mini Bus	43,448	30%	56,482
Bus	179,414	0%	179,414
Light Truck	60,348	15%	69,400
2- Axle Truck	102,755	15%	118,168
3-Axle Truck	106,017	10%	116,619
Heavy Truck	122,328	5%	128,444

Source: Toyota Malawi, Malawi Motors, Stansfied Motors LTD, Customs and Excise Tariff Book (2011)

[63] The exchange rate of the MWK against the US$ used in the analysis is an average of the rates prevailing during October 2013: 1 US$ = MWK 395.00.

16. The value of time savings, working and non-working, are based on the first principles. The value of time (VoT) is based on the average income assessed from Malawi Government publications. In this analysis it is assumed that work travel time is valued at 50 percent of the wage rate, with non-work travel time being 25 percent of work value. Vehicle occupancy rates have been derived from a number of sources as well as observations. The values employed for passenger value of time are presented in Table 5-3 below:

Table 5-3: Value of Passenger Time – Economic Unit Costs

(US$ per passenger hour)

	Work Time	Non-Work Time	Number of passengers per vehicle	Weighted VoT
Passenger car	0.38	0.10	3	0.19
Pickups	0.15	0.04	3	0.08
Minibus	0.15	0.04	16	0.08
Large Bus	0.15	0.04	50	0.08
Light Trucks (<3.5 tons)	0.15	0.04	1	0.08
Heavy Trucks (>3.5 tons)	0.15	0.04	1	0.08
Artics	0.15	0.04	1	0.08
Truck Trailers	0.15	0.04	1	0.08

Source: Roads Authority

17. The cost of paid crew has been estimated based on average rates for employment. The average number of crew in each type of vehicle has been estimated based upon observed practice and the results of previous feasibility studies. The results of these calculations are given in Table 5-4 below:

Table 5-4: Crew Time Costs – Economic Unit Costs

(US$ per crew hour)

	Cost per hour per person	Number of crew per vehicle	Total cost per vehicle hour
Passenger car	0.6	0	0.00
Pickups	0.6	0.75	0.45
Minibus	0.6	2	1.21
Large Bus	0.7	2	1.42
Light Trucks (<3.5 tons)	0.7	1	0.71
Heavy Trucks (>3.5 tons)	0.7	1	0.71
Artics	0.7	1	0.71
Truck Trailers	0.7	1	0.71

Source: Roads Authority

18. Based on the accident statistics provided by the Karonga Police Station for 2011-2013, the number of accidents was assumed at 50 fatalities and 12 damage only accidents annually. The economic costs of road accidents were estimated at US$3,741 per fatal accident, US$1,526 per injury, and US$169 per damage only accident. These were derived based on the South African National Roads Authority's cost of accidents by applying a ratio of Malawi population and Gross Domestic Product (GDP) to South African population and GDP. For the economic analysis, the assumption was made that the widening of the road section would reduce accidents by 50 percent.

19. The costs estimates for different options based on the widening of entire length of the road are based on the quantities of the principal works activities and unit rates from similar internationally competitively bid projects in the region. The estimates have been prepared based on 15 and 20 year design life comparing surface dressing with Asphalt Concrete and the SATCC design method with ORN31. Based on analysis of pavement design, it was found that the ORN method provides for more economical pavements and allows for the use of surface dressing at the traffic level on the project road.

20. The costs and benefits have been valued at 2014 prices. A 20-year appraisal period has been selected for the analysis of the project. Project benefits have therefore been forecast for twenty years after the new road is opened. A discount rate of 12 percent was applied, which is consistent with the rate used by the GoM for evaluation of internally funded projects, and with international experience.[64] In the analysis, all project costs and benefits have therefore been discounted back to 2014 at 12 percent. In addition, the residual value of the investment on the upgraded road options at the end of the appraisal period is assumed to be 25 percent of the initial investment. The results of the economic analysis are presented in Table 5-5.

Table 5-5: Economic Appraisal Summary: Karonga – Songwe Road Section

Option	EIRR (%)	NPV (US$ mln)
Option 1: Do nothing	0.0	0.0
Option 2: Patch and Reseal	-1.3	-11.8
Option 3: Patch, reseal and widen at trading centers	-0.8	-12.7
Option 4: Complete reconstruction with Double Surface Dressing	11.6	-0.5
Option 5: Complete reconstruction with Double Surface Dressing and widen at trading centers	16.6	2.5
Option 6: Complete reconstruction with Asphalt Concrete surface	10.9	-1.5

21. The NPV for Option 5, using a 12 percent discount rate, has been estimated at US$2.5 million with an EIRR of 16.6 percent for the entire section, which is highest than other options. This return is consistent with the expected range for transport projects in Bank financed investment operations.[65] Therefore, for the Karonga – Songwe road project, the most economically viable option is Option 5, to carry out reconstruction with double surface dressing and widening at trading centers with a base case EIRR of 16.6 percent and a NPV of US$2.5 million.

Sensitivity Analysis

[64] See "Project Analysis in Developing Countries"; S. Curry & J. Weiss where the most frequently reported discount rates applied in developing countries are shown to lie in the range 9% to 12%.
[65] World Bank, (2006) *Infrastructure, Lessons from the Last Two Decades of World Bank Experience*, Washington DC reports the average return for transport projects between FY00 and FY03 to be 39.4 percent.

22. Sensitivity analysis was undertaken to test the robustness of Option 5 to defined changes in key parameters of interest. The sensitivity analysis tested the impact of a 20 percent increase in the capital costs for the component and a 20 percent decrease in the traffic growth. If the construction costs alone increase by 20 percent, the NPV decreases by 32 percent but remains positive at US$1.7 million with an EIRR of 14.7 percent. In case of reduced amount of traffic by 20 percent, the NPV decreases by 22 percent remaining positive at US$1.97 million and EIRR of 15.7 percent. In the worst case scenario, a simultaneous change of 20 percent greater construction costs and 20 percent lower traffic resulted in a 53 percent reduction in the NPV and a 16 percent reduction in the EIRR. However, even in the worst case, both the NPV remained positive at US$1.17 million and an EIRR above 12 percent at 13.9 percent, suggesting that the economic viability is robust and not significantly sensitive to the variations in key parameters.

Greenhouse Gas Analysis

23. The rehabilitation of Karonga – Songwe road section using Option 5 would result in 2 percent savings in GHG emissions, with estimated decrease in total vehicle emissions of -4,028 t-CO2 over a 20 year period. In monetary value, the NPV of carbon emissions from the investment in road improvements is estimated at US$98,000.

(b) The improvements at the Border Crossings

24. This component proposes to design and introduce enhancements for improvements in infrastructure and operations at the Songwe border crossing between Tanzania and Malawi, and at the Dedza and Mwanza border crossings between Malawi and Mozambique, to allow potential operations as OSBP. A diagnostic[66] of the Songwe border crossing revealed a lack of interagency co-operation, no structured sharing of information, no co-ordination in operating hours between agencies on the same and opposite sides of the border, insufficient parking space, no Information and Communication Technology (ICT) connectivity, and a lack of coverage and necessary equipment for physical inspections. Average crossing times for imports into Malawi are 24 hours in total, but with a significant standard deviation.

25. In addition, recently completed update of the Diagnostic Trade Integration Study (DTIS)[67] identified a number of challenges at Malawian border crossings adding to costs, unpredictable cross border times and delays: (a) multiple number of independent and uncoordinated agencies resulting in duplication of data and processes across the agencies and redundant document and cargo checks; (b) excessive use of manual procedures centralized in Lilongwe; (c) lack of transparency and limited access to information on border regulatory requirements, fees and procedures available to users; (d) the facilities at all posts constrained with cramped office spaces; (e) overcrowded public areas and a shortage of office furniture, computers, telephones and consumables. However, as the specific improvements at design stage have yet to be confirmed, the cost estimates and concomitant benefits should be regarded as

[66] SATH (2011) *IBM – Kasumulu/Songwe*.
[67] The World Bank (2014) *Diagnostics Trade Integration Study (DTIS) Update: Reducing trade costs to promote competitiveness and inclusive growth*, AFTP1 Africa, Report No: ACS7534, March 25.

provisional at this stage, and the results of the economic analysis indicative of the expected returns.

26. The costs and benefits have been valued at 2014 prices. The former include the capital costs necessary for the physical and institutional improvements at the border. The resulting benefits are the time savings from loaded commercial traffic entering Malawi, realized from the improved efficiency at the border crossing. The benefits to empty commercial traffic, exiting commercial traffic, and leisure/passenger traffic are omitted at this stage. The cost of each additional day of delay has been estimated to be as much as US$200-400, according to earlier research.[68] Based on this work, we assume the time savings to loaded commercial traffic to be valued at US$12.50 per hour. Traffic studies carried out over the last twenty years have revealed that Malawi has an AADT growth rate of four percent. The stylized assumption is that the traffic at the border crossings will grow at the same rate over the appraisal period. The following table summarizes the current traffic, the provisional expenditures, current baseline figures for crossing times, and expected savings.

Table 5-6: Current traffic, provisional capital costs, crossing times, and expected benefits at the border crossing

Option	Annual Baseline Truck Traffic (2010)	Capital Costs (US$ millions)	Crossing Times (Hrs) in 2015	Expected Efficiency Gains (hrs)
Dedze border crossing	33,478	8	24	8
Mwanza border crossing	44,141	3	19	6
Songwe border crossing	17,053	3	6.5	1.5

27. A 20-year appraisal period has been selected for the analysis of this component, following a four year construction period commencing in 2016. Project benefits have therefore been forecast for twenty years after the new OSBPs have been opened. A discount rate of 12 percent was applied. In the analysis, all project costs and benefits have therefore been discounted back to 2014 at the selected discount rate. The simplistic analysis assumes no residual value for the facilities at the upgraded border crossings at the end of the appraisal period, which is considered to be a conservative assumption. The results of the economic analysis are presented in Table 5-7.

[68] Arvis, J.F., G. Raballand and J.F. Marteau (2010): *The cost of being landlocked: logistics costs and supply chain reliability*, The World Bank Group.

Table 5-7: Economic Appraisal Summary: Improvements at the border crossings

Option	EIRR (%)	NPV (US$ mln)
Improvements at Dedza border crossing	41	27.6
Improvements at Mwanza border crossing	21	2.35
Improvements at Songwe border crossing	35	7.47
Total for the investments in the border crossings	**33**	**12.47**

28. The indicative NPV for the proposed investments at the border crossings, using a 12 percent discount rate, has been estimated at US$12.47 million with an EIRR of 33 percent. Appropriate sensitivity analysis has been undertaken and has revealed the results to be robust to changes in the key parameters of interest. More detailed economic analysis will be undertaken for this component as the detailed design is completed, during implementation, when the specific interventions are known.

Summary of the economic analysis of the SATTFP

29. The following table summarizes the economic analysis of the two main components of the SATTFP SOP2 in Malawi:

Table 5-8: Economic Appraisal Summary: SATTFP SOP2

(NPV US$ millions, EIRR %)

	NPV	EIRR
Karonga – Songwe road section	2.5	16.6%
Border crossings at Songwe, Dedza, and Mwanza	12.47	33%
Total	**14.97**	

Source: Bank staff.

117. The total NPV for the SATTFP – SOP2, using a 12 percent discount rate, has been estimated at US$14.97 million, and EIRRs of 16.6 percent for the road section rehabilitation and 33 percent for the border crossing improvements.

Annex 6: Background on the North-South Corridor
MALAWI: Southern Africa Trade and Transport Facilitation Program - SOP2 (P145566)

1. The NSC is one of the most important corridors for international and intra-regional trade in the Southern and East Africa region. The broader NSC extends some 3,900 km from Dar es Salaam in Tanzania to the Port of Durban in South Africa. The corridor encompasses both road and rail networks, maritime and inland water ports, and is a key strategic trade route. The broader NSC is so called as it actually comprises two sub-corridors: (a) the Dar es Salaam Corridor (commonly known as the Dar es Salaam Corridor), extending for about 1,900 km from the Port of Dar es Salaam in Tanzania to Kapiri Mposhi in Zambia, and connecting Tanzania, Malawi, Zambia and the DRC; and (b) the traditional North-South Corridor, from Durban to the DRC, Zambia, Zimbabwe, Botswana, Malawi and northern Mozambique. The latter includes a number of branches linking to neighboring countries including Zambia to Lubumbashi in the DRC, and Malawi to the ports of Nacala and Beira in Mozambique.

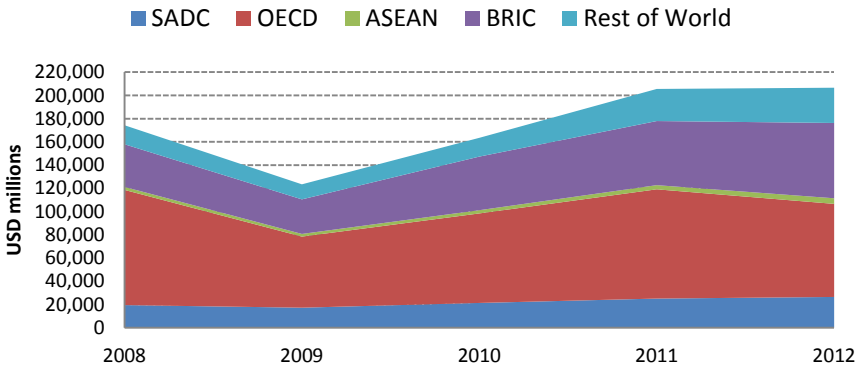
Trade Volumes and Directions on the Corridor

2. While the Southern and East Africa region has been growing at a significant rate over the period 2000-2008, intra-regional trade has contributed a relatively small part in this growth. Growth was in the main fueled by the increased value of commodity exports to global markets, primarily comprising South African minerals.[69] As a result the region increased trade with the rest of the world markedly, tripling between 2000 and 2008 from US$50 billion to US$153 billion.[70] By 2013, trade between the corridor countries (excluding Botswana) and the rest of the World amounted to US$308 billion, a further increase of 17 percent from 2011. However, this value falls to about US$74 billion, if South Africa is excluded.[71] The former comprises exports of US$145 billion, dominated by coal and minerals such as iron, copper, and precious metals, and imports of about US$163 billion of manufactured goods.

3. In addition, the increase in intra-regional trade has been very small. For example, following the decline in exports in 2009 due to the financial crisis, SADC's exports to the world have been increasing at 27 percent between 2010 and 2011, while the share of its intra-regional exports decreased 5 percent over the same period. However, between 2011 and 2012 the total exports have remained steady. While the SADC's share of exports to OECD has decreased 15 percent, the share of exports to ASEAN has grown a 34 percent (see Figure 6-1). With regional trade in Southern Africa reaching only 13 percent of total trade in 2012, the region compares poorly in this regard with other world regions: in Europe regional trade has reached 95 percent of total trade in 2012; in North America, 48 percent; and in the ASEAN, 25 percent.[72]

[69] The World Bank Group (2011a) *Harnessing Regional Integration for Trade and Growth in Southern Africa*. Washington DC.
[70] *Ibid.*
[71] International Trade Center (2014) Trade Map – International Trade Statistics Database, Retrieved from http://www.trademap.org/tradestat.
[72] *Ibid*

Figure 6-1: Growth of SADC Exports – Intra-Regional versus International (2008-2012)



Source: International Trade Center (2014) *Trade Map – International Trade Statistics Database*, Retrieved from http://www.trademap.org/tradestat

4. Trade flows along the NSC are dominated by exports of manufactured goods and retail merchandise from South Africa to the region, both in terms of volume and value. The total value of regional trade is estimated to exceed US$12 billion as reported in 2011, with the trade with South Africa accounting for more than 60 percent of this, almost all of which is transported along the NSC. Zambia, Zimbabwe, and Malawi source more than 50 percent of their imports from the region – almost all from South Africa; for Mozambique and DRC, the value of imports coming from the region is over 20 percent.[73]

5. Table 6-1 illustrates the importance of South Africa in terms of exports. South Africa is the major exporter to the region, with a share of almost 60 percent, while intra-regional imports with destination South Africa only represent 16 percent. For example, almost 85 percent of Tanzania's regional imports are from South Africa, while South Africa is a destination for only 12 percent of Tanzania's exports. Figures for Zambia, Mozambique and Zimbabwe also show the importance of South Africa in trade. For example, 90 percent of Mozambique's regional exports and 96 percent of its regional imports are with South Africa. The exported products are dominated by copper, other minerals and agricultural commodities from South Africa, DRC, Zambia, Zimbabwe and Malawi, while the imports include chemicals, mining parts and equipment, fertilizer, general consumer goods, etc.

Table 6-1: Intra-regional Trade in Corridor Countries 2013 (US$ millions)

		Importer										
		Burundi	DRC	Malawi	Mozambique	Rwanda	South Africa	Tanzania	Zambia	Zimbabwe	Total Region	Total Exports
Exporter	Burundi	-	10.44	0.00	0.00	4.48	0.81	1.36	0.03	0.00	17.12	113.05
	DRC	4.89	-	0.12	0.23	14.01	11.13	1.53	1,212.09	57.36	1,301.35	5,732.96
	Malawi	0.00	4.79	-	7.11	3.46	71.14	5.98	65.23	100.54	258.23	1,068.33
	Mozambique	0.00	0.37	33.16	-	0.00	1,330.67	3.74	20.20	88.62	1,476.76	4,369.21
	Rwanda	10.22	69.34	0.00	0.00	-	3.73	1.48	0.40	0.00	85.16	408.67
	South Africa	6.82	1,283.47	422.58	2,474.00	25.95	-	654.10	2,561.37	2,323.88	9,752.17	119,281.32
	Tanzania	46.42	71.96	80.72	68.33	66.43	59.09	-	67.89	4.73	465.56	3,821.23
	Zambia	28.76	763.64	197.20	21.31	7.34	844.69	105.18	-	453.80	2,421.91	7,303.68
	Zimbabwe	0.06	320.97	26.06	3.63	0.00	385.91	2.65	88.91	-	828.18	2,670.87
	Total Region	97.16	2,524.98	759.84	2,574.60	121.66	2,707.15	776.01	4,016.11	3,028.92	16,606.44	144,769.31
Total Imports		640.51	6,805.80	1,854.50	10,470.29	1,423.26	114,312.10	14,030.39	8,468.98	5,203.77	163,209.60	

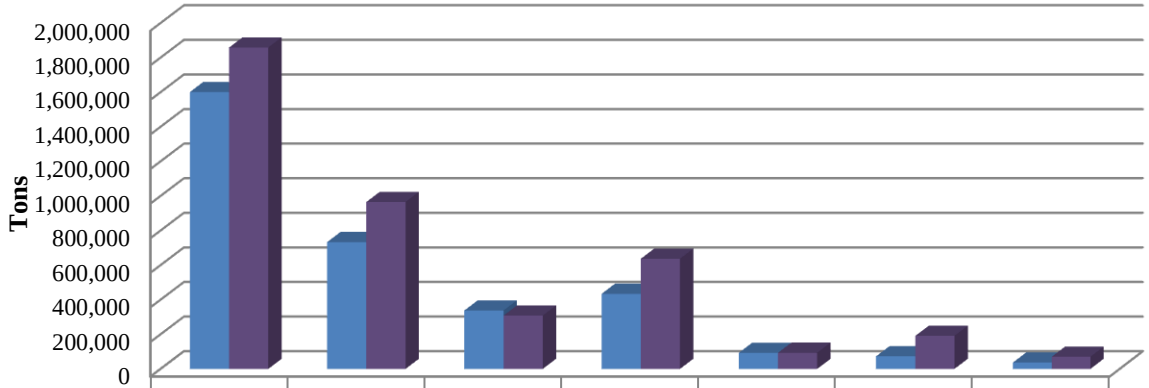
[73] *Ibid.*

Source: International Monetary Fund (2013), *Direction of Trade Statistics* (based on goods value of exports in USD millions)

6. The NSC also serves as the main distribution corridor for goods imported through South Africa, via the Port of Durban, to international markets. A large portion of the international exports from the region, including minerals and agricultural products, are exported through South Africa, via the Port of Durban and the OR Tambo International airport. Despite the disadvantage of additional distance from origins to other ports in the region, the large volume of exports from South Africa reflects both discounted return hauls, but also the regional hub aspects of both the port of Durban and the OR Tambo international airport with frequent direct calls.[74] During the recent international economic crises, freight volumes in South Africa have fallen, particularly regional road transport freight as well as container volumes in Durban. Maputo is increasingly being used as a viable alternative to South African ports as a result of the successful implementation of a corridor strategy.

7. The movement of goods along the Dar es Salaam Corridor is dominated by the import of consumer and manufactured goods, as well as mining and agricultural supplies, making up 80 percent of throughput in Dar Port, and the export of mining and agricultural products. Fuel imports, by pipeline, road and rail, are a major component, accounting for 35 percent of imports. Most of the mines prefer using multiple routes in order to secure alternative route access in case one route is closed and to have competitive pricing, time, and reliability options. In 2013, the Port of Dar es Salaam handled 1,579,661 tons with destination in Zambia, 701,526 tons destined for DRC, and 74,735 tons for Malawi.[75]

Figure 6-2 - Transit Cargo Traffic – Dar es Salaam Port



	ZAMBIA	D.R.CONGO	BURUNDI	RWANDA	MALAWI	UGANDA	Others
2011/2012	1,601,262	733,304	337,916	434,225	92,869	72,730	36,999
2012/2013	1,858,718	965,377	308,180	636,998	93,411	190,876	70,148

Source: Tanzania Ports Authority (2013), *Annual Statistic Report 2012-2013 http://www.tanzaniaports.com*

[74] Nathan Associates Inc. (2011) *Definition and Investment Strategy for a Core Strategic Transport Network for Eastern and Southern Africa,* Corridor Review and Performance Report, March, Washington, DC.: World Bank Public-Private Infrastructure Advisory Facility.

[75] Tanzania Ports Authority (2013) *Annual Statistics Report 2012-2013. http://www.tanzaniaports.com*

The Road Infrastructure on the Corridor

8. The NSC road network runs from Dar es Salaam in Tanzania to Durban in South Africa, via Malawi, Mozambique, Zambia, Zimbabwe, and on into South Africa (a map of the NSC showing the condition of the roads along the corridor is attached to the PAD). The entire NSC network outside of South Africa comprises 8,600 km of paved roads. The Dar es Salaam Corridor is running for 1,768 km from Dar es Salaam in Tanzania to Kapiri Mposhi in Zambia, and is heading south at Mbeya in Tanzania into Malawi via the Songwe/Kasumulu border crossing. The NSC in Malawi runs south through Malawi, serving Lilongwe, the capital, and Blantyre where a large proportion of the country's commercial and industrial capacity is located. The southern section of the NSC extends west from Blantyre to the border with Mozambique at Mwanza and then to the port of Beira and South Africa. A further branch of the NSC enters Mozambique at Dedza, providing a more direct route to Beira and South Africa.

9. A recent review of the NSC road network found that of the 8,600 km of road network across 7 countries, only 2,403 km of roads were in good condition, 5,156 km were found to be in fair condition, and 1,041 km were in poor condition. The latter were assessed to require needing immediate rehabilitation or upgrading,[76] whilst the roads in fair condition were assessed as requiring an upgrade or rehabilitation within the next two to five years. The sections in need of immediate repair/reconstruction were in Tanzania, Malawi, Zambia, Zimbabwe and Botswana.[77] Since then, a number of sections have either been upgraded, or are at the planning stage for prospective interventions, as summarized in the following table.

Table 6-2: Ongoing NSC Road Rehabilitation Projects (as of May 2013)

Road Section	Length	Progress	Source of Financing
Karonga- Songwe (Malawi)	46 km	In design stage	The World Bank (Financing for construction by World Bank)
Kacheche- Chiweta (Malawi)	70 km	In design stage	The World Bank (Potential financing for construction by the European Investment Bank)
Mzimba Turn off - Mzuzu - Kacheche (Malawi)	147 km	In design stage	The World Bank (Potential financing for construction by the European Investment Bank)
Serenje–Nakonde (Zambia)	615 km	Detailed design stage; total estimated construction costs of US$600 million.	Tripartite Trust Account (TTA) Invest Committee committed US$2.5m for transaction advisory services
Kitwe–Chingola (Zambia)	50 km	In construction stage	Government of Zambia
Mafinga-Iringa (Tanzania)	138 km	In construction stage	The World Bank
Lusaka-Chirundu road links 1, 2 and 3 (Zambia)	69 km	In construction stage	The World Bank
Lusaka-Chirundu road link 4 (Zambia) and Kafue weighbridge	25 km	Award of construction and supervision contracts	Tripartite Trust Account

[76] TradeMark Southern Africa (2011), *The TradeMark Southern Africa Case Study Series: North-South Corridor Roads*, In partnership with the COMESA-EAC-SADC Tripartite, Pretoria, South Africa, June.
[77] The survey did not include the branches to the NSC in Mozambique.

Road Section	Length	Progress	Source of Financing
Victoria Falls - Bulawayo Road Link 1&2 (Zimbabwe)	441 km	In design stage	TMSA
Nate-Kazungula (Botswana)	135 km	In construction stage	Government of Botswana

Source: COMESA-EAC-SADC Tripartite *Regional Infrastructure Investment Conference*, May 2013.

10. Malawi's public road network covers 15,451 km of classified roads of which 2,809 km are trunk paved roads (Main, Secondary and Tertiary designated roads), the rest being unpaved and earth surfaced. This network also forms part of the SADC Regional Trunk Route Network with such corridors as the Dar es Salaam (part of North-South) corridor, Nacala corridor and Beira (Sena) corridor. The paved proportion of the classified network (28 percent) is above the regional average of 20 percent. A road reclassification study carried out in 2006 identified a further 9,478 km of currently undesignated roads that serve rural communities (district and community roads), that are instrumental for rural access and connectivity with the higher level network. The GoM intends to classify these roads, bringing the total network to 25,000 km.[78] The country's road network is managed by the RA.

11. Substantial investments in roads have improved the condition of the paved road network; however, the situation on the unpaved network is less encouraging. Roads have historically been receiving the largest portion of the public funding, which reflects the sub-sector's dominating share of carried freight and passenger traffic. The share of the paved road network in good and fair condition has increased from 84 percent in 2007 to 96 percent in 2011, and compares well to the regional average of 79 percent. However the latest road condition survey might not be representative since it was carried out between October and December 2011 on 2,520 km of the paved road network, representing only 58 percent of the total paved network. In addition, the proportion of roads in good/fair condition is certainly lower today, reflecting the premature deterioration on many sections due to inadequate maintenance. The condition of the unpaved network has fallen from 83 percent in good and fair condition in 2007 to 63 percent in 2011. For improving rural access, road network size, available funding levels and rural access requirements need to be assessed in a holistic manner.

12. In Malawi institutional reforms in the road sector have led to the creation of the RFA and RA. These bodies administer respectively the collection and use of fuel levies for road maintenance. Revenue is increasing, allowing a growing proportion of maintenance activities to be financed. RFA is responsible for the implementation of the Government's annual budget allocation to the road sub-sector. It reports to the Ministry of Finance, Economic Planning and Development (MoFEPD). The Roads Fund raises revenue from the fuel (road) levy, transit fees and various other minor sources, and uses this income to finance the maintenance and rehabilitation of public roads, along with related surveys and monitoring activities. RFA income may also be supplemented by Government grants and loans. The RFA has requested the MoFEPD to authorize increases in road user charges (fuel levies) but the scope is limited due to the present economic situation in Malawi. RFA income has dropped as fuel sales have fallen during the current shortages in supply. The allocation the Roads Fund Administration makes to

[78] *Malawi Transport Sector Policy Note – Study Options*, World Bank, 2011.

the RA is covered by an annual financing agreement, which identifies the work program for the coming year and a budget for each component.

The Rail Infrastructure on the Corridor

13. The NSC rail network covers over 6,000 km of railroads and carries five percent of regional freight traffic**.** The regional railways have all been built to the 'Cape Gauge' of 1067 mm, with the exception of the Tanzanian Railways Corporation (TRC) system in northern Tanzania and the Kenyan/Ugandan systems, which have a 1,000 mm ('meter') gauge. This means that there is a high degree of physical interconnectivity within the Eastern and Southern Africa region and potentially a high level of inter-operability. Axle loads are generally 15 tons to 18 tons in the region and up to 26 tons in South Africa.[79]

14. The physical connection of rail networks potentially allows through traffic from Lubumbashi in the DRC to both Durban and Dar es Salaam ports, via the National Railways of DRC (SNCC), the national networks in Zambia (via the State Railways of Zambia) and Zimbabwe (via National Railways of Zimbabwe), and through South Africa (via TRANSNET), or through Tanzania [via Tanzania-Zambia Railway (TAZARA)]. Furthermore, the Port of Beira is connected via Beira Railroad Corporation (CCFB - *Companhia dos Caminhos de Ferro da Beira*) networks, to the core corridor. The actual traffic consists primarily of mining and agricultural products and imports of manufactured goods. Currently, the rail network outside of South Africa carries about five percent of total regional traffic volume, with the vast majority (97 percent) being carried by South Africa's Transnet.

15. The fixed costs for railway operations generally vary between 60 percent and 80 percent, mostly depending on the freight volumes and related asset utilization. For road services, fixed costs make up about 40 percent of operating costs.[80] This is why it is important for rail to achieve a very high level of infrastructure and equipment utilization. However, outside South Africa, despite the potential, railways in the region, have up to this time, been caught in a vicious circle of declining revenues, shortages of operating working capital, and deferred maintenance, leading to poor rolling stock availability, loss of capacity, declining reliability, and further loss of customers. The result is that the rail system in the region operates at well below its original design capacity, and is increasingly unable to attract the necessary funding to return to competitive levels of reliability.

16. Because of the competition with road haulers for most types of traffic, railway pricing is often dictated by what the market can bear. Current road tariffs are around US$0.059 to US$0.071 per ton-km (double for an empty return), while current rail tariffs vary between less than US$0.02 per ton-km (for coal link $\geq$ 60 million tons per year) to over US$0.2 per ton-km (for small volumes of captive traffic). On the longer regional cross border routes, road haulers perform about 1.5-2 round trips per month, while many of the railway operators only manage to load their wagons once per month, and cross border transit times can exceed one month. This is mainly owing to cash flow problems (fuel, repairs) and poor locomotive availability. For rail to

[79] COMESA-EAC-SADC Tripartite (2012) *NSC Progress Report*, April.
[80] TRADEMARK, Revamping the Regional Railway Systems in Eastern and Southern Africa, September 2012

recapture a significant portion of road freight, the benchmark general freight tariffs would need to be around US$0.04 per ton-km, with far greater reliability.[81]

17. Most of the NSC regional rail track outside of South Africa and Botswana is in poor condition (see Table 6-3). Some sections require refurbishment and upgrading and improvement in operations, and consequently suffer from poor efficiency and hence capacity constraints, including speed restrictions, shortage of operational railway wagons, unavailability of locomotives, and lack of operating capital for the purchase of spares and fuel.

Table 6-3: Rail Infrastructure Condition along the NSC

Rail link	Country	Track Length (km)	Track condition	Average Speed (km/hr)	Average Travel Time (hours)
Francistown-Gaborone	Botswana	475	Good	60	10.9
Gabarone-Port Elizabeth	Botswana	1,300	Good	30	46.3
Sakania-Lubumbashi	DRC	255	Poor	20	15.8
Lubumbashi-Kolwesi	DRC	232	Very Poor	15	18.5
Kolwesi-Kalemie	DRC	853	Very Poor	15	59.9
Kolwesi-Luena	DRC	950	Very Poor	1	953
Kasumbalesa-Lubumbashi	DRC	88	Poor	25.1	5.5
Durban-City Deep Pretoria	South Africa	720	Good	30	27
Pretoria-Beitbridge	South Africa	730	Good	40	21.3
Port Elizabeth-Pretoria	South Africa	1,150	Good	30	41.3
Gabarone-Pioneers Gate	South Africa	142	Good	30	7.7
Pioneers Gate-Pretoria	South Africa	268	Good	30	11.9
Dar es Salaam-Kidatu	Tanzania	300	Poor	25	25
Kidatu-Mbeya	Tanzania	506	Poor	26.6	23
Mbeya-Tunduma	Tanzania	115	Poor	25.6	6.5
Victoria Falls-Lusaka	Zambia	480	Poor	20	27
Lusaka-Kapiri Mposhi	Zambia	170	Poor	20	11.5
Kapiri Mposhi-Ndola	Zambia	110	Poor	20	8.5
Ndola-Sakania	Zambia	30	Poor	20	4.5
Kapiri Mposhi-Mbeya	Zambia	1,100	Good	30	39.7
Tunduma-Kasama	Zambia	240	Poor	26.7	10
Kasama-Mpika	Zambia	190	Poor	27.1	8
Mpika-Kapiri Mposhi	Zambia	509	Poor	26.8	23
Kapiri Mposhi-Ndola	Zambia	110	Poor	27.5	6
Ndola-Chingola	Zambia	87	Poor	24.9	4.5
Chingola-Kasumbalesa	Zambia	45	Poor	25	3.8
Beitbridge-Bulawayo	Zimbabwe	320	Fair	50	9.4
Bulawayo-Victoria Falls	Zimbabwe	468	Poor	30	18.6
Bulawayo-Plumtree	Zimbabwe	100	Fair (Zimbabwe) to good (Botswana)	30	6.3
Plumtree-Francistown	Zimbabwe	85	Fair (Zimbabwe) to good (Botswana)	30	5.8

[81] COMESA-EAC-SADC Tripartite (2012) *NSC Progress Report,* April.

Rail link	Country	Track Length (km)	Track condition	Average Speed (km/hr)	Average Travel Time (hours)
Bulawayo-Harare	Zimbabwe	508	Fair	20	28.4
Bulawayo-Rutenga	Zimbabwe	381	Poor	20	22.1
Rutenga-Beitbridge	Zimbabwe	134	Fair	20	9.7

Source: Nathan Associates Inc. (2011) *Definition and Investment Strategy for a Core Strategic Transport Network for Eastern and Southern Africa*, Corridor Review and Performance Report, March, Washington, DC.: World Bank Public-Private Infrastructure Advisory Facility.

18. A number of the regional railway systems have been concessioned. The currently operational railway concessions include Beitbridge Railway in Zimbabwe, Railway Systems of Zambia in Zambia, Central East African Railways in Malawi, and *Corredor de Desenvolvimento do Norte/*Northern Development Corridor in northern Mozambique. However, the concessioning of the regional railway systems has not in general led to improved operations and lower tariffs.

19. Two of the concessions – Tanzania Railways Limited (TRL) and CCFB, both operated by Rites from India, – have been cancelled as a result of loss of trust between the operator and the concession authority. The Railway Systems of Zambia concession has been terminated by Government for similar reasons, with only a small part of the projected freight having been attained (actual 0.5 million tons per year vs. projected 3.5 million tons), and the projected investment schedule having been delayed. Proposals for privatizing TAZARA have been dropped, mainly because of the poor performance of other regional railway concessions. As the most likely solution, many existing concession agreements will require renegotiation with governments playing a more active role in provision of track infrastructure, and possible deregulation to allow access to several competing operators.[82]

20. The railway network in Malawi comprises 797 km of mainline single Cape gauge track. The first section of Malawi's rail network was constructed in 1908, with a gradual expansion to 797 km taking place over 100 years. Today the network serves the south and center of the country, and is part of an international network extending from the Indian Ocean port of Nacala in Mozambique to the dry port at Chipata in Zambia. The rail infrastructure suffers from a history of insufficient maintenance and is vulnerable to flooding, whilst rolling stock is unreliable and in short supply (see Table 6-4 for track conditions). Railway operations were concessioned to Central and East Africa Railways (CEAR) in 1999 for a 20-year period, but the concessioning did not produce the expected improvement in services, despite various changes in the shareholding. The volume of traffic has declined as a result of stiff competition from the road sector. Vale SA, holder of one of the concessions in the Moatize coalfield and shareholder in CEAR, is currently financing the construction of a link between Moatize and Nkaya to connect to the CEAR network and upgrading of the existing line to Nacala to carry coal. This major foreign investment in the Moatize-Nkaya-Nacala corridor is estimated at US$986 million. Except for the relatively short section of the network that carries coal traffic from Moatize to Nacala, the current level of traffic is insufficient to finance the major investments necessary to modernize the permanent way and rolling stock without support from Government and development partners.

[82] COMESA-EAC-SADC Tripartite (2012) *NSC Progress Report,* April.

Table 6-4 – Rail track condition in Malawi

Section	Est. freight (mtpa both directions)	Track Length (km)	Track condition
Nayuchi -Nkaya	0.25	101	Fair
Mchinji-Lilongwe	0.10	104	Good
Lilongwe-Nkaya	0.20	283	Fair
Nkaya-Limbe	0.05	96	Fair
Limbe-Luchenza	0.05	44	Fair
Luchenza-Bangula	0.00	80	Not in use
Bangula-Marka	0.00	89	Not in use

Source: TRADEMARK, Revamping the Regional Railway Systems in Eastern and Southern Africa, September 2012

21. Rail transport in the region is dominated by the South African railway operator, Transnet Freight Rail (TFR), as the only financially viable operator on the NSC. TFR has demonstrated that by reducing the train turnaround time between Durban and City Deep (700 km), it is possible to reduce cost and capture freight from road haulers.[83] The railway operations in Zimbabwe, in relation to the NS corridor, are under the control of New Limpopo Projects International (NLPI), operating as Beitbridge-Bulawayo Railway Limited.

22. There is a renewed interest in the railways from the Government and various stakeholders, and efforts are being made by the COMESA-EAC-SADC Tripartite to revive the region's rail sector. The NSC Pilot Aid for Trade Program, a joint COMESA-EAC-SADC initiative, proposes a list of projects to support the railway systems on the NSC.[84] The World Bank has also initiated a US$255 million multimodal transport project directed to revive the SNCC operations in DRC. The DRC section of the Lobito corridor railway has recently been assessed by a team of railway experts from South Africa, funded by various mining interests; but the rehabilitation of the line has not yet been scheduled. In addition, an intermodal and rail development project (TIRP) to revive the Central Railway Corridor in Tanzania is currently under implementation with a US$300 million financing through the World Bank.

The Maritime Infrastructure on the Corridor

23. The main international sea ports connecting the end points of both rail and road networks on the NSC are the Port of Dar es Salaam in the north and the Port of Durban in the south. The branches linking neighboring countries include Lubumbashi in DRC to Lusaka, Malawi and Zambia to the Port of Nacala, and Malawi, Zambia and Zimbabwe to the Port of Beira in Mozambique. Durban and Dar ports are the largest and the only ones with sufficient volumes of traffic to justify direct call by major shipping lines. The secondary ports, Nacala and Beira, receive calls from large and smaller ships coming from hub ports in the area, particularly Durban. The Beira Port is constrained by the limited depth of the port and the allocation of berths to the rapidly expanding coal traffic. The Nacala Port is situated in a deep-water bay, offering natural protection for very large vessels. Although the port itself is currently a relatively small

[83] Nathan Associates Inc. (2011) *Definition and Investment Strategy for a Core Strategic Transport Network for Eastern and Southern Africa,* Corridor Review and Performance Report, March, Washington, DC.: World Bank Public-Private Infrastructure Advisory Facility.
[84] COMESA-EAC-SADC Tripartite (2012) *NSC Pilot Aid for Trade Programme: Surface Transport*, April.

feeder port, the construction of a major coal terminal is underway and an increase in general cargo capacity is planned. Table 6-5 below summarizes the key characteristics of the NSC ports.

Table 6-5: Key Comparative Characteristics of Ports on the NSC (2012)

Port	Country	Depth at Quay side (meters)	Number of Berths	Container Berths	Freight Volume (mtpa)	Container TEUs pa (thousands)	Operating Capacity (%)
Dar es Salaam	Tanzania	12.2-11.5	11	4	8	400	100%
Nacala	Mozambique	14	6	1	0.7	75	100%
Beira	Mozambique	9-12	12	4	3	175	100%
Durban	South Africa	12.8-12.2	58	7	45+45	2,587	100%

Source: Tanzania International Container Terminal Services, *http://www.ticts.net/*; COMESA-EAC-SADC Tripartite (2012) *NSC Progress Report,* April*;* USAID, (2012), *Logistics Review on Beina and Nacala Corridors*, and TRANSNET *http://www.transnetnationalportsauthority.net*

24. The congestion at both Dar es Salaam and Durban ports has eased with the recent decline in volumes due to the financial crisis; nevertheless, port performance remains a crucial issue. During the global commodity price boom, until mid-2008, when trade volumes in raw materials increased dramatically, the ports operated above their capacity and suffered from congestion with serious berthing delays. For example in 2008, Dar es Salaam Port with a capacity at the time of 250,000 TEUs handled a throughput of 385,000 TEUs.[85] However, following the economic downturn in 2009, a reduction in container volumes (in some ports by 15 percent) alleviated some of the congestion.[86]

25. In 2013, the volumes handled by the Port of Dar es Salaam reached 13.5 million tons, up from 12.1 million tons in 2012 and 10.4 million tons in 2011. The port has 11 berths, two tanker berths, a multi-product Single Point Mooring (SPM) and lighter quays, and handles a vast array of cargo, including containerized, dry bulk, Ro-Ro, and liquid bulk cargo. Port volumes are growing at over 10 percent per year, with petroleum volumes and containerized volumes increasing even faster. The port handles over half of Tanzania's total GDP and represents a strategically important gateway to the landlocked countries of the interior, Malawi, Zambia, Democratic Republic of Congo, Rwanda, Burundi and Uganda. Transit trade accounted for as much as 33 percent of total volume in 2012 or just over 4.4 million tons, with forecasts suggesting this could increase to 9.7 million tons by 2030.

26. This rapid growth is placing considerable strain on the Dar es Salaam Port. All the indicators of port performance and utilization, including *inter alia* waiting time for ships at anchorage, berth occupancy and cargo dwell time are deteriorating: Container vessels are now queuing for 10 days on average (up to a maximum of 25 days in some cases) to get a berth in the port. The delay is exacerbated by the limitations in operational efficiency at the quay and lack of storage space, lengthening the time required to unload and load a container ship, and inadequate integration between the key actors. This also impacts on the waiting time for a berth for dry bulk vessels which has reached 4.5 days, as the conventional berths are increasingly congested by

[85] COMESA-EAC-SADC Tripartite (2012) *NSC Progress Report,* April.
[86] *Ibid.*

container vessels. In addition, despite offering a poorer service resulting in increased charges for cargo, port tariffs (primarily wharfage) in DSM are higher than in competing ports.

27. A recent review[87] found a lack of container handling facilities and supporting infrastructure, allowing long term storage, and physical examination of container contents in the port, the long duration of custom clearance, due to the lack of an integrated system, and the lack of an option to allow clearance prior to the carrying vessel berthing, as contributory factors. The lack of storage space has been partially resolved by the creation of remote inland container depots or freight stations. But only at the cost of double handling of containers and increased traffic congestion in the city. The study also recommended, *inter alia*, a number of short-term measures to improve efficiency: (a) enhance customs system to allow for clearance prior to arrival of vessel, and before manifest is input; (b) drastically reduce the time a container can be stored in the port; (c) strictly apply the 21 day stipulation to auction uncleared goods; and (d) physical examination moved to inland container depots or freight stations.

28. A recently completed Dar es Salam Port Master Planning Study for the Tanzanian Ports Authority identified the constraints affecting port efficiency, causing severe congestion and high berth occupancy as the following, *inter alia*: (a) the lack of container storage space within the port area; (b) poor road and rail access to the terminal from both the Dar es Salaam and Central corridors; and (c) restricted entrance channel to the port limiting access to container carriers with capacity of up to 2,000 TEUs. The priorities outlined by the Government of Tanzania program for the maritime sector development are seen as: (a) Construction of a new container terminal (Berths 13 and 14); (b) Replacement of the Single Point Mooring for petroleum products; (c) the modernization of berths 1-7; and (d) the development of the eastern side of the bay as a prospective longer term development. These priorities form the core of the proposed Dar es Salaam Maritime Gateway Program that is currently under preparation between the Government of Tanzania and a coalition of development partners including the Trademark East Africa (TMEA), the United Kingdom Department for International Development (DFID) and the World Bank (WB).

29. With respect to general cargo and container volume throughput, the Port of Durban is the largest port in the Southern Africa region, handling more than 45 million tons of freight per annum, excluding oil and petroleum, but including more than 2.7 million TEUs of container traffic per annum**.** The container terminal has in the past suffered from congestion, mainly due to poor road and rail access – this has not yet been resolved but performance has improved because of decline in volumes due to the economic slowdown. Many of the terminals in the port are privately operated, including the bulk minerals terminal (Bulk Connections), which has handled copper concentrates from Zambia. The container terminal is operated by Transnet Port Terminals (TPT), as are all the port container terminals in South Africa.

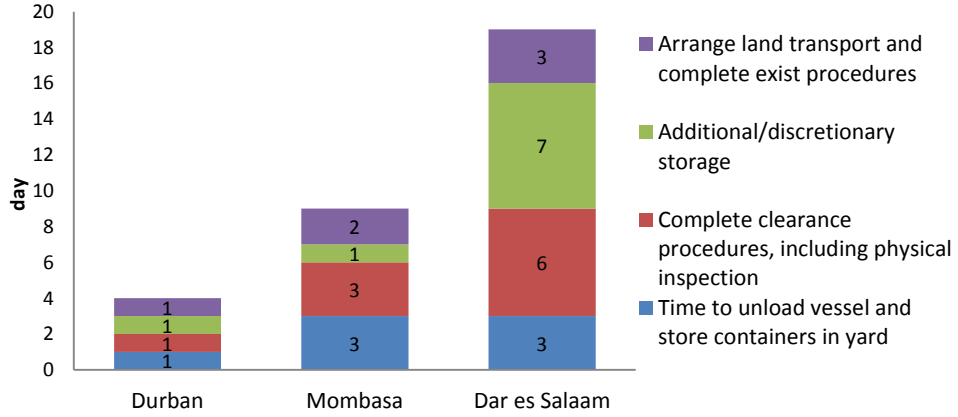
30. As a result of infrastructure investments, Durban Port Container Terminal capacity has increased to approximately 3.6 million TEUs per annum, which will increase to 4 million TEU after the berth extension**.** The new terminal (Pier 1) was transformed into a high tech facility with a 720,000 TEUs per annum capacity, three berths with a 12.5 meter draft, six ships to shore

[87] AECOM Intl (2011) *Trade Facilitation Interventions Dar es Salaam*, A study for SATH.

gantries, and 888 reefer points. The old terminal is larger, with designed capacity of 2.9 million TEUs per annum, six berths over 14,000 ground slots with an average draft of 11.8 meters, 19 ships to shore gantries, and 1,117 reefer points.[88] The investments in the container terminal also included six lift cranes with a carrying capacity of 80 tons at a time in Pier 1, and 19 cranes with twin lifting capability in Pier 2. Further infrastructure improvements included widening of the harbor channel entrance to 225 meters and deepening to 19 meters in the approach. The berthing draft is still below 12 meters; however, it is intended to be deepened to 16.5 meters. The container terminal is presently operating at near capacity with a throughput of about three million TEUs per annum. Transnet has planned a phased expansion of Durban to handle up to eight million TEUs per annum by 2018.

31. Durban Port holds a dominating position in Sub-Saharan Africa in terms of size and performance. Figure 6-3 shows the total average dwell time in Durban for both imports and exports, which is by far the lowest among the ports not only in Southern Africa but also across Sub-Saharan Africa in general. Further, breaking down the cargo dwell time by operational, transactional, and discretionary storage, the difference is the greatest in time spent for clearance procedures, as well as for discretionary storage.[89]

Figure 6-3: Comparative Breakdown of Cargo Dwell Time between Durban, Mombasa and Dar es Salaam Ports



Source: Kgare T., Raballand G., and Ittmanh H.W. (2011) Cargo Dwell Time in Durban: Lessons for Sub-Saharan African Ports, Policy Research Working Paper N.5794, The World Bank Africa Region, Transport Unit, September.

The Traffic Volumes on the Corridor

32. At present, around 80 percent of cargo on the NSC moves by road to or from the ports of Dar es Salaam or Durban, and the remaining 20 percent (primarily copper) is carried by rail. The corridor features both effective liberalization and spotty enforcement of quality and load control rules applicable to the trucking operators.[90] As a result of greater competition, road freight prices in the corridor average US$0.05 per ton-kilometer, by far the lowest in sub-Saharan Africa. Traffic levels are of the order of about 100 loaded trucks per day in each direction, average

[88] *Ibid.*
[89] *Ibid*
[90] Teravaninthorn, S. and Raballand, G. (2009) *Transport Prices and Costs in Africa: A Review of the International Corridors*. The World Bank Group.

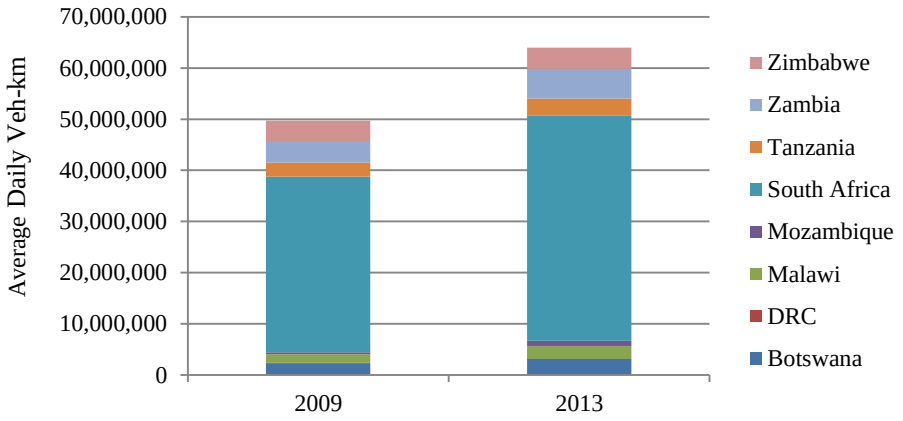
speeds of about 60 km/hr can be maintained, but with border crossing at Nakonde / Tunduma taking two to four days, the transit time from Kapiri Mposhi to Dar es Salaam can take up to six to seven days.[91]

Table 6-6: Traffic Flows Along North-South Corridor

	Core Corridor					Extended Corridor		
	Tanzania	**Zambia**	**Zimbabwe**	**Botswana**	**South Africa**	**DRC**	**Malawi**	**Mozambique**
Road traffic								
Vehicles per day	2,496	965	1,553	3,994	15,687	Na.	1,425	NA.
Tons cargo (million)	0.6	0.6	2.6	1.1	21.6	0.5	NA.	NA.
Rail traffic								
Tons cargo (million)	0.6	0.2	0.6	-	1.8	1.0	0.5	0.9

Note: NA means not applicable, while blank cell mean not available.

Figure 6-4: Evolution of the Average Daily Veh-km in NSC by Country



Source: University of Birmingham, Alta Innovations (2014) *Economic Benefits of an Efficient North-South Corridor – Strategic Level Analysis of Investments in the North-South Corridor Using HDM-4*, Birmingham, January.

33. The NSC corridor is one of the most heavily trafficked corridors in the COMESA-EAC-SADC region, carrying on average 64 million vehicle-km a day. The road network is already under pressure in relation to its design capacities and in terms of delays at strategic points, such as border posts. A number of mineral deposits within the region have become economically interesting and the increased levels of mining activities are leading to increased volumes of exports and imports with consequential heavy loading of NSC. Thus, the average daily vehicle-km increased about 30% from 2009 to 2013 (Figure 6-4). Mozambique and Malawi have recorded the more significant growths, 170 per cent and 48 per cent, respectively.

[91] Nathan Associates Inc. (2011) *Definition and Investment Strategy for a Core Strategic Transport Network for Eastern and Southern Africa*, Corridor Review and Performance Report, March, Washington, DC.: World Bank Public-Private Infrastructure Advisory Facility.

34. However, there are significant variations in distribution of traffic along different countries' road segments of the NSC. As shown in Table 6-7 below, the road segment of the NSC in South Africa carries about 70 percent of the total number of vehicle-km of the whole NSC, while DRC carries only 0.3 percent of total NSC road traffic, and Tanzania – 5.2 percent. The number of medium and heavy goods vehicles, expressed as a percentage of the total vehicle-km for each country, varies from about 6.9 percent in Botswana to 34 per cent in Zambia. The data for the DRC were of low reliability.[92]

Table 6-7: Average Daily Road Traffic on the NSC by Country in 2013 (vehicle-km)

Country	Average Daily Vehicle-km	Average Daily Vehicle-km as Share of Corridor Traffic	Medium/Heavy Goods Traffic as Share of Country's Medium/Heavy Goods Traffic
Botswana	2,941,053	4.6%	6.9%
DRC	177,552	0.3%	84%[1]
Malawi	2,479,000	3.9%	15%
Mozambique	1,102,948	1.7%	17%
South Africa	43,977,259	68.7%	9%
Tanzania	3,348,323	5.2%	24%
Zambia	5,808,328	9.1%	34%
Zimbabwe	4,168,598	6.5%	20%
TOTAL	**64,003,061**	**100%**	**13.2%**

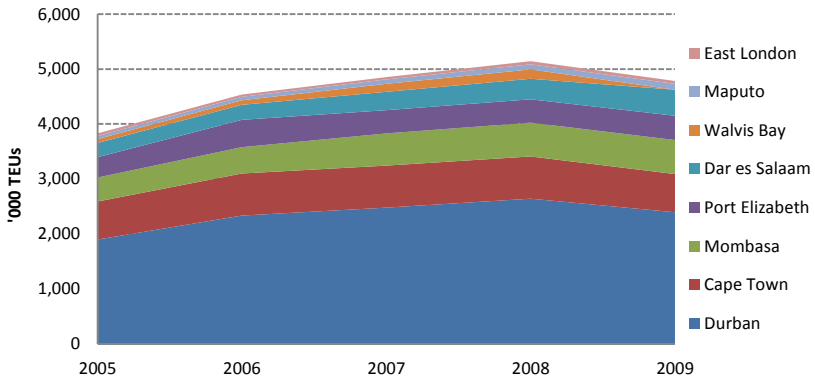
Source: University of Birmingham, Alta Innovations (2014) *Economic Benefits of an Efficient North-South Corridor – Strategic Level Analysis of Investments in the North-South Corridor Using HDM-4,* Birmingham, January.
[1] Data for the DRC were of low reliability

35. The freight volumes carried by the regional north-south railway, excluding South Africa, are estimated at six to seven million tons annually, mostly moving in or through Zimbabwe, and generally over distances of 400 to 600 kms. TAZARA, built at five million tons annual capacity, currently carries only 0.6 million tons, of which about 0.5 million tons is transit traffic mostly serving the DRC and Zambia copper belts.

36. The overall port container traffic in the region has been growing during 2000-2008, but has dropped following the recent international economic crises. The Port of Dar es Salaam has been increasing its overall vessel traffic by 3.9 percent per year and overall cargo traffic by 8.6 percent between 2000 and 2008. The Dar Port cleared 2 million tons by road and 244 thousand tons by rail, of which 132.5 thousand tons were cleared by TAZARA on the Dar es Salaam Corridor. The container traffic has been increasing at 14.7 percent per annum and reached 373,548 TEUs in 2008 (see Figure 6-5). The Durban Port handled 2.65 million TEUs in 2008, and the share of containerized traffic (67 percent in 2008) and transit traffic (30 percent in 2008) has been increasing.

[92] University of Birmingham, Alta Innovations (2014) *Economic Benefits of an Efficient North South Corridor – Strategic Level Analysis of Investments in the North-South Corridor Using HDM-4,* Birmingham, January.

Figure 6-5: Port Container Traffic – East and Southern Africa 2005-2009 ('000 TEUs)



Source: Kgare T., Raballand G., and Ittmanh H.W. (2011) *Cargo Dwell Time in Durban: Lessons for Sub-Saharan African Ports*, Policy Research Working Paper N.5794, The World Bank Africa Region, Transport Unit, September.

Border Posts and Customs Reform

37. The NSC is served by main border posts at Kasumulu/Songwe, Tunduma/Nakonde, Kasumbulesa/DRC, Chirundu, Beitbridge, Mchinji/Mwame, among others (see Table 6-9). Within the NSC, there are effectively three routes, passing through Chirundu, Victoria Falls, and Kazungula respectively, and one of the major determinant factors in the choice of route is border post congestion and processing time. The Dar es Salaam Corridor also features the Malawi Cargo Centers, operating dry port facilities at Dar es Salaam Port and Mbeya and Zamcargo, consolidating imports and exports for Zambia at Dar es Salaam Port.

38. The border crossings can represent a significant cost impact and impediments when considering the cargo clearing time for the road haulage transport along the NSC. The analysis of the travel conditions along the NSC from Durban to Lubumbashi shows that border posts represents 15 percent of the total cost (with one percent, one percent and 13 percent for Beitbridge, Chirundu and Kasumbalesa, respectively) and 37 percent of the travel time (with 13 percent, 11 percent and 13 percent for Beitbridge, Chirundu and Kasumbalesa, respectively).[93,94] The analysis also reveals the border processing times in Chirundu of 39 hours, in Beitbridge of 48 hours, and in Kasumbalesa of 49 hours (see Table 6-8). In terms of reliability of the time to complete a section, the greatest variation could be experienced at the Beitbridge border post with 335 percent, followed by the port of Durban, and the border crossings at Chirundu and Kasumbalesa.

[93] Nathan Associates (2011) *Definition and Investment Strategy for a Core Strategic Transport Network for Eastern and Southern Africa*. A study funded by PPIAF.
[94] Compared to Durban Port that accounts for 13 percent of total road cost and 40 percent of total time.

Table 6-8: Border Crossing Customs Clearance Time and Cost along the NSC

Border Post	Country	Clearance time for customs (imports and exports) (hrs)			Average charges for customs (per ton and per container) (US$)
		Average	max	min	
Nakonde/Tunduma	Tanzania-Zambia	48	96	24	Zambia: Road Transit Fees $10 + Carbon tax est. $30; Tanzania: Road User charges $152 + Customs $30
Kasumbulesa	Zambia-DRC	48	72	24	Various cost reported at $1150 per HGV per crossing
Songwe/Kasumulu	Tanzania-Malawi	30	75	1	Tanzania: Road User charges $152 + Customs $30; Malawi
Chirundu	Zimbabwe -Zambia	39	72	10	
Beitbridge	South Africa - Zimbabwe	48	72	24	Other than scanning charges at some node points, no customs charges for services
Mchinji/Mwame	Malawi-Zambia	5	48	5	
Kazungula	Zambia-Botswana	60	120	48	Road Transit Fees Zambia $10 going north and Botswana $130 going south + Carbon tax Zambia est. $30
Plumtree	Botswana-Zimbabwe	2	3	1	
Livingstone	Zambia-Zimbabwe	2	3	1	Road Transit Fees Zambia $10 and carbon tax Zambia estimated at $30
Nyamapanda	Zimbabwe-Mozambique	3	5	1	
Mwanza	Mozambique-Malawi	3	5	1	
Pioneer Gate	Botswana-South Africa	1	2	0.3	

Source: Nathan Associates (2011) *Definition and Investment Strategy for a Core Strategic Transport Network for Eastern and Southern Africa*. A study funded by PPIAF.

39. The performance of border posts is currently rather mixed. Tunduma is assessed to be performing "well" with a logistics score of 63; ongoing physical improvements at the Tunduma Border Post are estimated at about US$14.6 million, partially supported by Department for International Development (DFID)/TradeMark East Africa. The performance at Beitbridge is "fair" with a score of 58 as it experiences extreme forms of traffic congestion at peak periods; it is an important border post on the NSC with significant numbers of trucks and vehicles going to and from the South African ports and, to a lesser extent, Maputo. At Chirundu, performance is "good" with a score of 65, partially attributed to the establishment of a OSBP in 2009. At Chirundu, volumes of about 105 to 120 trucks per day move in each direction. The DfID and the Japan International Cooperation Agency (JICA) are providing support for strengthening the OSBP procedures. Kasumbalesa performance is "fair" with a score of 50, mostly due to the large charges and variability in wait time for customs clearance. Kasumbalesa between Zambia and DRC is another busy border post with about 400 trucks crossing every day. After the concessioning Kasumbalesa to a private sector in 2009, the government of Zambia decided to rescind the concession and resume its control as of April 2012. The performance at Mchinji is

"good" with a score of 72, due to the low traffic and uncongested movement on the corridor, despite the high cost of the customs process and road user fees.[95]

40. To improve the efficiency of movement of goods across borders by reducing wait time and costs of cross-border transactions, the Tripartite Task Force has launched an IBM Program. The IBM concept is a multi-agency approach, supported by a number of donors, focusing on the entire transport and supply chain. The goal of the concept is to improve the clearing process and minimize the disruption to movement of goods and people. A recent diagnostic[96] of the Songwe-Kasumulu border crossing, under this initiative, revealed a lack of interagency co-operation, no structured sharing of information, no co-ordination in operating hours between agencies on the same and opposite sides of the border, insufficient parking space, no Information and Communication Technology (ICT) connectivity, and a lack of coverage and necessary equipment for physical inspections. After the diagnostic, the objective is the design and establishment of OSBPs on all key border crossings in Tripartite countries. So far, an OSBP has been established and is functioning in Chirundu, Zambia. The bilateral agreement for establishing an OSBP at the Songwe-Kasumulu border crossing has been signed by Tanzania and Malawi, and the preparation of design is currently underway within the SATTFP SOP1.

41. Customs in the region's countries are an integral part of respective Revenue Authorities, serving as an important revenue generator from the trade related taxes (in some countries 25 percent of total tax revenue comes from trade duties). During the last 10-15 years, the Tripartite member states have been making attempts to reduce the customs duties as part of a regional coordination agenda by aligning their national customs taxes with the common external tariffs proposed by COMESA and EAC. A number of Tripartite countries have signed the Revised Kyoto Convention, namely Botswana, Lesotho, Mauritius, Namibia, South Africa, Uganda, Zambia and Zimbabwe. However, the actual implementation to put in place the Convention provisions following the WCO guidelines is still in question. Uganda has also implemented the Customs Reform and Modernization (CRM) Program, introduced by WCO to assist countries in improving customs administration performance; and Mauritius, Namibia, South Africa and SADC on a regional level are also on the way to join Uganda in this effort.

42. The MRA, launched in 2000, operates as a government tax administration agency under the Ministry of Finance. Since 2008, several reforms have been implemented in order to improve the environment for trading across borders. The MRA introduced risk management and post clearance audit unit, which enabled compliant traders to benefit from pre-clearances. In 2011, remote electronic filing of declarations was introduced which enabled Clearing and Forwarding Agents (CFA) to electronically track the progress of their declarations. Furthermore, MRA also introduced the Declaration Processing Center (DPC) which facilitates on line uploading and declaration processing by all major customs offices. The DPC has ensured the uniform application of customs law, valuation, and classification and reduced corruption. More recently, the MRA has launched non-intrusive inspections and plans to roll out scanners at the major border stations to minimize physical inspections. Nevertheless, many challenges remain since the

[95] Nathan Associates (2011) *Definition and Investment Strategy for a Core Strategic Transport Network for Eastern and Southern Africa*. A study funded by PPIAF.
[96] SATH (2011) IBM – Kasumulu/Songwe.

reforms are not always fully implemented. For instance, CFA at Mwanza have reported that virtually all commercial imports were subjected to physical inspection or access to information about trade regulations and procedures is still limited since it is not possible to download a comprehensive set of forms from the MRA website.

43. Principally resulting from the on-going customs modernization program at the MRA, over the past 6 years Malawi has reduced the number of days to import and export from 60 and 44 in 2007 to 43 and 34 days respectively in 2013. During the same period, the cost to import per container increased from US$1,590 in 2007 to US$2,870 in 2013 while the cost to export per container increased from US$1,565 in 2007 to US$2,175 in 2013. Malawi's cost to export is relatively high and has been increasing whereas both Tanzania and Zambia have managed to reduce the cost of exporting, although Zambia continues to face high costs. Some progress has also been done on reducing the number of documents required for importing from 16 in 2007 to 9 in 2013. However, the number of documents required to export increased from 8 in 2007 to 10 in 2013.

Figure 6-6 - Time to export (days)

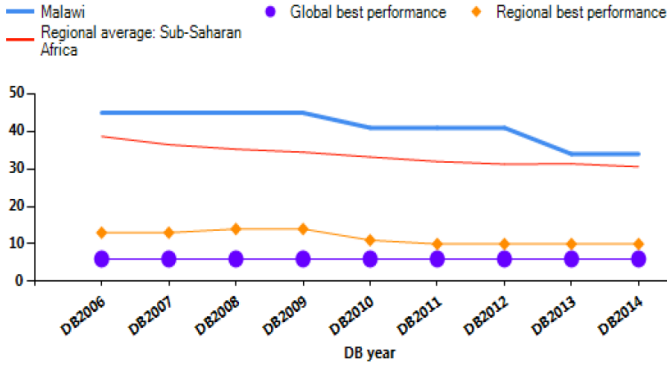
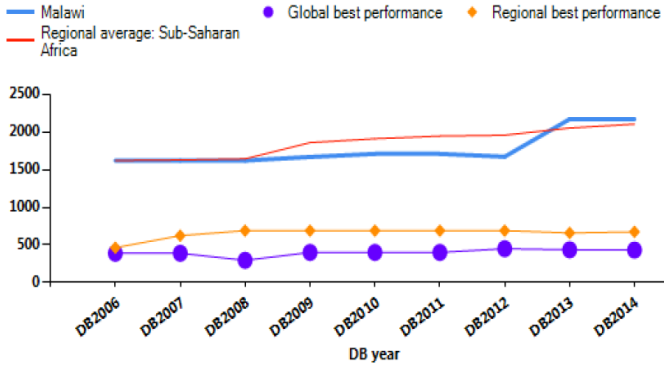


Figure 6-7 - Cost to export (US$ per container)



Source: Doing Business 2014 Reports http://www.doingbusiness.org/data/exploreeconomies/malawi/

The Logistic Performance of the Corridor

44. A competitive network of global logistics is the backbone of international trade, and is currently lacking on much of the corridor. Logistics encompasses an array of essential activities—from transport, warehousing, cargo consolidation, and border clearance to in-country distribution and payment systems— involving a variety of public and private agents. Improving logistics performance has become an important development policy objective in recent years because logistics have a major impact on economic activity. Evidence from the 2007 and 2012 Logistics Performance Indices (LPIs) indicates that, for countries at the same level of per capita income, those with the best logistics performance experienced additional growth: one percent in gross domestic product and two percent in trade. "These findings are especially relevant today, as developing countries need to invest in better trade logistics to boost recovery from the economic crisis and emerge in a stronger and more competitive position."[97] In the case of Africa,

[97] *Ibid*, p. iii.

and particularly in the context of southern Africa, the recommendations made by the LPI report are highly relevant.

45. Malawi ranks behind its neighbors in indicators that measure attractiveness of the business environment, such as the Global Competitiveness Index (GCI) of the World Economic Forum and the World Bank's Doing Business Report. On ease of doing business, the country ranking dropped from 110 in 2007 to 127 in 2010 and 171 in 2014. This can be attributed to a lack of significant reforms undertaken to improve the business regulatory environment relative to other countries. Further, the Malawi's performance on the 'Trading across Borders' indicator is also weak. Malawi stands 176 in the ranking of 189 economies and is below its neighbors, such as Mozambique, Tanzania and Namibia. Producers in Malawi continue to face high trade costs in sourcing their inputs and in getting their products to the market. Delays at ports and border posts, unduly complex customs, regulatory requirements and non-tariff barriers along major routes all contribute to higher-than-necessary transport costs, constraining tighter integration into the regional/global economy.

46. Logistics friendly countries have fewer bottlenecks in trade-related infrastructure, are industry leaders in quality and supply of logistics services, use best practices for core customs modernization programs, emphasize integration and coordination in border management, and have streamlined processes for regional facilitation and transit. With the exception of South Africa which ranks 34 in the LPI for 2014, countries in the area of influence of the North-South Corridor are poor performers, especially DRC. Malawi is ranked 73 in the LPI for 2014 and together with Kenya is the lead performer in the low-income group. In order to improve their performance, countries would benefit from improving infrastructure stock and services particularly with regards to port management and railway performance, in the context of increasing support to foster shifts into more environmentally friendly technologies.

47. Although, customs modernization programs are in place in South Africa, Zambia, Tanzania, and Zimbabwe; border post management reforms lag. For most countries, border clearance processes involve 15+ uncoordinated agencies. Lack of coordination is undermining advances made by the customs reforms. The minimal progress has been undermined by the high costs and administrative difficulties associated with outdated and excessively bureaucratic border clearance processes which are now often cited as more important barriers to trade than tariffs. Inefficient border processing systems, procedures, and infrastructure result in high transaction costs, long delays in the clearance of imports, exports, and transit goods, and present significant opportunities for administrative corruption. They essentially undermine a country's competitiveness in the international marketplace.[98] Border clearance processes by customs and other agencies are among the most important and problematic links in the global supply chain.

[98] The World Bank Group (2010b) *Border Management Modernization: A Practical Guide for Reformers*. International Trade Department. Washington D.C.

Figure 6-8: SADC and East Africa in the 2014 LPI Index

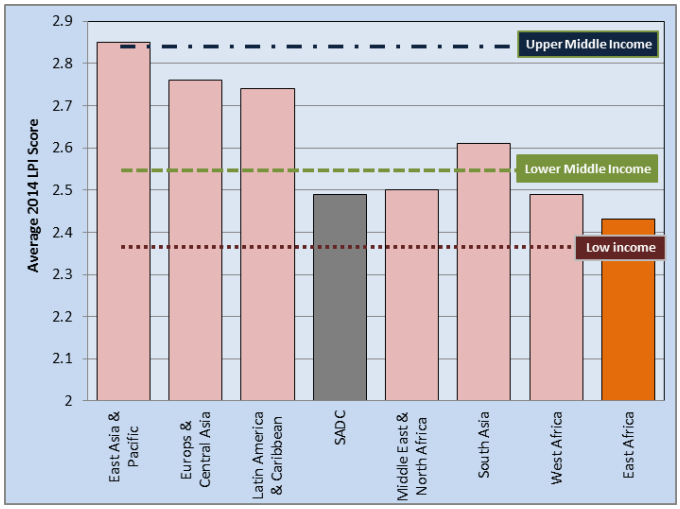


Figure 6-9: Competence and quality of service in logistics in Africa, by sub-region

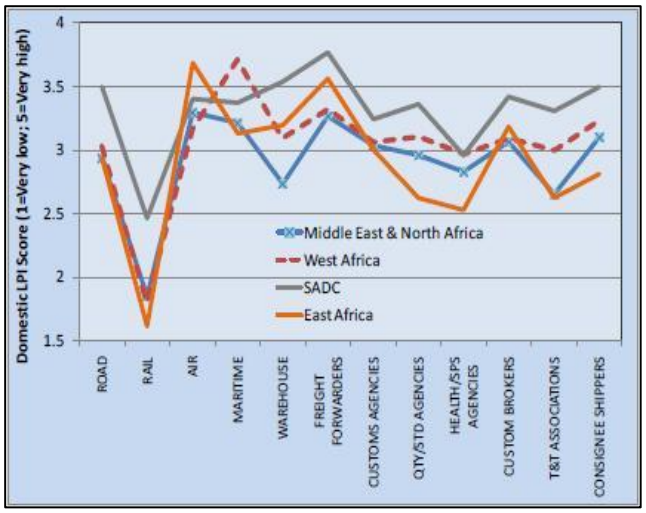


Figure 6-8 source: The World Bank Group (2014) *Connecting to Compete 2014: Trade Logistics in the Global Economy*, Washington DC.
Figure 6-9 source: The World Bank Group (2010c) *Logistics Performance Index 2010: Southern and East Africa*, based on findings of World Bank Report "Connecting to Compete 2010: Trade Logistics in the Global Economy", Washington, DC, February.

48. It takes three times as many days and nearly twice as many documents to import goods in poor countries than it does in rich ones.[99] Africa in particular fares very poorly with excessive physical inspections representing a major source of delays. The time between accepted customs declaration and customs clearance is only one day in OECD countries, but it currently takes four times longer in Africa.[100] Documentation requirements as well as processing time and cost for exports and imports procedures are the lowest in Tanzania and Mozambique relative to their NSC neighbors. According to the Doing Business 2012 survey (see Table 6-9), the worst performing countries, in terms of processing cost per container for export, are Botswana (US$3,185/container) and Zimbabwe (US$3,280/container), with Zimbabwe taking the longest (53 days) in terms of entire processing time. Export processing takes the least time and is cheapest in Tanzania and Mozambique (23 days and US$1,100 in Mozambique; 18 days and US$1,255 in Tanzania). On the import side, the best performing countries are also Tanzania and Mozambique.

49. Time spent on customs clearance shows opportunities for reduction, while the greatest cost factor is inland transportation and handling. The complexity of factors affecting time and cost are also shown in Table 6-9. Botswana, Zambia and Zimbabwe (all three landlocked) show the inland transportation and handling procedures as a major factor in their high costs. DRC, however, reflects document preparation as a major time and cost factor. In most countries, documentation preparation is the most time-consuming procedure, constituting over 50 percent of total processing time, and inland transport and handling is the most cost-intensive. In Tanzania, however, time dedicated to document preparation and port and terminal handling

[99] The World Bank Group (2012b) *Doing Business 2012: Doing Business in a More Transparent World*, Washington DC, Retrieved from www.doingbusiness.org
[100] World Bank (2010a) *Op Cit*.

makes up over 75 percent of the total processing time, and the associated costs account for over 65 percent of the total cost per container.

Table 6-9: Time and Cost Factors for Export/Import Procedures across the NSC Countries (2012)

		Botswana	DRC	Malawi	Mozambique	South Africa	Tanzania	Zambia	Zimbabwe
EXPORT PROCEDURES									
Number of required documents		**6**	**8**	**10**	**7**	**8**	**6**	**6**	**8**
Processing time and cost for documents preparation	days	11	23	25	13	15	8	27	28
	cost	$210	$1,200	$285	$185	$271	$495	$230	$300
Processing time and cost for customs clearance and technical control	days	3	5	2	2	4	4	3	4
	cost	$75	$300	$150	$250	$75	$240	$100	$180
Processing time and cost for port and terminal handling	days	4	14	4	4	9	4	5	4
	cost	$500	$805	$240	$365	$285	$320	$248	$300
Processing time and cost for inland transportation and handling	days	10	2	10	4	2	2	9	17
	cost	$2,400	$750	$1000	$300	$900	$200	$2,100	$2,500
Total processing time (days)		**28**	**44**	**41**	**23**	**30**	**18**	**44**	**53**
Total cost (US$ per container)		**$3,185**	**$3,055**	**$1,675**	**$1,100**	**$1,531**	**$1,255**	**$2,678**	**$3,280**
IMPORT PROCEDURES									
Number of required documents		**8**	**9**	**9**	**10**	**8**	**6**	**8**	**9**
Processing time and cost for documents preparation	days	15	41	25	18	14	8	30	42
	cost	$370	$790	$280	$435	$385	$450	$345	$401
Processing time and cost for customs clearance and technical control	days	5	11	3	3	4	5	4	4
	cost	$100	$300	$150	$340	$75	$240	$120	$350
Processing time and cost for port and terminal handling	days	11	9	9	5	11	10	9	8
	cost	$450	$945	$240	$400	$350	$540	$350	$350
Processing time and cost for inland transportation and handling	days	10	2	14	2	3	1	13	19
	cost	$2,500	$1,250	$1,900	$370	$985	$200	$2,500	$4,000
Total processing time (days)		**41**	**63**	**51**	**28**	**32**	**24**	**56**	**73**
Total cost (US$ per container)		**$3,420**	**$3,285**	**$2,570**	**$1,545**	**$1,795**	**$1,430**	**$3,315**	**$5,101**

Source: The World Bank Group (2012b) *Doing Business 2012: Doing Business in a More Transparent World*, Washington DC, Retrieved from www.doingbusiness.org

Annex 7: Governance and Anti-Corruption Action Plan
MALAWI: Southern Africa Trade and Transport Facilitation Program - SOP2 (P145566)

1. Governance and accountability problems remain an ongoing challenge in Malawi. Following the major corruption scandal in 2013 (known as "cashgate") which involved the hacking of the Government of Malawi's (GoM) integrated financial management information system (IFMIS), there has been an erosion of confidence in the accountability systems of the Government. Following the scandal, many development partners had suspended budget support and the use of country financial management systems in aid-financed projects, until there was clear progress in the implementation of the recommendations of the independent audit. The new Government is currently prioritizing actions to ensure that the public financial management systems are strengthened and support from development partners is restored. The new administration has expressed commitment to both Public Financial Management (PFM) and Public Sector Reform (PSR), to be spearheaded by the Ministry of Finance, Economic Planning, and Development (MoFEPD) and Vice President respectively. The new administration has also started taking legal action against some of the accused in "cashgate". This was welcomed by donor partners and citizens, but in order to restore confidence, these commitments need to be translated into concrete actions. The MoFEPD intends to focus on strict implementation of the policies and systems already in place and pursue this within the framework of the ongoing Bank-supported Financial Reporting and Oversight Improvement Project (FROIP) MDTF and with support from the International Monetary Fund (IMF).

2. To mitigate the potential financial risks at the project level, the implementing agency is quasi-government and will not be using the Integrated Financial Management Information System (IFMIS), which was at the heart of "cashgate". In addition, its fiduciary systems and procedures will be strengthened through a Governance and Anti-Corruption action Plan (GAC Plan). The proposed mitigation measures are aligned with the lessons of the recent Performance Learning Review (PLR) of the CAS (2015) highlighting the need to introduce smart accountability approaches into Government and projects while also keeping sight of the need for better country ownership.

3. Discussions on the broader governance risks are being taken forward through the Bank's ongoing policy engagement. The PLR proposes that the Bank increase its engagement its engagement on governance issues, particularly public sector and financial management reform through the existing FROIP MDTF project and other activities.

Project Governance and Anti-Corruption Action Plan

4. The GAC Action Plan is designed to strengthen the procurement and financial management systems and procedures to be used by the implementing entity, RA, and RFA, with specific actions to protect the Project. The plan is intended to mitigate risks that may arise, or those that compromise the delivery of the project in light of the recent "cashgate" crisis, though the implementing agency is quasi-government and will not be using IFMIS (which was at the heart of "cashgate"). This is intended to be achieved through the application of transparent and well documented procedures, based on the analysis of risks and the governance environment.

5. Five tenets have been identified to formulate the Governance and Anti-Corruption Action Plan for this project. These tenets have been built on the notion that corruption manifests itself readily in the procurement process, quality control, and financial control,[101] while governance is directly related to institutional aspects. The tenets have been built using in part the emerging best practice for dealing with governance and corruption risks in project lending.[102] The tenets follow the guidance in the World Bank Governance Strategy dealing with Anti-Corruption measures at the project level and the issues to be dealt with in anti-corruption action plans.[103] The summary of these elements is as shown in Box 1 below, while the five tenets developed for the SATTFP SOP2 GAC plan are described thereafter. ***Note***: Not all the suggested elements in the Box are considered for the SATTFP SOP2 GAC plan. The GAC plan also includes measures from experiences in similar Bank financed projects.

(a) Bank Procurement and Financial Management Procedures

6. First, as with all Bank projects, the fiduciary due diligence on procurement and financial management will be implemented by following the Bank's operational policies, guidelines, and procedures. Given noted fiduciary risks, further actions have been incorporated into the GAC plan. At the design stage, checks have been built in to ensure the reliability of the bills of quantities, cost estimates, and designs through the use of the supervision consultant in undergoing a robust design review. In addition to this, incremental procurement capacity will be available to assist RA with the preparation of the bidding documents, in bid evaluations, as well as on the job training.

7. Further efforts will be made to: (a) ensure broad dissemination of all procurement notices, pre-qualifications, Expressions of Interest, Tenders and Requests for Proposals on the United Nations Development Business (UNDB) and dgMarket, on the RA website and in local newspapers, together with notifying bidders of the outcome of the bidding/selection process; (b) monitor the bidding process, (c) ensure that to any clarifications sought by any bidder/s, replies will be sent to all bidders to avoid any unfair advantage, (d) check the financial bids/proposals, when needed, for signs of possible collusion, and (e) refer potential cases of fraud, collusion, corruption and coercive practices to INT.

8. As further oversight, the procurement plan sets out in detail all procurements subject to prior review by the World Bank. As evidenced in some projects, one important issue worth mentioning is the misuse of mobilization advances by contractors through diversions to other uses, thus compromising the works as the contractors run into cash flow difficulties. To mitigate against this risk, the qualification criteria will be set to allow only for the selection of reputable contracting firms with proven experience in similar works and sound financial footing to

[101] See World Bank (2007), J. Edgardo Campos & Sanjay Pradhan (eds). "The Many Faces of Corruption":- William D.O. Paterson & Pinki Chaudhuri in "Making Inroads on Corruption in the Transport Sector through Control and Prevention".

[102] World Bank (2008), "Dealing with Governance and Corruption Risks in Project Lending: Emerging Good Practices"; Discussion Draft, Operations Policy and Country Services dated December 12, 2008.

[103] World Bank (2007), "Strengthening World Bank Group Engagement on Governance and Anti-Corruption", pp 24-27.

undertake these works. As is common with mobilization advances, an advance payment guarantee will be required from the selected contractor.

Box 1: Smart Project Design and Anti-Corruption Plan Best Practice Elements:
[Based on World Bank (2008): Dealing with Governance and Corruption Risks in Project Lending: Emerging Good Practices]
Smart Project Design elements:

- Strengthening internal controls and accountability mechanisms:-procurement, financial management, monitoring and evaluation, and information disclosure;
- Strengthening participation and external accountability mechanisms- including (where appropriate) the participation of project beneficiaries and affected communities in project design and implementation, and strengthening their "voice" in order to enhance the responsiveness of service providers;
- Ensuring effective project oversight and supervision through careful project design, engagement (as appropriate) of independent "third party" oversight, and identifying and funding the Bank's Task Team requirements; and
- Implementing a well-thought-out communications plan designed to send the right signals, consistently to all of the players, and to avoid surprises later on.

When Smart Project Design isn't enough:

- Introduction of e-procurement, for greater openness and transparency, and to counter collusive arrangements that undermine the competitive bidding process;
- Transparent budget and expenditure tracking systems;
- Expanded scope of the audit function to include technical and/or value-for-money audits that make it more difficult for contractors, suppliers and consultants to get away with short-changing the project during implementation;
- Increasing the amount of critical information available to the public;
- Strengthening the voice of consumers through consumer satisfaction surveys;
- Engaging with NGOs, project beneficiaries and affected communities; and
- Increasing the probability of detecting irregularities through the development of an effective complaints program.

9. The Bank team will ensure compliance with Bank procurement and financial management rules through its oversight with Bank procurement and financial management specialists' reviews of documentation, carrying out office visits, interviews and inspections; and recommending actions to be taken if any inconsistencies are identified. Bank technical experts will also be involved in the review of all documentation as deemed necessary including but not limited to prequalification documents, requests for proposals, TORs, bidding documents, contract documents, and evaluation award reports. Last but not least, as part of the institutional capacity building component, the Bank will ensure that training of staff in procurement and financial management issues is offered to strengthen internal technical capacity.

10. The use of hotlines to report corruption and other forms of fraudulent activities is proposed given that they are not in use currently.

(b) Supervision Arrangements

11. Second, all construction supervision by the Government is to be undertaken by using reputable international engineering consulting firms. This is to ensure not only the proper construction of the project elements to the set technical specifications, but also to keep a check on unwarranted variation orders and time extensions. The contract management setup will be as per FIDIC arrangements, with the RA maintaining the Employer role and the supervising engineering firm maintaining the role of the Engineer (Employer's Representative). As such, decisions on variation orders and time extensions will only be made with the express consent of the Employer, who has an inherent desire to control costs, reducing the possibility for collusion practices between the Engineer and the Contractor. This firm will also supervise the Environment and Social Impact Assessment, the Environment Management Plan and the RAP.

(c) Independent Technical Audit on the Bank's Side

12. Complementing these efforts will be enhanced Bank supervision of the implementation of the works through physical site inspections, and careful review of progress reports. Field based staff will also play an integral role in carrying out random supervision checks; and reporting observed shortcomings during the project implementation. An integral part of the Bank supervision will involve the commissioning of periodic field data collection, laboratory tests and analysis as part of the normal supervision of the project. This will provide an additional professional opinion on the efficiency, economy and transparency of the works undertaken and supervised under the Project.

13. During supervision missions, RA and Bank representatives will jointly select a few 100-meter road sections to be monitored, properly identified through km posts and/or GPS coordinates. Field and laboratory tests and relevant reporting will be prepared prior to the next Bank supervision mission, which in turn will review the results together with RA, make appropriate corrective measures (if needed), and select another set of 100-meter long sections for monitoring during the successive period between Bank missions. Some sections may be selected for testing more than once for control and assessment of parameter evolution.

14. ***Field Tests and Sampling.*** Field tests and sampling will include layer thickness measurements, visual condition survey, transverse profile (rut depth), macro- and micro-texture, deflection testing, roughness (using high precision rod and level technique or equivalent), as well as other measurement deemed necessary by RA and Bank supervision missions. At the same time, samples will be properly collected for laboratory testing. The accurate IRI results from profile measurements may serve as a reference (calibration) for dynamic roughness measuring equipment used to measure roughness on other road sections.

15. ***Laboratory Testing.*** Laboratory tests will include empirical properties, as well as simulation tests and fundamental mechanical properties of materials used in all pavements layers, such as surfacing, base, sub-base, as well as subgrade. Actual pavement layer thicknesses and material quality will provide the basis for a reassessment of the adequacy of the pavement structural design, which could eventually lead to potential corrective measures to be applied in a timely manner, well before the completion of road works.

16. Test of unbound layers will include gradation, moisture content and degree of compaction. Testing of asphalt binders will include, but not be limited to penetration, ductility, elastic recovery, viscosity, stiffness modulus at low temperatures. Testing of fines and coarse aggregates will include gradation, plasticity index, stiffening power, shape index, coarseness index, content of organic materials, water absorption, density, LA abrasion value, stripping, and resistance to frost-thaw.

17. Testing of asphalt mixes will include standard specification tests such as Marshall mix design procedure, determination of binder and air void content, bulk specific gravity and theoretical maximum specific gravity, stability and flow, and gradation of asphalt mixes. Also recommended will be resistance to permanent deformation using wheel tracking device, resistance to fatigue, dynamic modulus, and stiffness modulus.

18. ***Reporting.*** Reports will be prepared summarizing all the above activities carried out in the field and in the laboratory (including supporting information), analysis carried out, and main findings on the quality of works, and appropriateness of design, monitored during the review period. The periodic report, to be delivered to the Bank and RA at least one week prior to each supervision mission, should also include recommendations that would lead to the road works to deliver the desired outcome.

(d) Financial and Independent Technical Audits on the Borrower's Side

19. Third, extra measures to ensure oversight and proper due diligence will include the use of external financial and technical audits. The details of the financial audit using independent auditors following international auditing standards are discussed in Annex 3 on Financial Management and Disbursement Arrangements. The technical audit will include the hiring of an independent consulting firm to carry out materials testing on drilled core samples from completed road sections to check compliance with the technical specifications. The nature of the tests and sampling required will be detailed in the technical audit Terms of Reference (ToR), which will be subject to formal clearance by the Bank. This independent quality check will be an integral part in ensuring not only that quality is met, but also that the sustainability of such an important asset is maintained to yield better governance outcomes for road users and all other stakeholders.

(e) Civil Society Oversight

20. Independent oversight by civil society is to be achieved through a coalition of citizens and road user groups, and implementation of an effective system of complaint handling, with transparent investigation and reporting of the results. This will be achieved on the Karonga – Songwe road section through establishment of a formal grievance committee to provide a fora for concerns raised by the citizens during preparatory and implementation phases. More broadly on the corridor, interested stakeholders will have the opportunity to report any concerns through a CPMS being established under SOP1 in the DCC. The disclosure of project documentation as per Bank disclosure policies, and the transparent procurement mechanisms with proper advertising, and declaration of contract awards will serve to equip the civil society (road users, stakeholders, media) with the information to ensure the project is being conducted in a satisfactory manner. Dissemination of information should be through a well-coordinated communications plan agreed upon by both the World Bank country office and RA. The public will be informed through the RA website that representatives of civil society groups are allowed to attend public bid openings. Concerns of affected stakeholders or aggrieved parties are to be handled through a complaint register system. All supervision engineers will be asked to run a complaint book, with the list of complaints forwarded to the responsible officials at RA for feedback or redress. Further, any party is entitled to lodge complaints on corruption issues to the World Bank Investigation Unit (INT): details online at http://www.worldbank.org/integrity.

21. Malawi was one of the pilot countries in the Construction Sector Transparency Initiative, but a detailed implementation plan for the national office has not been prepared yet, due to funding uncertainty, so currently CoST Malawi is less active.

Annex 8: Selection and Prioritization of Accident Blackspots
MALAWI: Southern Africa Trade and Transport Facilitation Program - SOP2 (P145566)

1. The risk based Road Safety Assessment (2014) was carried out on the Trunk Paved Road Network in Malawi with funding from the GRSF. The study completed the following: (a) a road safety assessment of the paved Main Road network in Malawi (approximate length 2,809 km) to identify a prioritized list of accident blackspots based on economic criteria; (b) preliminary designs and cost estimates for the priority blackspot interventions; and (c) a Manual for Safe Road Design, suitable for the Malawian context, for local stakeholder agencies to use to identify, prioritize and design priority interventions to address blackspots on the network.

2. Based on the assessment and accident data, 70 blackspots were identified. Almost 400 fatal accidents and 250 serious accidents have been registered on these blackspots accounting for 20 percent of fatal and serious injury accidents respectively registered during 2008-2012 on the main road network (2,012 fatal and 1,237 serious). Safety measures at these locations are thus important for reducing fatalities on Malawian roads. Furthermore, such safety measures would reduce the number of accidents not registered by the police.

3. The road network was assessed to identify general road safety problems and risky locations. The problems identified included the following, apart from behavioral issues:

(a) Settlements – typical lack of speed management/traffic calming (leading to too high speed), lack of facilities for pedestrians and cyclists, vendors encroaching the road, parked vehicles and stopped busses, busy market days, etc.;

(b) Lack of facilities for vulnerable road users outside settlements, e.g. lack of paved shoulders;

(c) Vertical and horizontal alignment with no delineators, warning signs, local speed limits and where relevant guardrails;

(d) No or limited safety zone with steep ditches and slopes, fixed objects (poles, pillars, trees, stones, endings of guardrails (fishtails), etc.) too near the road and not protected by e.g. guardrails. Missing/stolen guardrails and signs is a big problem in Malawi;

(e) Bridges often lacking guardrails on approach, damaged parapets and joints not safely constructed. On M05 there are many single lanes bridges that are often lacking guardrails and parapets and there are traces of conflicts between vehicles approaching from both sides; and

(f) Four-leg junctions are used and should be replaced by roundabouts or staggered T-junctions. Junctions need in some cases appropriate channelization.

4. For each blackspot, interventions were suggested and a rough cost assessment and assessment of potential effects (based on e.g. iRAP toolkit[104] and PIARC catalogue[105]) was prepared. The blackspots have been ranked according to the Benefit-Cost ratio where the blackspots treatment with highest reduction in fatality and serious accident costs per investment is ranked highest as described in the methodology based on the cost of fatalities and serious injured.

5. During the Stakeholder Workshop, the top seven priority locations of blackspots out of total 70 were selected on the North-South Corridor for preliminary design and inclusion in the SATTFP SOP2. These include the following locations:

(a) Chimbiya TC, (M01 S);
(b) Lumbadzi TC, (M01 N);
(c) Mponela TC, (M01 N);
(d) Lizulu TC, (M01 S);
(e) Tsangano TC/Biriwiri;
(f) Kampepuza TC, (M01 S); and
(g) Lunzu TC, (M01 S).

[104] iRAP, The Road Safety Toolkit, http://toolkit.irap.org/default.asp
[105] Catalogue of design Safety Problems and Potential Countermeasures, PIARC Technical Committee 3.1 Road Safety, 2009


IBRD 41090
RWANDA
BURUNDI
KENYA
DEM. REP. OF CONGO
TANZANIA
DODOMA ★
ANGOLA
ZAMBIA
LUSAKA ★
MALAWI
LILONGWE ★
ZIMBABWE
HARARE ★
MOZAMBIQUE
BOTSWANA
NAMIBIA
SOUTH AFRICA
SWAZILAND
MBABANE ★
MAPUTO ★
LESOTHO
MASERU ★
PRETORIA ★
GABORONE ★
COMOROS
MORONI ★
MADAGASCAR
Mozambique Canal
Kindu
Ilebo
Kananga
Mbuji-Mayi
Kigoma
Kalamie
Shinyanga
Arusha
Moshi
Mombasa
Tabora
Singida
Tanga
Wete
Mkokotoni
Zanzibar
Morogoro
Kibaha
Dar es Salaam
Iringa
Mafinga
Sumbawanga
Mbeya
Igawa
Kamina
Kasama
Karonga
Lindi
Mtwara
Rumphi
Chiweta
Songea
Bwengu
Mzuzu
Kolwasi
Lumumbashi
Mansa
Solwezi
Ndola
Kasumbalesa Border Crossing
Nakonde/Tunduma Border Crossing
Songwe/Kasumulu Border Crossing
Karonga – Songwe Road Section Rehabilitation Financed by the Project | 46 km
Bwengu – Chiweta Road Section potentially Financed by EIB | 60 km
Bwengu – Chiweta Road Section potentially Financed by EIB | 150 km
Mwami/Mchinji Border Crossing
Kasungu
Lichinga
Chipata
Pemba
Mamoudzou
Mayotte (Fr.)
Kabwe
Dedza/Calomue Border Crossing
Nacala
Nampula
Moçambique
Mongu
Chirundu Border Crossing
Zobue/Mwanza Border Crossing
Blantyre
Tete
Mulanje
Mulanje/Muloza Border Crossing
Livingstone/ Victoria Falls Border Crossing
Kazungula Border Crossing
Cuchimano/Nyamapanda Border Crossing
Kasane
Livingstone
Quelimane
Gweru
Mutare
Chimoio
Maun
Bulawayo
Beira
Masvingo
Francistown
Ghanzi
Martin's Drift/ Groblersburg Border Crossing
Belt Bridge Border Crossing
Serowe
Pietersburg (Polokwane)
Inhambane
Molepolole
Mochudi
Gaborone Border Crossing
Kanye
Lobatse
Lobatse Border Crossing
Xai-Xai
Nelspruit
Tsabong
MMabatho (Mafikeng)
Johannesburg
Toliara
Kimberley
Bloemfontein
Richards Bay
Pietermaritzburg (Ulundi)
Durban
GSDPM Map Design Unit
0 100 200 300 400 500
KILOMETERS
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MALAWI
SOUTHERN AFRICA TRADE AND TRANSPORT FACILITATION PROJECT SOP2
ROAD CONDITIONS ALONG THE NORTH–SOUTH CORRIDOR:
Good Fair Poor
NATIONAL CAPITALS
MAIN CITIES
BORDER CROSSINGS
INTERNATIONAL BOUNDARIES
FEBRUARY 2015