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PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR 115.4 MILLION

(US$190 MILLION EQUIVALENT)

TO THE

UNITED REPUBLIC OF TANZANIA

FOR A

SECOND CENTRAL TRANSPORT CORRIDOR PROJECT

April 30, 2008

Africa Transport Sector
Country Department AFCE1
Africa Regional Office

CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2008)

Currency Unit	=	Tanzania Shillings
1,210 TSh	=	US$1
1 SDR	=	US$ 1.6466

FISCAL YEAR
July 1 – June 30

ACRONYMS AND ABBREVIATIONS

AC	Asphalt Concrete
AfDB	African Development Bank
AGL	Aeronautical Ground Lighting
AWP&B	Annual Work Plan and Budget
B/C	Benefit/Cost Ratio
BoT	Bank of Tanzania
BRT	Bus Rapid Transit
CAG	Controller and Auditor General
CAS	Country Assistance Strategy
CBD	Central Business District
CE	Chief Executive
CFAA	Country Financial Accountability Assessment
CH	Chainage
CODAP	Coordination Unit for Donor Funded Projects
CTCP	Central Transport Corridor Project
CTCP2	Second Central Transport Corridor Project
CV	Curriculum Vitae
DA	Designated Account
DANIDA	Danish International Development Agency
DARCOBOA	Dar es Salaam Commuter Bus Owners' Association
DART	Dar es Salaam Rapid Transit Agency (DART Agency)
DAWASCO	Dar es Salaam Water and Sewerage Corporation
DBST	Double Bituminous Surface Treatment
DO	Development Objective
DPs	Development Partners
DPP	Department of Policy and Planning
DSBT	Double Surface Bituminous Treatment
EA/SA	Environmental Assessment/Social Assessment
EC	European Commission
EIRR	Economic Internal Rate of Return
E&M	Evaluation and Monitoring
EMP	Environmental Management Plan

ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
EU	European Union
FAD	Finance and Administration Division
FC	Fare Collector
FM	Financial Management
FMR	Financial Management Report
FMS	Financial Management System
GBS	General Budget Support
GDP	Gross Domestic Product
GoT	Government of Tanzania
GPRS	General Packet Radio Service
GPS	Global Positioning System
HDM-4	Highway Development and Management Model
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HR	Human Resource
IBRD	International Bank for Reconstruction and Development
ICAO	International Civil Aviation Organization
ICB	International Competitive Bidding
ICT	Information and Communication Technology
IDA	International Development Association
IFC	International Finance Corporation
IFR	Interim Financial Report
IP	Implementation Progress
IRP2	Second Integrated Roads Project 2
IRR	Internal Rate of Return
ISDS	Integrated Safeguard Data Sheet
ITDP	Institute for Transportation and Development Policy
JAST	Joint Assistance Strategy
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
JISR	Joint Infrastructure Sector Review
KADCO	Kilimanjaro Airport Development Company Limited
KIA	Kilimanjaro International Airport
LAAC	Local Authority Account Committee
LGA	Local Government Authority
LGRP	Local Government Reform Program
LGSP	Local Government Support Project
MCC	Millennium Challenge Corporation
MDA	Ministries Departments and Agencies
MDG	Millennium Development Goals
MKUKUTA	Mkakati wa Kukuza Uchumi na Kuondoa Umasikini Tanzania
MoCT	Ministry of Communications and Transport, Zanzibar
MoFEA	Ministry of Finance and Economic Affairs
MoID	Ministry of Infrastructure Development
MOU	Memorandum of Understanding

MTEF	Medium Term Expenditure Framework
NAO	National Audit Office
NCB	National Competitive Bidding
NGO	Nongovernmental Organization
NMT	Non-motorized Transport
NORAD	Norwegian Agency for Development Cooperation
NPV	Net Present Value
NSSF	National Social Security Fund
OP/BP	Operation Policy/Bank Policy
PAC	Public Account Committee
PAD	Project Appraisal Document
PAP	Project Affected People
PAYE	Pay As You Earn
PCCB	Prevention and Combating of Corruption Bureau
PCN	Project Concept Note
PDO	Project Development Objective
PEFAR	Public Expenditure and Financial Assessment Review
PEMCAAP	Public Expenditure Management Country Assistance and Action Plan
PFM	Public Financial Management
PFMRP	Public Financial Management Reform Program
PID	Project Information Document
PMO	Prime Minister's Office
PMO-RALG	Prime Minister's Office - Regional Administration and Local Government
PMU	Procurement Management Unit
PMMR	Performance based Management and Maintenance of Roads
PPA	Public Procurement Act
PPP	Public-Private Partnership
PPRA	Public Procurement Regulatory Authority
PR	Public Relations
PRSC	Poverty Reduction Support Credit
PSO	Public Service Obligation
QCBS	Quality and Cost-Based Selection
QPR	Quarterly Progress Report
RAC	Road Agency Cost
RAP	Resettlement Action Plan
RFB	Road Fund Board
ROW	Right of Way
RPF	Resettlement Policy Framework
RPIT	Resettlement Planning and Implementation Team
RUC	Road User Cost
SBD	Standard Bidding Document
SDP	Specific Development Project
SIL	Specific Investment Loan
SSATP	Sub-Saharan Africa Transport Policy
SSS	Single Source Selection
STI	Sexually Transmitted Infections

SUMATRA	Surface and Marine Transport Regulatory Authority
SWAp	Sector-wide Approach
TA	Technical Assistance
TANESCO	Tanzania Electric Supply Company Ltd
TANROADS	Tanzania National Roads Agency
TANZAM	Tanzania to Zambia (Highway)
TBD	To Be Determined
TCAA	Tanzania Civil Aviation Authority
TEU	Twenty-foot equivalent unit
TIC	Tanzania Investment Centre
TICTS	Tanzania International Container Terminal Services
TOR	Terms of Reference
TPA	Tanzania Ports Authority
TRC	Tanzania Railway Corporation
TSDMS	Transport Sector Data Management System
TSIP	Transport Sector Investment Program
TSSP	Transport Sector Support Program
TTCL	Tanzania Telecommunication Company Limited
TSh	Tanzanian Shillings
UDA	Usafiri Dar es Salaam
UK	United Kingdom
UNEP	United Nations Environment Programme
VAT	Value Added Tax
VOC	Vehicle Operating Cost
WAN	Wide Area Network
ZANROADS	(proposed) Zanzibar Road Authority
ZANTRANSPORT	(proposed) Zanzibar Transport Regulatory Authority

Vice President:	Obiageli K. Ezekwesili
Country Director:	John Murray McIntire
Sector Manager:	C. Sanjivi Rajasingham
Task Team Leader:	Dieter E. Schelling

TANZANIA
Second Central Transport Corridor Project

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TANZANIA

SECOND CENTRAL TRANSPORT CORRIDOR PROJECT

PROJECT APPRAISAL DOCUMENT

AFRICA

AFTTR

Date: April 30, 2008 Country Director: John McIntire Sector Manager/Director: C. Sanjivi Rajasingham Project ID: P103633 Lending Instrument: Specific Investment Loan	Team Leader: Dieter E. Schelling Sectors: General transportation sector (47%); Roads and highways (38%); Aviation (15%) Themes: Regulation and competition policy (P); State enterprise/bank restructuring and privatization (P); Trade facilitation and market access (P); Infrastructure services for private sector development (P); Export development and competitiveness (S) Environmental screening category: Full Assessment

Project Financing Data

[ ] Loan [X] Credit [ ] Grant [ ] Guarantee [ ] Other:

For Loans/Credits/Others:
Total Bank financing (US$m.): 190.00
Proposed terms:

Financing Plan (US$m)

Source	Local	Foreign	Total
BORROWER/RECIPIENT	10.70	0.00	10.70
International Development Association (IDA)	38.00	152.00	190.00
Foreign Private Commercial Sources (unidentified)	4.90	36.00	40.90
Financing Gap	22.80	0.00	22.80
Total:	76.40	188.00	264.40

Borrower:
Ministry of Finance and Economic Affairs
P.O. Box 9111
Dar es Salaam
TanzaniaFax: 255 22 211 7790

Responsible Agency:
Tanzania National Roads Agency

Maktaba Complex
Bibi Titi Mohammed Street
Dar es Salaam
Tanzania
Tel: 255 22 2150932
Fax: 255 22 2150022
tanroadshq@tanroads.org

Estimated disbursements (Bank FY/US$m)									
FY	9	10	11						
Annual	60.00	80.00	50.00						
Cumulative	60.00	140.00	190.00						

Project implementation period: Start July 1, 2008 End: June 30, 2011
Expected effectiveness date: July 1, 2008
Expected closing date: December 31, 2011

Does the project depart from the CAS in content or other significant respects? ***Ref. PAD I.C.***	[ ]Yes [X] No
Does the project require any exceptions from Bank policies? ***Ref. PAD IV.G.***	[ ]Yes [X] No
Have these been approved by Bank management?	[ ]Yes [ ] No
Is approval for any policy exception sought from the Board?	[ ]Yes [ ] No
Does the project include any critical risks rated "substantial" or "high"? ***Ref. PAD III.E.***	[X]Yes [ ] No
Does the project meet the Regional criteria for readiness for implementation? ***Ref. PAD IV.G.***	[X]Yes [ ] No

Project development objective ***Ref. PAD II.C., Technical Annex 3***
The project development objective (PDO) is to support Tanzania's economic growth by providing enhanced transport facilities that are reliable and cost effective, in line with MKUKUTA and the National Transport Policy and Strategy. Following are the key monitoring indicators for the achievement of the PDO: (i) average rush hour travel time by public transport users between Ubungo and the Dar es Salaam central business district (Posta); (ii) average vehicle operating cost on the Korogwe-Mkumbara-Same trunk road; and (iii) satisfactory rating of Zanzibar airport by airlines and passengers

Project description ***Ref. PAD II.D., Technical Annex 4***
Component A: the Dar es Salaam urban transport component: Implementation of phase one of a bus rapid transit system in Dar es Salaam, including strengthening of the responsible agency (DART).

Component B: Trunk Road Component - rehabilitation/upgrading of the Korogwe - Mkumbara - Same Trunk Road as well as support to TANROADS.

Component C: Zanzibar Airport Component - repair/strengthening of the existing runway, design of a new airport runway and support to MOCT Zanzibar.

Which safeguard policies are triggered, if any? ***Ref. PAD IV.F., Technical Annex 10***

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

Significant, non-standard conditions, **if any**, for:
Ref. PAD III.F.
Board presentation:
None
Credit effectiveness and disbursement conditions:
The Additional Conditions of Effectiveness shall be that the Subsidiary Agreement has been duly executed on behalf of the Recipient and TANROADS.

The Additional Legal Matter shall be that the Subsidiary Agreement has been duly authorized or ratified by the Recipient and TANROADS and is legally binding upon the Recipient and TANROADS in accordance with its terms.

Conditions of disbursement for Component A: that DART is fully operational and has: (i) adequate capacity, satisfactory to IDA, including management and key staff, all with terms of reference and qualifications satisfactory to IDA, and a board of directors; (ii) produced a communication strategy satisfactory to IDA; and (iii)a fully functional procurement unit and tender board.

Conditions of disbursement of Component B: that TANROADS Board of Directors has been put in place as required by the Roads Act.

Condition of disbursement of Component C: that MoCT Zanzibar has employed a Project Manager for the management of the Zanzibar airport runway repair/strengthening with TOR and curriculum vitae satisfactory to IDA.

Covenants applicable to project implementation:
MoF is prepared to provide necessary guarantees to back-stop both the bus operators and the fare collector's contracts in case of breach of contract by the DART agency and in case of insufficient revenue.

MoF has secured the needed additional finance to close the financing gap of the project not later than 24 months after effectiveness of the credit.

DART will procure the services of bus operators, fare collectors, and a fund manager in an

appropriate and transparent manner satisfactory to IDA.

DART has introduced grievances procedures for affected daladala owners and drivers within 18 months of project effectiveness satisfactory to IDA.

The project reports include adequate information on monitoring the progress made by DART in (i) executing the respective contracts with the bus operators and the fare collector; and (ii) addressing the grievances of daladala operators and drivers.

A. STRATEGIC CONTEXT AND RATIONALE

1. Country and sector issues

1. Tanzania has experienced sustained economic growth since 2000 at an average annual rate of 6 percent. At the same time, the number of people living below the poverty line declined from 36 percent to 27 percent. Key growth sectors are mining, construction, manufacturing, and tourism—all sectors that strongly depend on and generate transport. Not surprisingly, demand for transport grew even faster than general economic growth. For example, the throughput of containers at the Dar es Salaam port grew from 176,000 TEU in 2002 to 326,000 TEU in 2007, and the total passenger traffic at the Zanzibar airport grew from 178,000 in 2001 to 597,000 in 2007, representing an average annual growth rate of 21 percent for the former and 23 percent for the latter.

2. Although growth is essential for poverty reduction, another affect often is congestion at transport terminals such as ports and airports as well as in urban areas. The main ports and airports (particularly in Dar es Salaam and Zanzibar), however, have a high potential for beneficial public-private partnership (PPP) arrangements, which could accrue the necessary investments and improved management so that congestion can be decreased and efficiency increased.[1] A more intrinsic problem is that of urban congestion. Rapidly growing motorization (though still low at about 30 vehicles per 1,000 population) combined with population growth, triggered by both in-migration and natural growth, has led to major congestion on Dar es Salaam's main roads in recent years. International experience shows that urban congestion cannot be tackled through the expansion of the urban road network alone, but must be addressed through the provision of attractive mass transit combined with intelligent traffic management measures, as well as the creation of capacity to manage the urban transport system.

3. The government of Tanzania (GoT) has prepared a 10-year Transport Sector Investment Program (TSIP) and based on it a three-year rolling investment plan commensurate with the Medium Term Expenditure Framework (MTEF). Planned annual investments and operating costs in the sector amount to about US$ 1 billion per year (8 percent of GDP), of which about US$ 300 million per year would be operational (maintenance) costs to be financed from user charges, and US$ 700 million are planned investments, including US$ 100 million envisaged to be financed by the private sector through PPP arrangements. About US$ 300 million equivalent of the investment needs annually is expected to be financed from GoT budget resources and a further US$ 300 million per year is needed from development partners (DPs). Although ambitious, it is assessed that such investments are required to achieve the Millennium Development Goals (MDGs) for poverty reduction. The components planned to be financed under this project are high-priority items under the TSIP.

[1] For example, at the Dar es Salaam port average dwell time for containers decreased from 40 days in 1999 to 14 days in 2003, after a private sector container terminal operator took over in 2000. However, by 2007 dwell time increased again to an average of 27 days per container due to congestion at the port.

2. Rationale for Bank involvement and justification for this project

4. As mentioned above, Tanzania requires about US$ 300 million equivalent per year from DPs to finance its TSIP. The number of DPs in the sector has shrunk considerably; some DPs have moved to general budget support (GBS) and others, particularly smaller bilateral donors, have moved out of the sector altogether. Currently the main DPs in the sector are the European Commission (EC), the Danish International Development Agency (DANIDA), the Norwegian Agency for Development Cooperation (NORAD), the Japan Bank for International Cooperation (JBIC) and the Japan International Cooperation Agency (JICA), the Millennium Challenge Corporation (MCC), the African Development Bank (AfDB), and the World Bank. Given the commitments of the other DPs in the sector, World Bank is required to contribute about US$ 80 million per year over the coming years, up from the average of about US$ 18 million from FY00–FY07.

5. The "parent" of this project (the Central Transport Corridor Project, CTCP) is performing well. Disbursement currently stands at 67 percent and it is expected that the balance of the credit will be about 90 percent disbursed at the end of this FY[2] (FY 2008). The rationale for this Second Central Transport Corridor Project (CTCP2) is the fact that important sub-projects have been prepared under the CTCP that are now ready for implementation. Conversely, it seems prudent to wait with a larger sector-wide project (the TSSP) until all the elements for a sector-wide approach are in place. Hence, CTCP2 will complement and enhance the outcomes of CTCP by implementing two of the key projects prepared under CTCP. Other important subprojects prepared under CTCP, such as the paving of the Tanga-Horohoro (Kenya Border) road, the Tunduma – Sumbawanga road and the Minjingu-Babati-Singida road, are being taken up by other DPs (MCC and ADB respectively).

3. Higher-level objectives to which the project contributes

6. This project contributes to Tanzania's poverty reduction strategy (Mkakati wa Kukuza Uchumi na Kuondoa Umasikini Tanzania, MKUKUTA), Tanzania's National Vision 2025, and Zanzibar's Vision 2020, all of which aim at reducing absolute poverty by 50 percent in 2010 and eradicating it by 2025. CTCP2 mainly supports the Mkukuta cluster one: "Growth of the Economy and Reduction of Income Poverty," which aims amongst others at resolving infrastructure bottlenecks, particularly in transport and energy.[3] All three CTCP2 components contribute in an important manner to the MKUKUTA cluster one goals. Component A, the urban transport component, contributes by addressing the rapidly growing urban transport congestion that threatens to stifle the attractiveness of Dar es Salaam as a business center of the country and imposes huge costs on the economy. Component B, the trunk road component, ensures the viability of one of the most important trade links in the country. Component C, the Zanzibar airport component, ensures that this airport can cope with the rapidly growing demand triggered by tourism, which is the mainstay of the economy of the island.

[2] Disbursement for the rail component of CTCP was halted by delay of the concession of TRC. This issue was resolved (in October 2007), and disbursement has rapidly accelerated.

[3] "Joint Assistance Strategy for the United Republic of Tanzania," Report no. 38625-TZ, the World Bank.

B. PROJECT DESCRIPTION

1. Lending instrument

7. The Second Central Transport Corridor Project (CTCP2) is a specific investment loan (SIL). It is follow-on to the CTCP, under which components A and B of this project have been prepared. Component C, the Zanzibar airport runway repair works, commenced under the Second Integrated Roads Project (IRP2). However, the contractor charged with the works failed to perform and his contract was cancelled. The IRP2 credit was closed on December 31, 2006, and it was decided to finance the Zanzibar airport runway under this credit.

8. GoT, in its letter dated May 22, 2007, requested International Development Association (IDA) financing for the above components[4] of US$ 170 million. Meanwhile, mainly due to inflation in the construction sector and the devaluation of the U.S. dollar, the amount needed to finance the project has increased to US$ 213 million, while the IDA amount available in this financial year (for this sector) is only US$ 190 million. This leaves a financing gap of US$ 23 million which the government will be required to fill within 24 months after effectiveness of the credit through either its own funding or that of a development partner.

2. Project development objective and key indicators

9. The project development objective (PDO) is *to support Tanzania's economic growth by providing enhanced transport facilities that are reliable and cost effective*, in line with MKUKUTA and the National Transport Policy and Strategy. Following are the key monitoring indicators for the achievement of the PDO: (i) reduction of rush hour travel time of public transport users in Dar es Salaam; (ii) reduced vehicle operating cost on the Korogwe to Same trunk road; and (iii) satisfactory rating of Zanzibar airport facilities by both airlines and passengers.

3. Project components

3.1 Component A: the Dar es Salaam urban transport component – implementation of phase one of a bus rapid transit system in Dar es Salaam, including strengthening of the responsible agency (DART) - US$ 158.2 million, of which IDA US$ 98.2 million, GoT US$ 10.0 million for resettlement costs, US$ 38.2 million to be financed by the private sector for bus procurement and the fare collection system, and a financing gap of US$ 11.8 million.

10. Dar es Salaam is facing rapidly worsening traffic congestion, which is threatening its economic growth prospects. In 2003 the Dar es Salaam City Council decided, as the core of their strategy to battle urban traffic congestion, to embark on the implementation of a bus rapid transit (BRT) system in Dar es Salaam. BRT systems have been successfully introduced in many large cities in developing countries in Latin America and Asia, but are also increasingly

[4] IDA funding was also requested to cover a fourth component, consisting of performance-based management and maintenance of roads. Meanwhile, this has been covered through an amendment of the parent project, the CTCP, and respective contracts have been awarded.

adopted in developed countries. BRT is best understood as a *surface metro system* that uses bus technology to provide metro-like services. While incorporating the features of a metro system such as rapid boarding and dedicated right of way, BRT systems can, for a fraction of the cost of a metro, transport almost the same amount of people (the Transmilenio system in Bogota peaks at 45,000 passengers per hour per direction). The development of the Dar es Salaam Rapid Transit System (DART) has been supported by ITDP (Institute for Transportation and Development Policy) through a UNEP grant and through the CTCP.

11. A concept study for the entire DART system was financed under CTCP and it included the detailed design of phase 1 of the system, including the preparation of bidding documents for 20.9 kilometers of separate bus-ways, 5 terminals, 29 trunk stations, 6 integration/feeder stations, 2 bus depots, as well as the improvement of the upcountry bus station at Ubungo, which will be integrated with the DART system. The entire trunk system of 20.9 kilometers will be provided with tree-shaded bicycle and pedestrian ways on both sides of the road. The average distance between bus stops will be 500 meters and system users will be encouraged to either walk or bicycle to the bus stops (privately operated bicycle parking facilities are planned at each bus stop). The system provides for integration with other public transport services such as *daladalas,*[5] the Kivukoni ferry, and the up-country bus terminal. One hundred and forty eight articulated trunk buses with a capacity of 140 passengers will provide both normal (stopping at all stations) and express services (stopping only at connector stations). Additionally, a system of 100 feeder buses with a capacity of 60 passengers will transport passengers to the trunk system through feeder stations. Trunk buses will be accessed at the stations by the passengers at level which will enhance system capacity and comfort.

12. The system will be regulated and managed by the DART agency, which was established by government order on May 25, 2007. The DART agency is currently in the final stages of becoming fully operational, including the recruitment of some additional staff, acquiring adequate office space and equipment, and preparing operational manuals. It is a **condition of disbursement** for this component that the DART agency is fully operational, satisfactory to IDA.

13. The buses will be procured and operated by two private bus operators that will enter into agreements with the DART agency. The operating contracts will be won through a competitive process commencing with a road show to engender private sector interest. The road show will be followed by a prequalification process whereby suggestions for changes to the bidding documents and draft contract documents are invited—and considered, if appropriate. The bidding process will conclude with a competitive bid for the lowest per-kilometer rate for the trunk buses and per passenger rate for the feeder buses (adjustable according to inflation).

14. Another player will be the fare collector, one single private company whose services will be procured through similar procedures as applied for the bus operators. The fare collector will introduce a smart card system and will be responsible for the daily fare collection. Furthermore, the fare collector will operate and maintain the bus stations and will monitor bus performance on behalf of the DART agency. The fare collector will be paid based on a percentage of the ticket revenue (for which he will have bid). Also there will be the DART fund manager; a

[5] Colloquial term for the minibuses in Dar es Salaam.

single private institution specialized in fund management, which will be responsible for financial management, reporting, liquidity control, and payments to the system actors (the DART agency, bus operator, fare collector, and fund manager) and short term investment of contingency fund. Finally, there will be the DART auditor who is to produce regular system audits.

15. Key to the financial sustainability of the system is that passenger fares can be appropriately adjusted when necessary. The financial model[6] developed to assess the viability of the system used a TSh 400 flat fare for a single trunk, feeder bus trip and a TSh 500 fare for a combined trunk and feeder bus trip. These fares are comparable with what current daladala users are paying.[7] That is, they are slightly higher for short trips, but considerable cheaper for long distance trips. Bus urban transport fares are regulated by SUMATRA (the Surface and Marine Transport Regulator). DART, with the help of the fund manager, will make system revenue and expenditure forecasts and based on them propose fare adjustments, if needed, for consideration by SUMATRA. SUMATRA is autonomous and has a broad-based Board of Directors including private sector representatives. As per its creating law when considering proposed fare adjustments it needs to take into account both system operating costs and affordability. Judging from the performance of SUMATRA, there is confidence that DART fare adjustments will be dealt with correctly and efficiently.

16. The system is planned to handle an initial total of 406,000 passenger trips per day. This may seem a lot, however already today 250,000 public transport passengers are being transported daily on the Morogoro corridor alone by the daladala-based system. Extensive sensitivity analysis done with the help of the financial model showed that the revenue (at above proposed fare level) is robust and under most of the scenario considerable contingency funds can be accumulated. Despite that, it will be important to provide government guarantees to cover certain risks of investors including revenue short falls. Furthermore, the provision of IDA Partial Risk Guarantees (PRG) and IFC financing will be offered to private investors, if requested by them.

17. The majority of the roads[8] on which DART will operate are under the responsibility of the Tanzania National Roads Agency (TANROADS). For this reason and because TANROADS has proven capacity of managing large contracts, infrastructure works will be implemented by TANROADS. It is planned to award the DART infrastructure contract in September 2008. Construction is planned to take 24 months and is expected to be completed in October 2010 – the planned commencement of operations. Detailed future maintenance arrangements will be laid out in the Project Implementation Plan. The Road Fund Board, which is responsible for the financing of road maintenance, will earn an estimated TSh 1.5 billion (US$1.3m) annually from the TSh 200 fuel levy paid by the bus operators per liter of diesel, which is sufficient for adequate maintenance of the roadway.

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[6] Developed by Deloitte, financed by UNEP and managed by ITDP, the financial model contains an inbuilt demand elasticity factor taking into account fare affordability. Due to the low affordability (transport costs are up to 30 percent of low-income household's expenditures), fares can not be increased significantly above current levels.

[7] Daladala users currently pay between TSh 250-400 per ride (depending on distance). However, for most destinations two daladala rides are required, hence actual fares paid are between TSh 500-800.

[8] Some of the roads are actually under the municipalities, but they will delegate the management of these roads to TANROADS.

18. A risk analysis is presented in chapter C.5. One of the gravest risks as seen by many BRT experts is the resistance to change by the existing operators. At commencement of DART operations, daladala will be prohibited to operate along the DART trunk routes (but not the feeder routes). This will necessitate the discontinuation of 45 of the 192 existing daladala routes (about 1500 out of the 7000 daladalas). Most of these owners will be given opportunities to operate on other existing or on new routes. However, such routes might be less profitable than their original route. To mitigate these risks, the Dar es Salaam Commuter Bus Owners Association (DARCOBOA) was involved in the preparation of the DART project from the beginning. DARCOBOA representatives participated at the initial and subsequent visits to the Transmilenio BRT system in Bogota, Colombia. They are currently positioning themselves for making bids jointly with foreign bus operators, manufacturers, and financiers, for the first DART bus operating contracts. Other mitigation measures are being considered, such as allowing affected daladala bus owners (most of them are very small operators owning one or two buses) privileged access to shares of the future DART bus operators, and training facilities for the daladala drivers to become DART bus drivers (the first DART bus operator will need at least 600 bus drivers).

19. One of the measures to mitigate risks is for DART to develop an appropriate communication strategy. A draft strategy has been prepared which includes (i) a *communication audit* identifying the key stakeholders and their level of influence, and mapping them in communication clusters based on their importance; (ii) a *public information campaign* using both traditional and nontraditional media; (iii) *behavior change communication* aiming at a mental shift to supporting public transport, including the middle class (who should shift from car using to public transport within town); (iv) a *risk matrix* considering the key risks of the project and appropriate mitigation measures in terms of communication tools and products; and (v) *identification of key stakeholders* that can champion the cause of DART. The draft needs to be further developed and enhanced through stakeholder consultations before finalization. It is a **condition of disbursement** of this component that a communication strategy is developed satisfactory to IDA.

3.2 Component B: the trunk road component - rehabilitation/upgrading of the Korogwe-Mkumbara-Same trunk road as well as support to TANROADS to implement the project – US$ 64.3 million of which US$ 57.4 million financed by IDA and a financing gap of US$ 6.9 million.

20. The Korogwe-Mkumbara-Same trunk road (172 kilometers) forms part of the North-East Corridor of the Tanzanian trunk road network that connects the main commercial center of the country, Dar es Salaam, with the major tourist destinations in northern Tanzania. The road is also part of the main link between Dar es Salaam and Nairobi, the major trade centers of Tanzania and Kenya respectively. Current (2007) traffic varies between 880 and 1,400 vehicles per day (annual average daily traffic), of which 25 percent is trucks. Traffic growth is forecasted to be 7 percent on average per year over the design life period of 20 years.

21. The road was rehabilitated to DSBT (double surface bituminous treatment) standard in 1991–94. The road currently is in fair to poor condition and its width is not commensurate with

trunk road standards. The Tanzania National Roads Agency (TANROADS) therefore plans to rehabilitate the road, provide it with a 50 millimeter AC (asphalt concrete) surface and to widen it to trunk road standards, from the current six meters carriageway and one meter shoulders to 6.5 meters carriageway width and 1.5 meter shoulders. Furthermore, for safety reasons, it is necessary to eliminate some at-grade crossings with the Tanga railway, some sections prone to flooding need to be elevated, and some bridge decks need replacement/widening. Also, the design has been submitted to a road safety audit and appropriate speed-reducing measures within villages and town, including rumble strips, speed bumps, and raised pedestrian crossings, are part of the design. Design and bidding documents for this road section were prepared under CTCP.

22. Procurement for works is currently ongoing in two lots: Korogwe-Mkumbara (76 kilometers) and Mkumbara-Same (96 kilometers) through slice and packaging. Engineering estimates for the two contracts are US$ 59.3 million. Contract duration is 30 months. It is planned to award works contracts in July 2008 and substantial completion is expected in December 2010.

3.3 Component C: the Zanzibar airport component – repair/strengthening of the existing runway, design of a new airport runway and support to MoCT Zanzibar - US$ 17.6 million of which US$ 15.7 million financed by IDA and a financing gap of US$ 1.9 million.

23. The Zanzibar airport has experienced spectacular growth with more than a two-fold increase of passenger traffic between 2001 and 2007 (from 178,000 to 597,000) and aircraft movements (from 16,800 to 33,500). The runway of the airport is 2,462 meters long and 45 meters wide. Its surface is in poor condition and needs urgent repair/strengthening. Additionally, the runway is relatively short and does not provide an adequate security margin for large airplanes (such as the Boeing 767).

24. An earlier attempt to rehabilitate the airport runway financed under the Second Integrated Roads Project (IRP2) failed after the engaged contractor was terminated due to lack of performance and IRP2 was closed on December 31, 2006. Procurement for the completion of the original works planned to be financed under CTCP2 was cancelled with the rejection of all bids that were received on January 11, 2008, since the lowest bid was more than 100 percent above the engineer's estimate.

25. Meanwhile, the government of Zanzibar, based on the recently completed Zanzibar airport master plan, being part of an overall transport master plan for Zanzibar financed under CTCP, has adopted another strategy, which essentially entails the rapid repair/strengthening of the existing runway to make it usable for another five to six years, and at the same time prepare design and bidding document for the construction of a new runway east of the existing one. The plan is to use the existing runway as a taxiway once the new runway is constructed. This solution has several advantages: (i) it substantially decreases the high risk of works executed on an operational runway; (ii) the current runway is too close to the terminal building and there is an insufficient security margin and space for parking planes; and (iii) Zanzibar airport would finally get a taxiway that extends to the full length of the future runway (which substantially increases airport capacity).

26. Following strategy has been agreed upon with MoCT Zanzibar: (i) the execution of immediate repair measures such as crack and pothole filling (currently on-going); (ii) the execution of repair/strengthening works (essentially an overlay over the entire runway including the extension which was close to completion under the original contract); and (iii) the preparation of detailed design and bidding documents for a new runway to be financed under a future project, jointly with other DP and (hopefully) in the framework of public-private partnership arrangement for the management of the airport.

27. The contract for the repair/strengthening of the existing runway is planned to be awarded in January 2009. Contract duration is 15 months and works are scheduled to conclude in April 2010. Total cost for works and supervision are estimated to be US$16.4 million. Additionally, there will be US$ 0.6 million for the design of the new runway and US$ 0.6 million institutional support to MoCT Zanzibar.

4. Lessons learned and reflected in the project design

4.1 Component A: the Dar Salaam urban transport component

28. Over the last 10 years, BRT systems have been or are being implemented in many cities in Latin America and Asia as an effective and relatively low-cost alternative to rail-based rapid transit. A recent study[9] drew important lessons from this experience. The table below shows how these lessons have been taken into account in the design of the DART system.

[9] "A Critical Look at Major Bus Improvements in Latin America and Asia," by Dario Hidalgo, Paulo Custodio, and Pierre Grafitieaux, a paper produced through the assistance of TRISP, a partnership between the UK Department of International Development and the World Bank (contact: pgraftieaux@worldbank.org).

Table 1. Best Practices in the Design of the DART System

Activity	Best practices	Application in the case of DART
Planning	• Combine financial, legal, environmental aspects with engineering • Planning/design should be done with a strong implementation bias • Sufficient resources (time and money) should be allocated to preparatory activities • Experience from other cities should be used, but the system needs to be adapted to the local situation. • Create special-purpose teams for system planning and implementation	• DART design contract combined all these elements • DART design contract combined concept design with detailed design of phase 1 • DART preparatory activities took three years and were supported by World Bank, UNEP, and GoT resources • Designer adapted the best of the Transmilenio system in Bogotá for Dar es Salaam • Project Management Unit (PMU) of both hired and City Council staff was created
Decision process	• Early approval of high-level decision makers is required • Priority must be given to regulatory issues • A special purposes agency should be created • Creativity is required in funding the project development • Open bidding procedures are important for the procurement and operation of buses with priority to existing operators	• City Council approved on April 2003. Cabinet endorsed on July 2006 • SUMATRA involved in planning. • DART agency created on 25/05/2007 • World Bank funding for infrastructure being secured • ICB procurement procedures planned
Implementation approach	• Apply a gradual implementation approach, adapting the project on the basis of the initial experiences • Make use of using the existing right of way • Give attention to pavement design to avoid rapid deterioration	• Phase I will be implemented first, five more phases will follow, based on first experience • Corridor runs on trunk road with 60-meter ROW • Rigid pavement (concrete) has been adopted for the bus-way
Implementation	• Prevent rushed implementation; have contingency plans ready if system components are not complete • Dedicate funding to user education programs • Emphasize general benefits over special interests and apply authority if protests occur	• Implementation is scheduled to take two years • Budget incorporates project publicity and user education • Reduction of congestion, pollution, and traveling time are emphasized publicly
Operation	• Use the intrinsic flexibility of buses to balance supply and demand • Focus on system integration during planning and design • Design vehicles and other physical features for market and service plan • Be aware that pavement maintenance is a permanent issue • Use strong dividers to segregate traffic • Prefer median lanes and level access platforms with many doors to access the buses to increase speed and reliability • Allow time to adapt and implement advanced fare collection systems	• Operational programs are designed to balance buses proportionally to demand • System integrates with ferry and upcountry bus terminals for exchange of passengers • Bus specifications consider limitations of serviceability and coastal climate, Euro III compliant • Effective construction and maintenance of pavement will be under Road Authority • Raised curbstones—200–300 mm thick, 250 mm high, firmly embedded—will be built • Median lanes and level access are in design • Smart cards will be introduced
Structural issues	• Try to provide mechanisms for technical (automatic) definition of fares without political interference • Make a strong effort to stick to operating contracts—permanent renegotiations often tip in favor of operators • Involve other transport initiatives and urban development concepts to enhance positive impacts and help project continuation • Have a clear vision for system expansion and integration with other transport initiatives and services	• SUMATRA will decide on fare increases. SUMATRA has a broad Board of Directors and is somewhat cushioned from political interference • Contracts to be observed during operations • Conceptual design is being adapted in the city transport master plan being formulated • DART's vision is to integrate transport initiatives. The city transport master plan being formulated will include this vision

Source: see footnote no. 9

4.2 Component B: the trunk road component

29. In the past, serious delays of projects have been experienced because design and bidding documents were not ready. For example, the paving of the Singida-Shelui road of the central transport corridor, now being completed under the CTCP, was already planned under the first Integrated Roads Project (IRP) in the early 1990s. Delays in the preparation of the design and bidding documents finally led to a cancellation of the planned amount for the paving from the IRP2 and its final financing under the CTCP. Under CTCP, with the help of the Nordic Development Fund, about 700 kilometers of upgrading works were designed and bidding

documents prepared. Some of these projects are now being executed by other donors, including AfDB, MCC, and DANIDA. The design and bidding documents for the Korogwe-Same road were completed about a year ago and procurement is at an advanced stage so that at the planned effectiveness date of the CTCP2 works can commence.

4.3 Component C: the Zanzibar airport component

30. One of the key lessons learnt from the recent (failed) procurement of works for the rehabilitation/extension of the Zanzibar airport runway is that in the current environment of limited competition amongst contractors the prequalification procurement procedures are not producing the desired results, and therefore it is proposed to apply post qualification procedures.

C. IMPLEMENTATION

1. Partnership arrangements

31. In Tanzania there is good partnership between the transport sector development partners. A DPs group has been formed chaired by the EC. All DPs have agreed to move jointly with GoT towards a sector-wide approach (SWAp). It is hoped that this can commence in FY09 and possibly will include a basket fund for capacity building and continued parallel financing for large investment projects, but with a single agreed sector investment program in support of the country's poverty reduction program (MKUKUTA). There is strong collaboration amongst DPs for urban transport in Dar es Salaam. JICA is financing the preparation of a Dar es Salaam urban transport master plan that takes the implementation of a bus rapid transit system in Dar es Salaam as a core measure for a future enhanced urban transport system. As well, JICA is financing the expansion to four lanes of 11 kilometers of the urban section of the Kilwa road within Dar es Salaam, including the provision of BRT lanes in the center of the road (the Kilwa BRT line is the number two priority line after the Morogoro line). Furthermore, JICA is contemplating the same treatment for the Morocco-to-Tegeta section (17.5 kilometers) of the Bagamoyo road within Dar es Salaam. EU is financing the rehabilitation/upgrading of the port access road, which branches off from the Mororogoro road at Ubungo where it links with the DART phase 1 project.

2. Institutional and implementation arrangements

32. TANROADS is the implementing agency of the project. TANROADS, the Tanzania National Roads Agency that manages the national road network (28,900 kilometers) on behalf of the Ministry of Infrastructure Development (MoID), was established in 2000 and has since then proved itself as a capable and efficient organization. All aspects of project management including procurement, contract management, financial management, and safeguards procedures will be executed in a fully mainstreamed manner within TANROADS' organizational structure (see Annex 6). TANROADS will procure and manage the civil works and supervision contracts for the DART infrastructure and the rehabilitation/upgrading of the Korogwe-Same road. The Chief Executive of TANROADS is the Accounting Officer for the project, assuming overall responsibility for accounting for the project funds. TANROADS will manage the project's Designated Account (DA). Disbursements from the IDA credit will be

made based on quarterly Interim Financial Reports (IFR). Disbursements from the DA will be made based on certified invoices received from the executing entities DART and MoCT Zanzibar. This credit will support TANROADS with US$ 2.5 million (for TA, training, equipment and operating costs) to cover the estimated extra cost incurred being the implementing agency of the project.

33. As required in the recently approved Roads Act, TANROADS will be provided with a Board of Directors. MoID is determined to put this Board of Directors in place as soon as possible. TANROADS plans to advertise its key positions, which were recently reshuffled and are currently only provisionally staffed, through a transparent and competitive procedure. It is recommended that this should only be done after the Board of Directors is in place. One of the first issues the Board of Directors should deal with will be the adjustment of the salaries and incentives to TANROADS staff so that it can remain competitive and recruit professionals of high standard. During the recent first annual Joint Infrastructure Sector Review (JISR) it was also agreed that eventually TANROADS should become an independent authority set up by law. It is a **condition of disbursement** of component B that the TANROADS Board is in place as per the Roads Act.

34. The DART agency is the executing agency for the urban transport component of the project. However, as explained above, TANROADS will procure and manage the infrastructure contracts while the DART agency will procure the services of (private) bus operators, a fare collector, a fund manager and the DART auditor. The DART agency was established by Order under the Agency Act on May 25, 2007, under the Prime Minister's Office, Regional Administration and Local Government (PMO-RALG). The DART agency has a planned establishment of 23 staff and total estimated operating costs of US$ 0.9 million equivalent per year (including salaries). This credit plans to support the agency with US$ 3 million (including technical assistance, training, office equipment, vehicles, and operating costs) during the coming years, until commencement of operations of the BRT system.

35. The DART agency is in the process of being established. Its Chief Executive was appointed and its Board of Directors nominated on November 13, 2007. The positions for its key staff were advertised and competitively selected and are currently being confirmed by GoT. Once all staff are in place, DART will prepare operational manuals (including a financial management manual and a procurement manual), a communication strategy, will establish a Tender Board, and other actions for its proper functioning. It is a **condition of disbursement** for component A that the DART agency is fully operational satisfactory to IDA, and that is has prepared a communication strategy satisfactory to IDA.

36. MoCT Zanzibar will execute the Zanzibar airport component of the project. MoCT Zanzibar is a traditional ministry with a large labor force. It currently employs 2,073 staff, most of them in the Roads Department. Under CTCP a transport policy and master plan was developed for Zanzibar. The master plan proposes sweeping changes to the management of the transport sector including the focusing of MoCT on policy setting and sector oversight, while creating various executive and regulatory authorities. The policy and master plan is planned to be submitted for cabinet approval in mid 2008. Its implementation and resulting capacity creation will take some time and it has therefore been agreed with MoCT that an interim Project

Manager will be employed for the management of the Zanzibar airport component of the project with skills and terms of reference (TOR) satisfactory to IDA. The Project Manager will be fully empowered to manage the implementation of the component. The employment of such Project Manager, satisfactory to IDA, is a **disbursement condition** for component C of the project.

3. Monitoring and evaluation of outcomes/results

37. The overall responsibility for monitoring and evaluation of this project will be with TANROADS. TANROADS will produce quarterly progress reports (QPR) that will include quarterly reports produced by the DART agency and by the Zanzibar airport component Project Manager. The QPR will include the IFR, which will be the basis for the two quarterly disbursements from the credit account to the designated account. The QPR will, besides what is required in the IFR, report on physical progress of the various subprojects and will report on the progress of the project monitoring indicators as per the project's results framework (see Annex 3). The QPR will also contain a summary of the status of the implementation of the Environmental Management Plans (EMP) and the Resettlement Action Plan (RAP).

38. In view of the forthcoming SWAp in the transport sector, MoID is in the process, with assistance from DANIDA, of preparing a sector-wide monitoring and evaluation framework. A first draft of such framework has been produced and was discussed with DPs. It will be important that the framework, and more specifically the selected indicators, adequately serves the different purposes of sector oversight (by MoID), sector finance (MoFEA, DPs, and RF), and the executing and regulatory agencies. The core entity for such a Transport Sector Data Management System (TSDMS) is the statistical unit of the Department of Policy and Planning (DPP) at MoID. The statistical unit is already producing a transport sector statistical yearbook that has been gradually improved and that serves increasingly all the different interests in the sector.

4. Sustainability

39. Critical for the sustainability of the components of this project is the continuation of implementation of reforms in the sector. Amongst the most important of these are as follows: (i) the strengthening of the policy setting, strategic planning, and sector oversight and monitoring capacity of MoID; (ii) the transformation of TANROADS into a truly autonomous and effective road authority through the passing of a respective bill; (iii) the adoption and implementation of the Road Safety Policy and Strategy; (iv) the adoption by the GoT of a PPP policy and institutional framework; (v) the setting up of effective urban transport management capacity in Dar es Salaam (through DART and/or the proposed urban transport authority); and (vi) the implementation of the reforms in the transport sector in Zanzibar as proposed in the transport master plan, including the focusing of MoCT on policy setting and sector oversight, the creation of appropriate executive and regulatory agencies (the proposed ZANROADS and ZANTRANSPORT), and the implementation of PPPs in the airport and ports sector. These reforms are part of the current sector dialogue between sector stakeholders. They are also linked to the various GBS (general budget support) instruments existing, including the PRSC of the World Bank.

5. Critical risks and possible controversial aspects

40. The risks of this project are mainly related to component A, which attempts to implement a novel approach (at least in Africa) for the provision of urban transport services. As explained in chapter B.4.1 of this PAD, the lessons learned from the preparation and implementation of BRT systems worldwide have been applied. However, several important risks remain, which are discussed in table 2 below. The proposed mitigation measures are preliminary proposals. During the discussions with interested private sector parties, adequate solutions to address these risks will be determined and finally laid out in the contract with the winning bidder. The risks related to component B and C are fairly standard, and are mainly related to procurement and contract management. Overall risk rating is **high,** related mainly, as mentioned, to component A of this project.

Table 2. CTCP2 Risks

No.	Whose risk	Description of risk	Rating of risk	Proposed mitigation measures	Rating of residual risk
Component A					
1	**GoT/ DART**	Procurement of bus operating and fare collector contracts is not transparent and DART is suspected of corruption	H	Full transparency is required by DART during the procurement process. World Bank will review the procurement documents and will comment, but will not issue no objection. The Public Procurement Regulatory Authority (PPRA) will conduct procurement audits.	S
2		DART cannot cope with the difficult issues that will come up during the procurement of the bus operating and fare collector contracts	H	DART will be assisted by high-level experts during the project implementation phase.	S
3		DART fails to received bids for either/or the bus operation or fare collection	S	After the "road show" there will be a time for potential bidders to comment on the bidding documents. This should ensure that the documents can be made sufficiently attractive to receive bids.	M
4		DART is unable to cope with public relations matters of this highly visible undertaking	H	DART employs a capable public relations manager. It is a condition of disbursement for this component that DART prepares a communication strategy satisfactory to IDA.	S
5		SUMATRA is unable to increase fare after request of DART due to political pressure or if insufficient funds are collected to meet payments to the bus operator and the fare collector	H	As a mitigation measure it is suggested to obligate GoT to provide guarantees to cover potential shortfalls. If requested by operators IDA can provide a partial risk guarantee, to cover some of these risks (see also risk no. 18)	S
6		Operator/fare collector unable to cope with task	M	Bidding documents will require substantial and successful prior experience as a requirement for prequalification.	L
7		SUMATRA unable or unwilling to forbid and/or relocate the (42) daladala routes along the trunk routes as required on "D" day	S	This would decrease system revenue and would likely trigger government guarantees.	M
8		Buses and other equipment		The provision of buses and other equipment of	

		are substandard or are badly maintained	M	specified standard complete with maintenance regime approval from the manufacturer (normally resulting in a service contract with the manufacturer) is a prequalification requirement for the operating contracts. The operator's contract contains penalties for poor bus maintenance.	L
9		Buses and other equipment badly operated	M	The operating contracts contain payment deductions for any infringement of quality of service indicators in the contract, such as speeding of bus driver, operations of unclean buses, and so forth.	L
10		Risk of "asset stripping" by the operator	M	This would be the case if the operator does not put the money aside for the renewal of its fleet. Appropriate clauses in the operating contract will require that depreciation is taken into account.	L
11		DART is required to cater for "special fares" for students (and free rides for police officers, military personnel, etc.)	H	The financial model assumes that 15% of DART users are students who pay half fare. All other pay full fare. It would however be highly preferable if there were no exceptions since special fares impose additional collection costs and international experience show that reduced fares are often misused.	S
12	**Bus operators /fare collectors**	Taxes	M	Operators will be eligible for TIC (Tanzania Investment Center) tax exemptions, that is import duty and VAT exemption for all imported buses.	L
13		Increased bus operating costs due to inflation/increased fuel costs	H	The operating contracts will include an appropriate cost adjustment formula (taking into account the main operating cost factors (fuel, spare parts, tires, salaries) that will allow monthly adjustment of the tariff paid to the operator	S
14		Cash flow risks	M	Weekly payments are planned to the bus operators and the fare collector.	L
15		Increased roughness of road surface	M	The operating contracts will specify a maximum roughness for the bus-ways above which the operator will be entitled to additional payments to cover increased operating costs. Concrete has been chosen for the bus-ways to decrease this risk.	L
16		Natural and political force major, such as flooding of road way, blockage of road way due to demonstrations, and so forth	L	The operators will be obliged as per the operating agreement to enter into an insurance contract to cover force major risks.	L
17		Breach of operating contracts by GoT/DART	M	If requested by operators, and if agreed by GoT IDA can assist with a partial risk guarantee, that would cover such risk.	L
18		Demand is less than forecast	M	The operating contract ensures a minimum compensation.	L
19		Bus-way is used on instruction of GoT for other purposes, impeding bus operations	L	This would trigger compensation payments to operators as per the agreement.	L
20		Electricity interruptions impede functioning of turnstiles and traffic lights	H	The fare collector will be obliged to provide back up solutions including generators or solar cells.	L
21		Bus-way construction is delayed while bus operator and/or fare collectors are made ready to operate	H	DART will give the "go ahead" to the bus operators to order the buses only when there is a relatively certain date of the completion of the infrastructure.	M

22	**Daladala owners**	Protest action by daladala owners due to loss of income after some routes are banned on "D" day	S	Some routes will be rerouted by SUMATRA, some operators will be given new routes. The bidding criteria for the bus operator would either require or include incentives such as the issuance of shares to existing daladala owners and operators on preferred terms. The communication strategy will also help to mitigate risks 22 and 23.	M
23	**Daladala drivers**	Protest action by daladala drivers due loss of income after some routes are banned on "D" day	S	DART bus operators will require roughly 40 percent of the number of daladala drivers to operate the DART buses. Funding for training of drivers has been budgeted under this credit. However, trained drivers will still have to pass an exam to be eligible as DART drivers.	M
Component B					
24	**TAN-ROADS**	Delays of implementation due to lack of capacity at TANROADS	S	Procurement for these works is far advanced and an experienced international consultant is being recruited to supervise works. TANROADS is provided with support through this credit to enhance its capacity as needed.	M
Component C					
25	**MoCT Zanzibar**	Delays of implementation due to lack of capacity at MoCT Zanzibar	H	Procurement for these works is far advanced and an experienced international consultant is being recruited to supervise works. In order to compensate for weaknesses encountered within MoCT Zanzibar, it is a **condition of disbursement** of this component that an appropriate Project Manager is engaged by MoCT Zanzibar to manage these contracts on its behalf.	S
Overall Risk Rating : High					

"D" is the first day of operations; Rating of risks are on a four-point scale—High (H), Substantial (S), Moderate (M), and Low (L)—according to the likelihood of occurrence and magnitude of potential adverse impact.

6. Loan/credit conditions and covenants

41. Following were the conditions fulfilled prior to negotiations:

(i) TANROADS, jointly with DART and MoCT Zanzibar, prepares a Project Implementation Plan and a Procurement Plan satisfactory to IDA – a draft final updated Project Implementation Plan and the final Procurement Plan were presented prior to negotiations and were found satisfactory.

(ii) TANROADS prepares a template for the quarterly progress report (QPR) and the interim financial reports (IFR) satisfactory to IDA – templates of the QPR and IFR were submitted prior to negotiations and were found satisfactory.

(iii) Ministry of Finance and Economic Affairs (MoFEA) provides a letter of Sector Development Policy satisfactory to IDA – such letter dated April 22, 2008 was provided to IDA before negotiations.

(iv) DART reaches an understanding with SUMATRA as to what the licensing requirements and costs for the bus operators will be – DART provided such letter dated April 17, 2008 to IDA.

(v) DART reaches an agreement with the Tanzania Investment Center (TIC) as to the exemption of the operators in respect of the payment of import duty and VAT for the importation of buses - DART provided such letter dated April 9, 2008 to IDA.

(vi) DART inquires with Tanzania Bureau of Standards (TBS) as to their requirements in respect of bus specifications - DART provided such letter dated April 10, 2008 to IDA.

(vii) DART conducts a survey of the current time needed for commuters from Ubungo to Posta during the morning rush hour (7-8 am) – the results of this survey were provided to IDA prior to negotiations.

(viii) MoCT Zanzibar presents an action plan for the implementation of the transport sector reform program and the results of a baseline survey of airline and passenger satisfaction rating of Zanzibar airport – MoCT Zanzibar has provided such letter dated April 14, 2009, and the draft final baseline survey dated April 2008 to IDA before negotiations.

42. Following are additional conditions of effectiveness:

(i) MoFEA will have entered into a Subsidiary Agreement with TANROADS satisfactory to IDA. Such subsidiary agreement will note that on-lending of the proceeds of the credit to TANROADS will be on grant basis.

(ii) The Additional Legal Matter shall be that the Subsidiary Agreement has been duly authorized or ratified by the Recipient and TANROADS and is legally binding upon the Recipient and TANROADS in accordance with its terms.

43. Following are the conditions of disbursement for each of the components:

(i) *For component A:* that DART is fully operational and has: (i) adequate capacity, satisfactory to IDA, including management and key technical staff, all with terms of reference and qualifications satisfactory to IDA, and a board of directors; (ii) produced a communication strategy satisfactory to the Association; and (iii) a fully functional procurement unit and tender board.

(ii) *For component B*: that the TANROADS Board of Directors has been put in place as required by the Roads Act.

(iii) *For component C:* that MoCT Zanzibar has employed a Project Manager for the management of the Zanzibar airport runway repair/strengthening with TOR and curriculum vitae (CV) satisfactory to IDA.

44. Following are the credit covenants:

(i) MoFEA is prepared to provide necessary guarantees to back-stop both the bus operators and the fare collector's contracts in case of breach of contract by the DART agency and in case of insufficient revenue;

(ii) MoFEA has secured the needed additional finance to close the financing gap of the project not later than 24 months after effectiveness of the credit;

(iii) DART will procure the services of bus operators, fare collectors, and a fund manager in an appropriate and transparent manner satisfactory to IDA;

(iv) The putting in place, by the DART agency, within 18 months of project effectiveness, of grievances procedures for daladala owners and drivers satisfactory to IDA; and

(v) The project quarterly report shall include adequate information on monitoring the progress made by DART in (a) executing the respective contracts with the bus operators and the fare collector; and (b) addressing the grievances of the daladala operators and drivers.

45. Following are the key milestones for the implementation of the project:

(i) Negotiations were held at the Dar es Salaam Country Office of the World Bank on April 23 and 24, 2008.
(ii) The Board date of the credit is May 27, 2008.
(iii) Signing of the credit agreements is planned for June 12, 2008.
(iv) Effectiveness of the credit is planned for July 1, 2008.
(v) A mid-term review shall be carried out not later than by September 30, 2009.
(vi) The project is planned to be fully implemented by June 30, 2011.
(vii) The project closing date is December 31, 2011.

D. APPRAISAL SUMMARY

1. Economic and financial analyses

46. All three components earmarked for funding under this project are highly economically and financially viable. They are priority investments of the country's TSIP, and are expected to have a substantial impact on Tanzania's economy, particularly in the areas that they serve. DART is expected to have a major impact on public transport in Dar es Salaam city, and will be a reference point for public transport programs for large cities in Africa. A summary of the economic and financial aspects of the three components is presented below. A more detailed discussion and analysis is presented in Annexes 4 and 9.

1.1 Component A: the Dar es Salaam urban transport component

47. The **economic evaluation** of the DART system is based on a project life cycle of 25 years for phase one and compares the scenario with and without the project at a 12 percent discount rate. For both scenarios, the economic benefits and operational costs for the system were calculated. Economic benefits are direct and indirect. The direct benefits are the positive economic impacts generated internally by the transportation system, while the indirect benefits relate to the impact on the urban environment. Direct benefits identified include reduction of travel time and operational costs, while indirect benefits include reduction of pollution and accidents. The direct benefits are estimated from service measures generated by the transportation planning model i.e. passenger-kilometer, passenger-hours and fleet-kilometers. The economic operational costs for the system refer to cost of operating the buses and include replacement, fuel, maintenance, labor and other administrative costs, but exclude taxes. Based on these parameters, the project demonstrates good economic results. It achieves an EIRR of 14.52 percent, NPV of US$ 22.51 million and a Benefit/Cost ratio of 1.16.

48. The **financial model for DART** is based on an affordable flat fare of TSh 400 (US$ 0.35 equivalent) for single use on either trunk or feeder bus routes. The transfer fare is TSh 100 and

hence the total fare for a consecutive ride on a feeder route and a trunk route is TSh 500. It assumes that DART will provide superior services because of its reliability and efficiency and will edge out existing daladala operators (for whom GoT will identify alternative routes). Fares will be adjusted periodically to cater for inflation, Tanzania Investment Centre (TIC) rules (tax exemptions) will apply to the bus operator and fare collector investors, interest on borrowed funds will be low, and the type and capacity of buses specified in the investors document is adopted and maintained.

49. DART phase 1 will operate seven trunk lines service, using 148, 18.5-meter-long articulated trunk buses (including 7 reserves) with 140 passenger capacity, and fifteen feeder bus routes, using 100, 10-meter-long buses (including 5 reserves) with 60 passenger capacity. It will transport 406,000 passengers per day on the system and there will be an estimated total of 122 million passenger trips annually. Table 3 presents the projected total fare income and expenditure for the first five years from 2010 onwards when DART commences operations under a scenario that has been assessed as most realistic.[10] This scenario demonstrates that the system is financially sound.

Table 3 DART projected Five-Year Income and Expenditure 2010–14

	2010	2011	2012	2013	2014
Tariff Revenue US$	39,864,132	41,237,417	42,658,011	43,548,333	44,469,960
Government Subsidy	0		0	0	0
Expenditure	38,375,286	38,432,633	41,291,931	41,127,882	40,971,234
Balance / Contingency Fund	**1,488,845**	**2,804,784**	**1,366,080**	**2,420,451**	**3,498,726**

1.2 Component B: the trunk road component

50. The proposed rehabilitation/upgrading of the Korogwe-Mkumbara-Same road (172 kilometers) includes base repairs and reprocessing, widening of the existing road from the current 6 meter carriageway and 1 meter shoulder to 6.5 meters and 1.5 meters respectively, and laying a new 50 millimeter asphalt concrete (AC) wearing course. The proposed works will also include improvement of safety at rail crossings by providing grade separation, as well as better safety in built-up areas along the road by providing non-motorized transport (NMT) facilities. The estimated cost for the works component is US$ 61.8 million (including supervision).

51. The economic evaluation for the road was carried out using the Highway Development and Management Model (HDM-4) and sought to establish benefits against the investment costs. The benefits considered included the following:

[10] Scenario details are as follows: fare TSh 400/500, cost of trunk bus 257k, feeder bus 82.4k, annual spare parts 14.4 percent, fraud 3 percent, investment mark up 24 percent, equity 40 percent, GoT contribution to DART operating costs 2 years, special fare 15 percent, special fare rate 50 percent, fuel $1.29/liter.

- reduction in vehicle operating costs (VOC) as a result of the improved road
- reduction in maintenance costs
- road user time savings resulting from quicker journeys
- benefits to generated traffic, which will be encouraged to use the road as a result of the improved road conditions

52. The evaluation was carried out at the 12 percent discount rate, over the 15-year analysis period commencing in 2010 when the road is expected to be completed, and compared two alternatives: the 50 millimeter AC and the double–surface-dressing wearing course. The results obtained indicated that both options were viable with the AC option returning a higher NPV of US$18.3 million and an EIRR of 16 percent. These economic indicators demonstrate the robustness of the proposed investments.

1.3 Component C: the Zanzibar airport component

53. The proposed repair and strengthening of the airport runway is assessed to cost US$ 16.4 million (US$ 16.1 million for civil works and US$ 0.3 million for supervision), up from US$ 10 million in 2001. The first economic appraisal for the airport to justify the investment was done in 2001. The evaluation found the proposed investments based on a 20 year design life economically viable with an EIRR of 58 percent. The revised 5 year design life appraisal (2007) for the conservative scenario is still robust and demonstrates that due to the sharply increased traffic at the airport the proposed investment is viable despite increased costs. The EIRR is now 39 percent with an NPV of US$ 11.85 million and a benefit-cost ratio of 1.83. The medium term intervention measures proposed here take into account the need for a stop gap measure which will enable the government plan and mobilize funds for the implementation of a long term plan which includes a modern airport new runway and terminal building as recommended in the recently completed Zanzibar transport master plan study. Funding for economic appraisal for the long term plan are provided within this project

2. Technical

2.1 Component A: the Dar es Salaam urban transport component

54. The DART system for Dar es Salaam is envisioned as a high-quality, low-cost public transportation system operating on specialized infrastructure with adequate incentives to offer affordable mobility, sustainable urban environment, and better quality of life to the urban population, especially the poor. It is fashioned like similar BRTs in Bogota, Rouen, Quito, and Curitiba. It is planned to develop the DART system in six main corridors with a total of 130 kilometers of segregated bus-ways at an estimated total infrastructure cost of US$ 885 million, to be completed at the latest by 2025. These corridors are located on: Morogoro road, Bagamoyo road, Nyerere road, Kilwa road, Mandela/Sam Nujoma road and an outer ring road to be determined.

55. Construction for the first corridor is expected to start in September 2008 at an estimated cost of US$ 103.5 million. The corridor to be implemented under phase 1 is 20.9 kilometers long and will include the following routes: (i) Kimara-Ubungo-Kivukoni on Morogoro road, (ii)

Msimbazi road from Kariakoo to the junction with Morogoro road at the fire station, and (iii) from Morocco on Bagamoyo road through Kawawa road to the junction with Morogoro road. The bus-ways will be provided with 220 millimeter concrete pavement designed to withstand the cumulative axle load of the buses over 20 years. The works component includes the construction of roads and drainage, non-motorized traffic facilities and buildings (stations, terminals and depots).

56. The design of the phase 1 corridor provides for 29 trunk stations, 6 integrated/feeder stations, 5 terminals, and 2 bus depots. Additionally, the existing upcountry bus terminal at Ubungo will be upgraded and connected with an overhead pedestrian bridge with the DART trunk and feeder stations. The stations will be located strategically along the corridor (approximately 500 meters apart) to cater for the very high passenger volume in this corridor. Terminal stations will be located at Kivukoni near the ferry, Kariakoo, Ubungo, Kimara, and Morocco. The depots will be located at Ubungo and Jangwani. The DART design has provided for pedestrian and NMT lanes as well as bicycle parking at terminals and stations.

2.2 Component B: the trunk road component

57. The proposed rehabilitation of the existing road aims at strengthening the existing pavement, widening of the carriageway and shoulders to trunk road standards, and improving safety on the highway by eliminating four at-grade crossings. Other interventions include improvements to the existing geometric alignment to increase the radius of some bends, raising the road in identified areas to protect it against flooding, and enhancement of drainage structures. The cross-section is 6.5 meters carriageway with 1.5 meter shoulders. Though the regional standards are 7 meters carriageway width, Tanzania has decided to keep its trunk road standard at 6.5 meters. Surfacing will be 50 millimeter asphalt concrete including the shoulders. This will partly compensate for the relatively narrow carriageway width.

58. Works are being procured in two separate construction packages with the possibility of a qualified firm executing the two simultaneously under a slice-and-package arrangement. The contract duration is 30 months, to commence in July 2008 and conclude in December 2010. The estimated cost for the works component is US$ 59.3 million. The estimates have been updated to take into account recent increases in construction costs. One consultant will be appointed to supervise both packages. The estimated cost for supervision is US$ 2.5 million.

2.3 Component C: the Zanzibar airport component

59. The Zanzibar international airport provides both an essential domestic link to the mainland and is also the main point of arrival for the majority of tourists. The airport was first constructed in the 1930s with a 1525 meter long by 37 meter wide runway aligned in a north-south direction. The initial contract to upgrade the deteriorating runway and taxiways was awarded in 2004 under the IRP2 project but had to be terminated due to the underperformance of the contractor.

60. Under the project, it is intended to repair/strengthen the pavement and complete the extension of the runway to approximately 3000 meters. This will enable the airport to

accommodate increased traffic from wide-bodied aircraft and enhance the potential of Zanzibar as a tourist destination. Amongst proposed interventions are the following: (i) provision of an asphalt concrete overlay (base course and wearing course); (ii) limited improvement of the drainage; (iii) improvement of the air control systems including rehabilitation of Aeronautical Ground Lighting (AGL) system; and (iv) maintenance of the runway during repair.

61. The cost of construction and supervision is estimated at US$ 16.4 million. The estimated construction period is 15 months, with a planned signing of the contract in January 2009 and conclusion of the contract in March 2010.

3. Fiduciary

62. *Procurement:* Procurement activities will be carried out by TANROADS, the DART agency, and MoCT of Zanzibar. TANROADS has an appropriately staffed procurement unit and a tender board (as required by the public procurement act). The DART agency is still to establish its procurement unit and tender board, and it is a **condition of disbursement** that this is done. MoCT Zanzibar will employ a Project Manager to manage the contracts for the Zanzibar airport runway repair/strengthening. TANROADS will provide technical backstopping to the DART agency and MoCT Zanzibar in the areas of procurement, contract management, and administration.

63. TANROADS will be responsible for the procurement and management of the DART phase 1 infrastructure and Korogwe-Same trunk road civil works and supervision contracts. It has adequate experience in implementing World Bank–funded projects including the ongoing CTCP. Procurement of the contracts to be financed under the credit is on-going. Validation of the procurement capacity of TANROADS was done by the Bank in September 2007 following the August 2007 restructuring of TANROADS.

64. The key issues and risks concerning procurement for implementation of the project have been identified and are outlined in Annex 8 of this PAD, including corresponding corrective measures. The overall project risk for procurement is average.

65. During project preparation in September 2007, a Financial Management Capacity Assessment was carried out of the Finance and Accounts unit of TANROADS under the Directorate of Management Services responsible for agency financial affairs including the current IDA project. The assessment was conducted in line with the World Bank's "Financial Management Practices Manual" dated November 2005. This includes identification of financial risks that may affect project implementation and risks mitigation measures to address these risks.

66. The assessment also drew on the 2005 and 2006 Country Public Expenditure Financial Assessment Reviews (PEFAR). The major findings of the financial management assessment carried out during the above reviews are as follows. First, at the country level, over the past six years the government continued to strengthen its public financial management systems, which are now generally assessed as satisfactory. The timelines and quality of financial reporting and audits has improved. Government continues to strengthen the capacity of accountants and

auditors at the MDAs and local government authorities (LGAs). Hence the country financial management risk is modest. Second, at the implementing entities level, the overall assessment indicated that there are adequate financial management systems that satisfy the World Bank's minimum requirements under OP/BP10.02. Entity financial management risk is modest. The risks concerning financial management for implementation of the project have been identified and are outlined in Annex 7 of this PAD, including corresponding corrective measures.

4. Social

4.1 Component A: the Dar es Salaam urban transport component

67. This component's main social benefits will include reduced travel time and increased comfort of users, improved general traffic flow, and improved urban landscape and quality of services at locations where project-induced redevelopment of public open spaces will occur.

68. On the negative side, people will be affected by direct and indirect displacement. In total, phase 1 of DART will affect 293 properties, and of these 193 will be totally displaced. Project-affected people (PAP) include 741 entities (families, businesses, others) and 87 businesses that operate as tenants or concessionaires within Ubungo terminal. Other businesses may lose clientele as a result of reduced access or lost parking, or will no longer be able to make informal use of the public right-of-way.

69. To address these issues, a Resettlement Policy Framework (RPF) has been prepared, was approved by the Bank, and was disclosed in-country and at the Infoshop. On the basis of the RPF, a Resettlement Action Plan (RAP) was prepared in two phases (phases 1a and 1b), was cleared by the Bank and disclosed in-country and at the Infoshop.

70. To finance the cost of resettlement, GoT has budgeted TSh 10 billion (US$ 8.5 million) in the FY07 budget. The phase 1a RAP, which was disclosed on July 30, 2007, has already been implemented. The phase 1b RAP, was disclosed on December 5, 2007, and its implementation commenced in early 2008. All resettlement action must be completed before construction is scheduled to commence in September 2008.

71. There will be impacts on employment at the time of the changeover from the traditional to the new public transport system (planned for October 2010). Overall, it is estimated that the new DART system will create about the same number of jobs as will be lost in the traditional system (about 3000). Still, since the required skill levels are generally higher in the new system compared to the traditional daladala system, many people involved in the traditional system might be negatively affected.

72. In order to mitigate these impacts, the following has been done up to now and is planned for the future. DARCOBOA which represents the owners of the daladala has been involved in the preparation of the project from the beginning. Representatives of DARCOBOA visited the Transmilenio BRT in Bogota, Columbia and learnt from their counterparts. DARCOBOA is currently positioning itself to bid for the DART bus operator's contracts jointly with foreign partners. It is also proposed that daladala owners who are rerouted to other—less attractive—

routes at the beginning of the operations of DART will be given preferential access to shares that are expected to be issued by the bus operator company. Daladala drivers will be provided with training to upgrade their skills (as part of the project) so that they could become eligible to get jobs as drivers of the DART buses.

73. In order to identify the project affected daladala owners and operators the Social and Environmental Unit of the DART agency will, in collaboration with SUMATRA (who registers the daladala operators for the specific routes) list both the affected owners and drives, and will in collaboration with the DART public transport department and with SUMATRA, assess their eligibility for support by the project. The establishment of an appropriate grievances mechanism for daladala owners and drivers within 18 months of project effectiveness is one of the covenants of the project.

4.2 Component B: the trunk road component

74. This component will have both positive and negative impacts. The potential positive impacts are as follows: (i) increased income generation during construction due to selling food and other local products to the construction workforce by members of the local community residing along the road, especially women and youth; (ii) temporary employment to the local community members during road construction works; (iii) reduced vehicle maintenance and operation costs due to improved road condition; and (iv) increased tourism activities due to improved road condition with faster and more comfortable journeys.

75. The important issues of concern to this project are road safety and HIV/AIDS transmission. Potential HIV/AIDS infections are going to be minimized by promoting sensitization campaigns by the contractor through NGOs (as part of the works contract). It is proposed to locate workers' campsites remote from village settlement to minimize interactions with local communities. In addition, the contractors are advised to give priority to local communities during employment of unskilled labor to minimize the number of newcomers in the project area.

76. During consultations, the local communities expressed some concerns about the problem of increased road accidents due to speeding vehicles. The construction of speed-reducing, measures including raised pedestrian crossing in towns and speed humps at the end and beginning of villages, has been made part of the bidding documents. The disruption of livestock routes and community access to their business activities is another issue that has been raised by the communities. Access roads and concrete slabs across drainage channels have been included in the design to allow the community to access their business and social activities. As well, elimination of a number of railway crossings by construction of overpasses is planned to improve safety. Where need for NMT facilities and parking has been identified, their design has been incorporated taking into account both safety and convenience

4.3 Component C: the Zanzibar airport component

77. The potential positive impacts anticipated after the completion of the project are (i) the increased use of larger planes, (ii) introduction of direct services from European and Far Eastern markets, resulting increased tourism, (iii) increased move to air cargo that could reduce

the congestion at the seaport, and (iv) increased potential for beneficial PPP arrangements for the management of the airport and the expected result of improved provision of services at the airport.

78. Identified negative impacts are disease infection and transmission (HIV/AIDS, other STIs, malaria, and so forth) during construction. These are caused by association and interaction of construction workers with the local people. Also, abandoned pits filled with rainwater could harbor disease vectors responsible for malaria, cholera, dysentery, and so forth. Occupational health and safety during construction phase is also a risk to the construction workers. Increased noise and vibration during construction can be a nuisance. The discomfort caused by noise includes auditory fatigue and temporary lessening of hearing ability.

79. The negative impacts that may result from the construction and operation of the airport are considered to be negligible and appropriate measures to address them will be included in the bidding documents and mitigated through the contract.

5. Environmental

80. Environmental assessments (EAs) were prepared for each of the three project components to identify, assess, and mitigate the potential environmental and social impacts. Additionally, with funding from CTCP, GoT has prepared a Sectoral EA for the Transport Sector along with guidelines for EAs for the various sub-sectors of transport. These guidelines were applied in the production of the individual EAs for the three project components. The following impacts were identified for each of the components.

5.1 Component A: the Dar es Salaam urban transport component

81. Since the project is located in an urban area along established commercial corridors, impacts on native vegetation and fauna will not be significant. Only urban landscaping vegetation will be affected and this effect will be compensated when landscaping implemented as part of the project consolidates. Physical environment impacts are also expected to be of marginal importance. Necessary earth movement is limited and local topography implies limited risks of erosion and soil runoff. Commercial borrow pits for all construction materials are available at reasonable (although not always ideal) distances from construction sites and no new pits or quarries will need to be developed. Two flood plains will be intercepted by on already existing crossings and widening of existing avenues will be limited and is not likely to have significant impacts.

82. One of the main positive environmental impacts of the DART system is the reduction of greenhouse gas emissions. A majority of the current public transport providers are daladala minibuses carrying less than 20 people at a time. The emissions by DART trunk buses carrying 140 passengers are estimated at 2,100g/km (since they will be compliant to EURO III emission standards), while emissions of the feeder buses carrying 60 passengers are 1,250g/km. The current minibuses emit 50–70 percent more gases to transport the equivalent amount of passengers compared to the future DART system. Hence, DART will reduce pollution levels by about 60 percent in the phase 1 corridor. Other positive impacts expected from the introduction

of the DART system are reduced air pollution–related illnesses, reduced noise levels, enhancement of non-motorized transport, and a more beautiful city environment.

5.2 Component B: the trunk road component

83. Soil erosion and sedimentation of road pavement between Chekelei village (CH 109+800) and Hedaru (CH 119+100) are the main environmental issues of this component. These issues will be mitigated through soil conservation methods incorporated in the engineering design. Another identified environmental issue is the accumulation of solid wastes in construction camp sites. Likewise uncontrolled discharge of liquid wastes could result in pollution of surface and ground water, especially of surface water sources around the workers campsite. Improper setting of pit latrines may result in contamination of both ground and surface water sources. Other issues include dust/air pollution, noise and vibration from operation of vehicles/equipments/machinery along the road and borrow pits, and destruction of riverbank vegetation due to the movement of heavy machinery and trucks. The latter situation could lead to increased river bank erosion, sedimentation of river beds, and destruction of adjacent land and properties. Most of the negative impacts identified are of low significance and will be mitigated through measures as part of the works contract.

5.3 Component C: the Zanzibar airport component

84. The completion of the construction of the airport runway extension and the overlaying of the existing runway will require a substantial amount of excavated construction materials like sand, gravels and aggregates for base course, gravel surfacing, and drainage structures. In the process of excavating these materials, the contractor will affect the landscape of the sites where these materials are taken from. Land clearance to obtain construction materials will involve uprooting trees and crops within area as well as displacing of topsoil. The process of repair/strengthening of the existing runway and completion of the runway extension will also entail considerable vegetation loss, including shrubs and grasses along the runway. Waste production at the campsite and batch plant will include solid waste, such as packaging materials and drums of bitumen. Besides these wastes, stockpiles of construction materials like aggregate and gravel may impose visual impacts. Mitigation measures for these environmental impacts will be included in the bidding documents and implemented through the contract.

6. Safeguard Policies

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]
Physical Cultural Resources (OP/BP 4.11)	[ ]	[X]
Involuntary Resettlement (OP/BP 4.12)	[X]	[ ]
Indigenous Peoples (OP/BP 4.10)	[ ]	[X]
Forests (OP/BP 4.36)	[ ]	[X]
Safety of Dams (OP/BP 4.37)	[ ]	[X]

Projects in Disputed Areas (OP/BP 7.60)*	[ ]	[X]
Projects on International Waterways (OP/BP 7.50)	[ ]	[X]

7. Policy Exceptions and Readiness

85. This project complies with all applicable Bank policies.

86. The engineering design and bidding documents for the works to be financed under components A and B of this credit have been completed, and procurement of works and supervision services is ongoing. It is expected that respective contracts can be signed after effectiveness of the credit. Due to the recent failed bidding, the bidding documents for component C are being revised (see paragraphs 24 and 25) and will be ready by June 2008.

* *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: Country and Sector Background

TANZANIA: Second Central Transport Corridor Project

1. Tanzania's recent growth is a result of a decade of reforms since 1995 in all sectors of the economy, including the transport sector. The following are key reforms that took place in the transport sector during this period: (i) 1998, creation of a second generation road fund; (ii) in 2000, creation of TANROADS, a road agency that is responsible for the management of main roads (trunk and regional roads) in the country (28,900 kilometers); (iii) 2004, transformation of the Tanzania Harbor Authority to the Tanzania Port Authority (TPA) a "landlord" port organization that is responsible for all marine and inland ports; (iv) 2003, creation of SUMATRA, the land transport regulator, as well as the Tanzanian Civil Aviation Authority (TCAA); (v) 2005, merging of the former Ministry of Works and the Ministry of Communication and Transport (mainland) into the Ministry of Infrastructure Development (MoID); (vi) 2006, preparation of a sector investment program and broad agreement between GoT and DPs to move towards a sector-wide support; and (vii) in 2007, increase of road user charges for the funding of maintenance from US$ 0.08 equivalent to US$ 0.16 per liter of fuel.

2. Private sector involvement in the transport sector is strong with practically all works executed by private sector contractors (100 percent of maintenance works are done by local contractors) and practically all transport services provided by private sector operators (the current exception is Air Tanzania Corporation, but efforts are underway to seek a private partner). Infrastructure finance through PPPs is still modest but important potentials exist. The following PPPs in the transport sector have been established or are evolving: (i) in 1998, the management of the container terminal of the Dar es Salaam port was concessioned to a private operator called Tanzania International Container Terminal Services (TICTS); (ii) also in 1998, the Kilimanjaro International Airport (KIA) was concessioned to Kilimanjaro Airport Development Company Limited (KADCO); (iii) the port of Kigoma at the lake of Tanganyika has been managed by a private operator since 1995; (iv) the agreement for the concession of the Tanzania Railway Corporation (TRC) to a private operator was signed on September 3, 2007; and (v) in October 2007 TANROADS commenced implementation of performance-based management and maintenance (PMMR) contracts on about 1,000 kilometers of important rural roads in three regions on a pilot basis.

3. Ninety percent of inland freight transport and 70 percent of passenger transport is using the road network. The classified road network of Tanzania extends to 85,516 kilometers, of which 5,042 kilometers (5.9 percent) are paved and 32,954 kilometers (38.5 percent) are in poor condition as shown below.

Table A1.1: Size and Condition of the Classified Road Network in Tanzania

Type of road	Length (km)	Of which paved		Of which in poor condition	
		km	%	km	%
Trunk	9,934	3,914	39.4	2,342	23.6
Regional	18,957	328	1.7	5,413	28.6
District	29,537	11	-	10,792	36.5
Feeder	21,191	-	-	11,697	55.2
Urban	5,897	790	13.4	2,710	46.0
Total	**85,516**	**5,042**	**5. 9**	**32,954**	**38.5**

4. Past finance in the transport sector has been insufficient to cope with growth and to ensure an appropriate infrastructure platform to achieve the MDGs or the National Vision 2025. With only about 5.9 percent of the network paved and about 25 percent of the national road network (trunk and regional roads) still in poor condition—which often means impassible during the rainy season—Tanzania has a lot to catch up even in comparison with its neighbors. About 37 percent of the main road network (trunk and regional roads) or 11,500 kilometers have traffic levels above 200 vehicles per day, the usual threshold for paving. Only 13.4 percent or 790 kilometers of the urban (secondary) roads are paved, although from an economic point of view (minimization of overall transport costs) almost all of them should be paved. In terms of kilometers of paved roads per land area and population, Tanzania compares poorly with other countries in the region (table A1.2).

A1.2: Paved Roads per Population and Land Area in Eastern and Southern African Countries

Country	Population (million)	Land Area (000 km^2)	Total road network (km)	% Paved	Pop. per km of paved road	Land area per km of paved road
Malawi	12.6	94	15,451	26.1	3,120	23
Zambia	11.5	743	91,440	22.0	572	37
Mozambique	19.9	799	37,349	16.9	3,152	127
Uganda	27.8	197	70,746	5.7	6,950	49
Kenya	33.5	583	63,942	12.1	4,330	101
Rwanda	8.9	25	14,000	8.3	7,659	22
South Africa	45.5	1,214	362,099	20.3	619	17
Tanzania	**37.9**	**882**	**85,516**	**5.9**	**7,517**	**175**

5. In 1998 a second generation road fund, the Road Fund Board (RFB), was created based on a specific act, with a Board of Directors, a Secretariat, and dedicated funding. From FY00 to FY07 the revenue of the RFB increased from US$ 51 million to US$ 67 million equivalent, the large majority of it accrued from a fuel levy. The amounts collected are allocated as follows: 67 percent to TANROADS for maintenance, 7 percent to MoID for development, and 30 percent to PMO-RALG, which allocates its share to the 132 LGAs based on network and need. Up to now the funding collected roughly covered the routine maintenance requirement of the network, or about 40 percent of requirement. What was not done in the past, due to shortage of funds, essentially was periodic maintenance, particularly on paved roads. In the budget of FY08 GoT decided to close the funding gap and increased the fuel levy two-fold from US$ 0.08 to US$ 0.16 equivalent per liter. Total collection in FY08 is projected to be TSh 218 billion or an equivalent of US$ 173 million, at current exchange rates, and this amount will essential eliminate the maintenance funding gap.

6. GoT has also prepared a 10-year Transport Sector Investment Program (TSIP) and based on it a three-year rolling investment plan commensurate with the MTEF of the GoT. Planned annual investments and operating costs in the sector amount to about US$ 1 billion per year, of which about US$ 300 million per year would be operational (maintenance) costs to be financed from user charges, and US$ 700 million is planned investments, including US$ 100 million envisaged to be financed by the private sector through PPP arrangements. About US$ 300 million equivalent of the investment needs annually is expected to be financed from GoT budget resources and a further US$ 300 million per year is needed from DPs. Although ambitious, it is assessed that such investments are required to achieve the MDGs.

Following are the remaining key challenges in the sector:

7. **Road sector management capacity.** Important strides have been made in Tanzania in terms of improved road management capacity with the creation of TANROADS, which is responsible for the management of the national road network of 28,891 kilometers. Also, the 132 local government authorities responsible for the management of the 56,625 kilometers of local roads have increased performance in recent years, resulting in better condition of the road network. However, important challenges remain. With the forthcoming increased funding both for development and maintenance, additional engineering staff will be required both in TANROADS and in the LGAs. Good working conditions need to be established to attract such staff. Both oversight agencies, MoID and PMO-RALG, need to strengthen their oversight and monitoring capacity while TANROADS needs an empowered Board of Directors that can appropriately guide and oversee the agency.

8. **Road safety.** Road safety is of growing concern in Tanzania. Road accident fatalities have grown by an average of 9 percent since 2000 and have reached 2,884 in 2006. Bus passengers and pedestrians bear the brunt of the fatalities with a share of 76 percent. MoID has prepared the final draft of a National Road Safety Policy in March 2007. The key proposal is for GoT to set up a Road Safety Board that will be responsible for the overall leadership, coordination, and management of road safety activities in Tanzania. The Board will have a permanent secretariat and will be financed from a Road Safety Fund that is fed primarily from road user charges. Cabinet approval is now being sought. A Road Safety Bill (available in draft) will need to be passed by parliament. Also, it is planned to create an independent Driver and Vehicle Examination and Licensing Agency that would be a regulator and a "one-stop-shop" for all vehicle-related matters.

9. **Growth and resulting increased transport demand.** While growth is essential for poverty reduction, it has its downsides, including congestion at transport terminals such as ports and airports and in urban areas. The main ports and airports (particularly in Dar es Salaam and Zanzibar) have a high potential for beneficial PPP arrangements that could accrue the necessary investments and improved management so that congestion can be decreased and efficiency increased.[11] A more intrinsic problem is that of urban congestion. Rapidly growing motorization (though still low at about 30 vehicles per 1,000 population), combined with population growth

[11] For example, at the Dar es Salaam port average dwell time for containers is about 20 days. Inefficiencies at the port are costing the country an estimated US$30 million per year in direct costs (mainly cost of ship dwell time, which is transferred to the consumers).

triggered by both in-migration and natural growth, has led to major congestion in Dar es Salaam in recent years. International experience shows that urban congestion cannot generally be tackled through the expansion of the urban road network, but must be addressed through the provision of attractive mass transit combined with intelligent traffic management measures, as well as the creation of capacity to manage the urban transport system.

10. **Move towards a SWAp.** As part of the Joint Assistance Strategy for Tanzania (JAST) a schedule has been agreed between DPs and GoT for each sector to move towards a SWAp and eventually toward General Budget Support (GBS). The goal for the transport sector is that commencing in FY09 a SWAp with a basket fund should be in place. Following are the essential requirements for a SWAp: (i) a sector-wide evaluation and monitoring (E&M) system is agreed upon by all parties; (ii) an acceptable overall investment plan is in place; and (iii) adequate capacity to implement it is available. Important work on all these issues is ongoing and it is expected that the next sector credit of the World Bank, the proposed Transport Sector Support Project, will be delivered in a SWAp mode jointly with all the other DPs and GoT.

Annex 2: Major Related Projects Financed by the Bank and/or other Agencies

TANZANIA: Second Central Transport Corridor Project

A. World Bank Funded Project			
Project	**Sector Issue**	**Latest Supervision (PSR) ratings**	
		Implementation Progress (IP)	**Development Objectives (DO)**
Central Transport Corridor Project (IDA 38880—US$122m)	Support the National Transport Policy by focusing on the improved performance of the Central Transport Corridor through (i) upgrading strategic road links, (ii) enhancing road management capacity, and (iii) improving operations of Tanzanian railways	Satisfactory	Satisfactory
Integrated Road Project I (IDA 21490—US$180.4m)	Support Tanzania's economic recovery program by restoring trunk and regional road networks that have been obstacles to the sustainability of Tanzania's economic recovery program, and develop MoW's institutional capacity for properly managing road networks	Completed	Unsatisfactory
Integrated Road Project II (IDA 2598A, 25980, P7941, and P7940, totaling US$171.7m)	Support Tanzania's economic recovery program by reducing transportation costs, improving accessibility to economically productive areas, strengthening overall sector administration, and strengthening organizational and financing arrangements in the road sector	Completed	Moderately Satisfactory
Port Modernization (IDA 20950—US$37m)	Support the expansion project to expand the physical, managerial, and operational capabilities of THA to meet the traffic volume expected in the 1990s and to provide a more reliable and cost effective link with the neighboring landlocked countries	Completed	Satisfactory
Transport Rehabilitation Project (railway restructuring) (IDA 22670—US$76m)	Support a comprehensive restructuring program for TRC comprising of (i) strengthen the organization of TRC, eliminate regulatory bottlenecks to its effective operations, and set it on a path of a commercially viable entity; and (ii) rehabilitate infrastructural assets, replace obsolete and uneconomic operational assets, and provide limited new investments consistent with the prospects for growth in domestic traffic	Completed	Unsatisfactory
Highway Project (06) (IDA 16880—US$50m)	Support Tanzania's economy by helping reduce transport as a constraint through rehabilitation of the most important sections of the highway network. The project comprises several components: (i) a road rehabilitation program consisting of the rehabilitation of several high-priority sections of the Tanzania-Zambia (TANZAM) highway, amounting to about 295 km, and 700–1000 km of primary gravel roads; (ii) a highway equipment rehabilitation program; (iii) a maintenance spares supply program for the trucking industry; (iv) technical assistance	Completed	Satisfactory

	for the local contracting industry; (v) technical assistance and consulting services for construction supervision, and agricultural feeder roads study, feasibility studies, and detailed engineering; and (vi) training		

B. Other DP Funded Projects			
Project	**Action**	**Development Partner**	**Status**
Singida-Minjingu Roads (US$33.2m)	Upgrading of the road to bituminous standard	AfDB	Being procured
Kagoma-Lusahunga (US$36.4m)	Upgrading of the road to bituminous standard	AfDB	Works ongoing
Zanzibar 5 roads (US$17.5m)	Upgrading of the road to bituminous standard	AfDB	Ongoing
Arusha-Namanga (US$59.1m)	Rehabilitation, paving and widening of Arusha-Namanga road	AfDB/JBIC	Being procured
Chalinze-Segera-Tanga (US$45m)	Rehabilitation of the road	DANIDA	Being procured
TANZAM Highway (US$64.5m)	Rehabilitation of some sections of TANZAM highway	DANIDA	Being procured
National roads US$12.5m)	Periodic maintenance of regional roads	DANIDA	Works ongoing
Ilule-Tinde-Nzega (US$50.8m)	Upgrading of the road to bituminous standard	EU	Works ongoing
Mandela Road (US$38.1m)	Rehabilitation of Mandela Road	EU	Being procured
STABEX (US$6.4m)	Rehabilitation of regional roads in coffee-growing regions	EU	Works ongoing
Local Government Roads (US$30m)	Support of National Rural Transport Policy	NORAD	Works ongoing
Marangu-Rombo Mkuu (US$15.2m)	Upgrading of the road to bituminous standard	NORAD	Works ongoing
Zanzibar (Pemba) roads (US$7.7m)	Rural roads rehabilitation	NORAD	Under planning
Masasi-Mangaka (US$20.1m)	Paving of Trunk roads	JICA	Works ongoing
Kilwa Road (US$21m)	Rehabilitation and four-laning of the Kilwa road	JICA	Works ongoing
Tunduma-Sumbawanga (US$200m)	Paving of trunk roads	MCC	Under planning
Tanga-Horo Horo (US$34m)	Paving of trunk roads	MCC	Under planning
Songea-Mbinga and Songea-Nantumbo (US$70m)	Paving of trunk roads	MCC	Under planning
Rehabilitation of Lindi Regional roads (US$4.9m)	Rehabilitation of regional roads to gravel standard	OPEC	Works ongoing
Rehabilitation of Kigoma Regional roads (US$2.9m)	Rehabilitation of regional roads to gravel standard	OPEC	Works on going
Malagarasi Bridge (US$65m)	Detailed Engineering Design of the Malagarasi Bridge	KOREAN Govt.	Design on progress
Upgrading of Ndundu -	Upgrading of Ndundu – Somanga to bituminous	KUWAIT	Under

Somanga road (US$ 40m)	Standards	OPEC	Procurement
Mikumi - Ifakara road (US$ 2m)	Paving of sections of the road	SDC	Works ongoing

C. GoT Funded Projects		
Project	**Action**	**Status**
Widening of Sam Nujoma Road (US$ 13.4m)	Upgrading to AC standard	Ongoing
Mbeya – Lwanjilio (US$ 24.6m)	Upgrading to DBST	Ongoing
Construction of Ruvu Bridge + 700m approach roads (US$4.5m)	Construction of new bridge and access road	ongoing
Kyamiorwa – Buzirayombo (US$ 46.5m)	Upgrading to DBST	Ongoing
Buzirayombo – Geita (US$ 39.6m)	Upgrading to DBST	Ongoing
Geita - Sengerema (US$ 33.0m)	Upgrading to DBST	Ongoing
Sengerema – Usagara (US$ 30.8m)	Upgrading to DBST	Ongoing
Dodoma – Manyoni (US$ 64.6m)	Upgrading to DBST	Ongoing
Manyoni – Isuna (US$ 31.3m)	Upgrading to DBST	Ongoing
Isuna - Singida (US$ 31.7m)	Upgrading to DBST	Ongoing
Mbwemkulu – Mingoyo (US$ 51.5m)	Upgrading to DBST	Ongoing
Unity Bridge and approaches (US$ 24.7m)	Concrete Bridge + DBST standard road	Ongoing
Nangurukuru – Mbwemkulu (US$ 39.2m)	Upgrading to DBST	Ongoing
Tarakea - Rongai – Kamwanga (US$ 16.4m)	Upgrading to DBST	Ongoing
Mwandiga - Manyovu (US$ 42.5m)	Upgrading to DBST	Under Procurement
Kigoma – Kidahwe (US$ 21.3m)	Upgrading to DBST	Under Procurement

Annex 3: Results Framework and Monitoring

TANZANIA: Second Central Transport Corridor Project

Results Framework

1. The framework below presents the project PDO and Outcome Indicators.

Table A3.1: Results Framework

PDO	Project Outcome Indicators	Use of Project Outcome Information
The project development objective is *to support Tanzania's economic growth by providing enhanced transport facilities that are reliable and cost effective*, in line with MKUKUTA and the National Transport Policy and Strategy	(i) Average rush hour travel time by public transport users between Ubungo and the Dar es Salaam central business district (Posta) (ii) Average vehicle operating cost on the Korogwe-Mkumbara-Same trunk road (iii) Satisfactory rating of Zanzibar airport by airlines and passengers	(i) The outcome information will be used by the DART agency to assess the efficiency of the BRT system (ii) This information will be used by TANROADS to compare the actual vs. the appraisal IRR (iii) This information will be used to assist MoCT Zanzibar to understand the needs of airlines and passengers
Intermediate Outcomes	**Intermediate Outcome Indicators**	**Use of Intermediate Outcome Monitoring**
Outcome 1: Improved urban transport in Dar es Salaam particularly in the Morogoro and Kawawa road corridors	(i) Percentage of completion of BRT works by value on July 1 each year (ii) Number of DART buses operational (iii) Average number of public transport passengers per day through Morogoro corridor at Jangwani	Information will be part of transport sector statistics (the Annual Transport Sector Statistics of the MoID)
Outcome 2: Enhancement of the Dar es Salaam to Arusha trunk road	Percentage of completion of trunk road works by value on July 1 each year	Information will be part of transport sector statistics (the Annual Transport Sector Statistics of the MoID)
Outcome 3: Enhanced operation of the Zanzibar Airport	(i) Zanzibar airport runway repaired and strengthened (ii) Compliance of Zanzibar airport with TCAA/ICAO safety and security standards	Information will be part of transport sector statistics (the Annual Transport Sector Statistics of the MoID)

Note: ICAO = International Civil Aviation Organization.

Arrangements for Results Monitoring

2. The overall responsibility for results monitoring for this project will be with TANROADS. TANROADS will produce a QPR, which will include component reports produced by DART management and by the Zanzibar Airport Project Manager. The QPR will include the IFR as per IDA requirement and this will serve as a basis for the two quarterly withdrawal applications from the credit account to the designated account maintained by TANROADS for the project, based on the two quarterly expenditure forecasts. The QPR will report on physical progress of the components, will provide the appropriate financial statements that serve as the basis for withdrawal applications, and will report on the progress on the project monitoring indicators as

per the project's results framework (see table A3.2). The QPR will also contain a summary of the status of the implementation of the EMP and the RAP.

3. In view of the forthcoming SWAp in the transport sector, MoID is in the process, with assistance from DANIDA, of preparing a sector-wide monitoring and evaluation framework. A first draft of such framework has been produced and was discussed with DPs. It will be important that the framework, and more specifically the selected indicators, adequately serves the different purposes of sector oversight (by MoID), sector finance (MoFEA, DPs, and RF), and the executing and regulatory agencies. The core entity for such a Transport Sector Data Management System (TSDMS) is the statistical unit of the Department of Policy and Planning (DPP) at MoID. The statistical unit is already producing a transport sector statistical yearbook that has been gradually improved and that serves increasingly all the different interests in the sector.

Table A3.2: Arrangements for Results Monitoring

		Data Collection and Reporting					
Project Outcome Indicators	**Baseline 2008**	**2009**	**2010**	**2011**	**Frequency and Reports**	**Data Collection Instruments**	**Responsibility for Data Collection**
Average rush hour travel time of public transport users between Ubungo and CBD (Posta) (in minutes)	62[12]		25		Survey after completion of component A	Survey of representative sample of commuters	DART
Average vehicle operating cost on the Korogwe to Same trunk road (US cents per km)	34		23		Survey after completion of component B	Calculation based on HDM model	TANROADS
Satisfactory rating of Zanzibar airport by airlines and passengers	Unsatisfactory rating[13]		Satisfactory rating		Survey after completion of component C	Survey	MoCT Zanzibar
Intermediate Outcome Indicators							
Percentage of completion of BRT works by value on July 1 each year	0	40%	80%	100%	Project QPR	Supervision consultant's monthly report	TANROADS
Number of DART buses operational	0	0	248	248	DART's monthly report	Fare collector's report	DART
Average number of public transport passengers per day through the Morogoro corridor at Jangwani (in thousands)	250k		350k	360k	DART's monthly report	Fare collector's report	DART
Percentage of completion of trunk road works by value on July 1 each year	0	35%	70%	100%	Project QPR	Supervision consultant's monthly report	TANROADS
Zanzibar airport runway repaired and strengthened	no	yes			Project QPR	Project Manager's monthly report	MoCT Zanzibar
Compliance of Zanzibar airport with TCAA/ICAO safety and security standards	Not compliant[14]	Not compliant	Compliant	Compliant	Project QPR	TCAA/ICAO reports	MoCT Zanzibar

[12] Based on surveys conducted by DART in April 2008; see project files.
[13] Baseline satisfaction survey report of April 2008; see project files.
[14] Based on letter of TCAA dated April 9, 2008; see project files.

Annex 4: Detailed Project Description

TANZANIA: Second Central Transport Corridor Project

Component A: the Dar es Salaam urban transport component

A. Background

A.1 Dar es Salaam City: Characteristics, Land Use, and Road Management

1. Dar es Salaam is the largest city in Tanzania and the country's principal center of commerce and industry. The city is also an important terminal for air, sea, and road transport. It is divided into three municipalities: Kinondoni, Ilala and Temeke. While the City Council has responsibility for transport and environmental planning and development, the municipal councils are responsible for the maintenance of roads classified as urban in their jurisdiction. However, main roads (trunk and regional) in urban areas are managed by TANROADS, an executive agency of the MoID.

2. Dar es Salaam is one of the fastest-growing cities in Sub-Saharan Africa. The city's population grew from about 3,500 in 1867 to 128,742 in 1957, increasing to 272,821 in 1967 and to 843,000 in 1978. The 1988 census recorded the city's population as 1,360,850. It increased to 2,487,288 in 2002 and is now estimated at about 3 million. Average annual growth rate over the past years was 4.3 percent. The annual growth in employment in Dar es Salaam is estimated to be 10 percent.

3. The land-use pattern of Dar es Salaam follows the predominantly radial road network emanating from the city center with the central business district (CBD) as the focal point. The current land use plan shows an extension of planned residential areas in the northwest along Bagamoyo road, in the south along Kilwa road, and in the west along Morogoro and Pugu roads. New industrial areas are also developing along Bagamoyo and Morogoroa roads.

4. The existing formal road network in the city comprises approximately 1,150 kilometers of which only 450 kilometers are paved. This existing road network is predominantly radial, with the central area serving as the focal point in which most public and government institutions are concentrated. The current development plan provides for ring roads and two of them (Nelson Mandela Expressway and Kawawa road) are already completed. The two ring roads have contributed significantly to the improved operation of passenger travel by public transport from the northern suburbs to the southwest industrial area and suburbs.

5. Trunk roads comprise about 13 percent of the classified roads and carry most of the urban passenger bus traffic. Collector roads comprise a further 6 percent of the total and collect and distribute traffic within the residential, industrial, and central areas of the city. Access roads comprise the remaining 81 percent of the total road network and distribute traffic within smaller areas.

6. The alignment of the roads in Dar es Salaam is generally good, road width is consistent with the functional classification, and adequate sight distances are available on most sections.

A.2 Public Transport in Dar es Salaam City

7. The public transport system mainly consists of mini- and mid-sized buses called daladala. There are approximately 7,000 registered and privately owned daladala in service with an aggregate seating capacity of approximately 273,000. Bus services with conventional big buses are operated by Usafiri Dar es Salaam (UDA), a public entity, which operates approximately 30 buses, mostly on out of town routes with an aggregate seating capacity of approximately 3,000.

8. The reliability, comfort, and safety of public transport services in Dar es Salaam are low. Considering the total urban transport fleet size, the maximum daily passenger capacity is estimated to be 4.6 million passenger trips but this can drop due to breakdowns and deliberate removal of vehicles from unprofitable routes, thus reducing the available capacity to about 70 percent of the maximum (or 3.2 million passenger trips per day in 2002). This is below the estimated demand of approximately 3.6 million passenger trips per day.

9. In a Dar es Salaam Transport Master plan study funded by JICA (2007), recent household surveys were used to collect data from 10,000 commuters. The JICA study found 80 percent dissatisfaction with the overall present transport arrangements, with highest dissatisfaction being expressed for waiting time, comfort, and safety. Bus terminal surveys (293 samples) at the Ubungo bus terminal found that respondents' journey time (including waiting and access time) averaged 95 minutes, indicating that on average commuting by bus consumes three hours a day (journeys being mostly less than 15 kilometers). Based on the survey, traffic speeds are in the order of 10–12 kilometers per hour (peak times) whereas the average travel speed of the BRT has been calculated at 27 kilometers per hour. Due to poor present bus supply, waiting is a major travel time factor for bus travelers. With the introduction of the DART, it is expected that the typical trip travel time (including waiting time) from Ubungo to the CBD will reduce from 45 to 25 minutes. This is expected to have socioeconomic benefits through an increase in productivity and opportunity across a wide community of urban dwellers, mainly workers and students but also disadvantaged groups such as women and the elderly.

10. As travel demand continues to increase in Dar es Salaam, meeting the additional demand with more daladala will only add to congestion and pollution, and will increase the number of accidents in the city. Every indication is that the number of daladala that the city can accommodate has reached capacity. Additionally and looking into the future, it is projected that by 2030, Dar es Salaam will have grown to 6.8 million inhabitants who will generate nine million trips per day. There is therefore a need for systematic planning for an alternative and reliable public transport system.

A.3 Dar es Salaam's vision for a BRT: DART

11. The Dar es Salaam City Council considers it very important that the level of mobility of the majority of residents is increased so that they can participate in a wide range of economic activities and has therefore opted to provide a bus-based mass transit system, DART, to increase public transport capacity and mobility.

12. The DART system envisions a high-quality, affordable public transportation system operating on specialized infrastructure with adequate incentives to offer affordable mobility, a sustainable urban environment, and a better quality of life for the urban population, especially the poor. DART has learnt the lessons from the implementation of similar systems in Bogota, Rouen, Quito, and Curitiba. In comparison to rail-based systems, a BRT system provides a high-quality public transport system with a significantly lower investment cost and time in addition to other benefits such easier operation and lower operational costs. BRT provides capacity for up to 40,000 passengers per hour per direction and relative high average speed. For example the Transmilenio in Bogota has an average speed of 26.6 kilometers per hour compared with São Paulo Metro that has an average speed of 30 kilometers per hour. Also, BRT provides more flexibility to attend to demand and is in most cases sustainable over time with no subsidy on operations.

13. According to a document prepared by the Dar es Salaam City Council, after consultations with stakeholders in 2003, the **DART vision** is "to have a modern public transport system at reasonable cost to the users and yet profitable to the operators using quality high capacity buses which meet international service standards, environmentally friendly, operating on exclusive lanes, at less traveling time." The document also states that the **DART mission is** "to provide quality, accessible and affordable mass transport system for the residents of Dar es Salaam which will subsequently enable poverty reduction, improve standard of living, lead to sustainable economic growth and act as a pioneer of private and public investment partnership in the transport sector in the City."

14. Once implemented, the system is expected to include a 130 kilometer network of bus ways, with over 200 route-kilometers of feeder roads. Infrastructure will comprise segregated and priority bus lanes, stations conveniently located with level access to the buses, terminals, pedestrian facilities, and parking.

15. The main arterial roads in the city will be gradually upgraded to accommodate DART. Six corridors have been identified for the short- and medium-term development and include Morogoro road (west), Kilwa road (south), Ali Hassan Mwinyi-Bagamoyo road (north), Nyerere road (southwest), Mandela-Sam Nujoma (outer ring road), and Kawawa road (inner ring road). GoT's plans are to develop DART in all six corridors at an estimated infrastructural cost of US$885 million (2006 estimates) by the year 2025. The first corridor identified will be implemented under phase 1, which is being financed under this project. Development of the DART system is expected to have a major impact on Dar es Salaam urban development.

4. Reduction of Greenhouse Gases Emissions

16. Reduction of greenhouse gases emissions has been one of the main underlying themes for promoting the BRT concept in cities. It was adopted by Dar es Salaam City Council and is supported by the Bank and ITDP. For Dar es Salaam, the contribution of greenhouse gases by existing public transport is significant largely because 98 percent of all public transport is provided by an estimated 7,000 daladalas, majority of which are over 10 years old and poorly maintained. It is expected that with the introduction of DART, greenhouse gas emissions will be reduced gradually. Secondly, GoT is contemplating restricting the importation of second-hand vehicles for use as public transport and legislating against daladalas with carrying capacity of

less than 50 passengers. These measures should not only improve the quality of public transport but also reduce greenhouse gas emissions.

B. Implementation of the DART

B.1 Phase 1—Pilot Corridor Project

17. Morogoro road was selected as a pilot corridor for system implementation in a participatory process with local authorities and other stakeholders. The corridor was chosen because of its densest traffic and passenger demand, which according to the 2007 JICA study cited above has the following characteristics: First, there is heavy demand. Over an 18-hour day, a total of 38,600 passenger vehicles traverse the corridor of which 41 percent are buses. This is 8 percent higher than that for Nyerere road and over 20 percent more traffic than the next busiest corridor. Additionally, during a 24-hour period, a total of 292,000 passenger trips were counted with 15 percent on large buses and 85 percent in daladalas. Second, there is consistent demand throughout the day. High passenger volumes over the extended operating period show that over a 14-hour period, from 6:00 am to 8:00 pm, the total hourly volume does not drop below 75 percent of maximum peak hour volume (which occurs between 7:00 am and 8:00 am). Based on both financial and economic considerations, both Kawawa road (terminating at Morocco), Msimbazi road (terminating in Kariakoo), and Ubungo to Kimara on Morogoro road have been included in the first phase of the project.

18. The Morogoro road corridor serves the high-density residential areas of Magomeni, Manzese, Tandale, Ubungo, and Kibango, among others and high employment densities in the CBD (Kariakoo, Kisutu, and Mchafukoge). Morogoro road also offers a continuous right of way (RoW) with four lanes per direction. RoW width varies from 40 to 50 meters, with the exception of the downtown area where there is only a 12-meter ROW.

B.2 Main Characteristics of the Proposed DART

19. DART main characteristics are as follows:

- segregated and exclusive bus lanes
- use of high-capacity buses with low greenhouse emissions
- high capacity—up to 40,000 passengers per hour per direction (comparable to most metro systems of the world)
- high-performance board and alight system
- enclosed stations with central platform and on-level boarding, which will speed up boarding time and bring safety and comfort to users (including physically challenged people)
- pre-board fare collection
- average speed over 20 kilometers per hour
- overtaking lanes at stations that allow express services, therefore improving service capacity, quality, and speed

Details of some of these characteristics are described below.

B.3 Location and Features

20. The pilot corridor will be 20.9 kilometers long and implementation will include the following: (i) **Morogoro Line** (Kimara-Ubungo-Kivukoni on Morogoro road), (ii) **Kariakoo Line** (Msimbazi road from Kariakoo to junction with Morogoro at the fire station); and (iii) **Kawawa Line** (Kawawa road from Morocco to Morogoro road junction).

21. It is proposed to construct new segregated bus lanes on all sections except the Ubungo-Kimara section—where the existing dual carriageway is considered to have sufficient capacity for both existing traffic and the BRT—and on the Morogoro road within the CBD—where there will *only* be space for the bus-ways. The design has provided for the segregated lanes to be located in the median of the corridor with overtaking lanes provided at the stations only. The over taking lanes will allow express services, therefore improving service capacity, quality, and speed.

22. The design has also provided for 29 trunk stations, 6 integration/feeder stations, 5 terminals and 2 bus depots. The stations will be located strategically to cater for potentially high passenger movements and take into account existing bus stands along the corridors. They will be located approximately 500–600 meters apart. Terminal stations have been located at endpoints of the DART corridors and at locations where passenger demand dictates and sufficient convenient and accessible land is available. They have been located at Kivukoni near the ferry, Kariakoo, Ubungo, Kimara, and Morocco. Bus depots will be located at Ubungo and Jangwani.

B.4 Pavement Design

23. The design has proposed a concrete pavement throughout the network for the BRT bus lanes and adopted minimum specifications provided in the Tanzania Pavement Design Manual. Concrete pavement of 220 millimeters depth was adopted, though it is relatively expensive compared with asphalt, because of durability and lower maintenance costs. Also, experience in other countries where BRT was introduced indicates that AC pavements exhibit extensive rutting and premature failure. For the few mixed traffic areas/lanes thick asphalt has been adopted. A design life of 20 years has been adopted for the following axle load configuration: front axle, 6.9 tons; middle axle, 8.3 tons; and rear axle, 8.2 tons for the articulated trunk route buses.

B.5 Geometric and Intersections Design

24. The geometric design of the phase 1 corridor focuses on the 20.9 kilometer routes described above, of which 3.7 kilometers are located along Kawawa Line. It aims to provide segregated bus lanes, NMT facilities, and improvements to existing lanes to enhance the BRT experience. Because the available ROW and intended service differ from section to section, geometric design and features differ. The design has identified 10 typical designs with homogenous characteristics as follows (table A4.1):

Table A4.1: 10 Typical Designs

Design type	Location/ road section	Proposed cross-section characteristics	Remarks
1	Kivukoni Front to Morogoro road	25.5m wide at stations and 21.5m off stations both with 3.0m wide bikeway and footpaths each provided on the seaside.	This stretch is on the seaside.
2	City Council to Bibi Titi road	11m wide, comprising two BRT lanes and 2m wide sidewalk. Entire street on level, corresponding to the raised bus corridor; bollards will be provided to separate the bus corridor from the walkways. Cyclists would be permitted to use the bus corridor, but should move onto the footpaths when buses need to overtake them.	Existing road section at CBD is very narrow, stretch 2 will be limited to buses and nonmotorized traffic only.
3	Bibi Titi road to United Nations junction	42.2m wide at stations and 31.1m off stations. Provides for 3.3m wide BRT lanes, dual carriageway for other road users, and 1.5m wide bicycle way and 2.5-4.0m footpaths on each side.	This stretch is on existing dual carriageway and has constrained space.
4	United Nations to Magomeni Mapipa	49.0m wide at stations and 38.5m off stations. Provides for 3.5m wide BRT lanes, dual carriageway for other road users, 2.5m wide bicycle way, and 4.0m footpaths.	Stretch 4 will require a large quantity of earth work as well as bridge and culvert expansion.
5	Magomeni Mapipa to Ubungo Terminal	49.0m wide at stations and 38.5m off stations. Provides for 3.5m wide BRT lanes, dual carriageway for other road users, 2.5m wide bicycle way, and 4.0m footpaths.	Similar to 4 but more comfortable cross-section provided with both wider motorized and non-motorized facilities.
6	Ubungo Terminal to Kibo	46.7m wide at stations and 45.5m off stations. Provides for 3. 5m wide BRT lanes, dual carriageway for other road users, 2.5m wide bicycle way, and 4.0m footpaths.	The existing service road will provide the space needed for the BRT lanes and also wide footpaths.
7	Kibo to Kimara Terminal	34.4m wide at stations and 22.9m off stations. Provides for 3.3m wide BRT lanes, single carriageway for other road users, 1.5m wide bicycle way, and 3.0m footpaths.	The demand and frequency of BRT buses in this stretch is lower, hence lanes will be shared by BRT and mixed traffic.
8	Msimbazi Street	25m wide at stations and 21.0m off stations. Provides for 3.5m wide BRT lanes, single carriageway for other road users, and 3.5m shared bicycle and footpaths.	The design cross-section will make use of the existing carriage way since no extension is possible.
9	Kawawa road (except by the valley)	40.6m wide at stations and 36.8m off stations. Provides for 3.5m wide BRT lanes, dual carriageway for other road users, 2.5m (1.5m at stations) wide bicycle ways, and 4.0m (2.5m at stations) footpaths.	On this stretch, NMT facilities are reduced at the stations to avoid major impact to roadside properties.
10	Kawawa road at the valley	40.6m wide at stations and 38.5m off stations. Provides for 3.5m wide BRT lanes, dual carriageway for other road users, 1.5m wide bicycle way, and 2.5m (2.4m off station) footpaths.	At the valley, a narrow cross-section is proposed to maximize use of the raised platform and avoid widening the existing box culvert.

25. The road design standards adopted take into consideration the design speed, existing land use along the corridor, traffic intersections, and future traffic forecasts. The following parameters were adopted:

- maximum use of existing right of way
- horizontal alignment that conforms to the specified geometric design parameters for urbanized area including adequate radii
- adequate lane widths for both the BRT and normal traffic and adequate NMT facilities and ramps
- security elements
- design speed limited to 40 kilometers per hour in the CBD area and 60 kilometers per hour in other urban area

26. Adequate **drainage facilities** will be provided and aligned and constructed such that they do not contribute to environmental degradation through erosion.

27. **Intersection control** was identified to be one of the major traffic problems currently in Dar es Salaam and the DART project has optimized the traffic flow performance in all intersections on proposed phase 1 corridors. The intersection design recognized that for a proper operation of the system, traffic engineering design must optimize the traffic flow along the corridor. To do this, classified traffic data was collected together with directional flow surveys at major intersections. Also, assessment was made of the condition of existing facilities and infrastructure. With this information it was possible to establish traffic movement patterns and availability of space for intersection improvement. It was also possible to identify alternative intersection proposals and simulate traffic for each alternative to determine the most suitable option. Initial analysis also established that most critical intersections have a similar layout. The analysis carried out therefore compared three different signal plans for the intersections.

28. **Plan 1** considered exclusive phases for right-turning traffic in all the intersection approaches. This signal plan requires the existence of exclusive lanes for accommodation of right-turning vehicles during phases in which their movement is not permitted. This is the current signal plan used at the major intersections. **Plan 2** corresponds to one phase for each approach (manual operation). It eliminates all kinds of conflicts between vehicles. Lane striping is required only for the purpose of organizing vehicles according to their movements (left, through, or right). This is the plan currently used by traffic police. Lastly, **Plan 3** requires only two phases, because right-turning traffic is prohibited at the intersection. For this plan, travel time might increase for right-turners; however, cycle time and overall delay are reduced by eliminating two phases. Its main advantages include the following: By changing the existing four-phase traffic signal to a two-phase signal plan and taking into consideration the current volumes, (i) the actual travel time is reduced by between 82 percent and 92 percent at peak time, (ii) the average delay is reduced by between 3.5 and 4 times, (iii) stop time at junctions is reduced to an average of 20 percent, and (iv) the average speed is increased from an average of 4.8 kilometers per hour to 25.5 kilometers per hour at peak time. The plan will however require construction/rehabilitation of extra turning lanes outside the corridor for the right-turners at some of the junctions.

29. Based on the above analysis, **Plan 3** was found to be the most cost effective and has been adopted for the major junctions at the Morogoro/Nelson Mandela-Sam Nujoma roads,

Nyerere/Msimbazi, and Kawawa/Bagamoyo roads. Similar analysis has been done for other junctions on both corridors and an optimal solution adopted.

30. **Station Design:** Bus stations and feeder stations have been strategically placed at points where potentially high passenger movements would take place. Twenty-nine locations for the trunk route and six integration stations for feeder buses have been identified. These are further classified under two categories according to their functionality and utility. First, there are conventional bus stations, which are used by trunk services and allow for passenger boarding and alighting. They take into account the existing conditions and willingness of the average person to walk 500 meters to board public transportation; hence stations will be located on the average 500 meters apart. Second, there are feeder transfer stations, which allow for the integration with one or more feeder routes and terminal stations; they will be open but the fare payment will be done inside the bus.

31. Stations will be built by modules, each module with a capacity for 65 buses per hour per direction. The platform will be 36 meters long, enough to hold two stopping articulated buses, 94 centimeters high, and 5 meters wide. Following this specification, three typical station types were developed for DART:

- one module with one or two side entrances
- two modules with entrances on both sides
- two modules with entrance at the middle and sides

Stations will be accessed by ramps and entrance will be restricted. Typically, the architectural design provides for sufficient space to accommodate peak demand and appropriate ventilation.

32. **Terminals and depots:** DART terminals are conceived as integration points between trunk and feeder services. Terminals shall be large and comfortable to provide opportunities for inclusion of other services. The depots are designed to provide cleaning and maintenance facilities to the bus fleet. They will be modern and efficiently planned as service production areas where buses are inspected, cleaned, and maintained. They will also serve as overnight and rest period parking areas.

33. **Feeder routes:** The system will have fifteen feeder routes. Feeder services will be offered at Ubungo Terminal, Morocco Terminal, and at Shekilango, Urafiki Mahakama, Magomeni, Mapipa, and the fire stations along Morogoro road and at Usalama and Kanisani stations along Kawawa road. Special buses (described below) will serve on the feeder routes. No specific infrastructure improvements are proposed in this project for the feeder roads.

C. Operations

C.1 Buses

34. **Capacity:** The general concept of BRT is centered on a trunk-feeder system. The proposed system designed for Dar es Salaam is based on a trunk-feeder systems in Curitiba (Brazil), Quito (Ecuador), and Bogotá (Colombia)—the most successful BRT in the world so far. The concept is based on the use of high-capacity buses on segregated lanes, and feeder buses—which can be normal buses or microbuses—integrated to the system on special terminals and transfer points. Based on this concept, as well as financial modeling, projected demand, and pavement design, a 140 passenger articulated bus with a 94 centimeter–high platform has been adopted for the trunk

routes and a 60 passenger 10 meter bus for the feeder routes. The trunk route buses will provide both local and express services.

35. The trunk buses will seat 44 passengers and have 16 square meters area for standing passengers, corresponding to 6.4 passengers per square meter and space for goods and items such as wheelchairs. The feeder bus will seat 24 passengers and have 4.4 square meters area for standing passengers, similar to trunk bus service. The buses are not air conditioned but will be well ventilated. These specifications together with other vehicle specifications will be included in the bid document for Bus Operator.

36. **Fleets:** The operating design is based on morning peak hour demand, as it represents the most critical public transportation scenario for the day. Three main factors that determine the bus fleets are (i) assigned dispatch frequency; (ii) complete cycle travel time; and (iii) vehicle's nominal passenger load capacity at peak hour, taken as 100 percent of vehicle's maximum capacity of 140 passengers and feeder vehicles maximum capacity of 60 passengers. The design anticipates 18 operating hours from 5 am to 11 pm.

37. Based on the above stated factors, it has been established that DART will operate seven trunk lines service, using (148) 18.5 meter articulated buses with capacity for 140 passengers, and 15 feeder line services, using (100) 10 meter buses with capacity for 60 passengers. The design has projected a total of 406,000 passenger trips per day and 122 million trips annually.

38. Since the objective of DART is to transform Dar es Salaam's informal system of minibuses into a customer-oriented public transportation service, it is expected that due to superior services offered by DART, 45 of the daladala routes that utilize Morogoro and Kawawa north roads will be edged out. The DART agency and the licensing authority will identify alternative routes for the edged out daladala. However, south-bound daladala on the Kawawa North route away from the BRT corridors will continue to operate.

C.2 Operating Agencies

39. The system has five actors. DART, a public agency, will regulate and manage the system and the service. Two private sector bus companies and one private sector fare collector company will provide the system services. Finally, a fund manager and an auditor. All the private actors will be competitively selected. Detailed tasks are as follows:

1. **DART agency**—a government agency responsible for overall management of the system, policy setting, regulation, planning and controlling of operations, and marketing
2. **DART Fare Collector**—one private sector company responsible for daily fare collection, maintenance of the physical infrastructure at the bus stations, acquisition and maintenance of equipment (including communication equipment) used at the station, and cleanliness and security at stations. In addition, preparing programs and schedules for the operations of the buses and management of the control centre.
3. **DART Bus Operator(s)**—two private sector companies responsible for acquisition, operation, and maintenance of buses along specified trunk, and feeder routes
4. **DART Fund Manager**—one institution responsible for financial management and reporting, liquidity control, and payments to the system actors (bus operators, fare collector, DART agency, and the fund manager) and investment of contingency fund.

5. **DART Auditor**—one private auditor to independently audit the system regularly to ensure transparency of the system and to check on handling of revenues by the fare collector and itself.

C.3 Ownership

40. The DART agency is the ultimate owner of the BRT system on behalf of the GOT. The bus operator is expected to be a foreign firm with experience but will be encouraged to associate with local firms that could be entities formed by the current daladala or other bus operators in Tanzania. The fare collector should preferably be a joint venture between a local firm and an international technology or fare collection system provider. Finally, the fund manager should be a locally based financial institution that handles finances and investments, such as a commercial bank.

C.4 Fare Structure

41. The business plan was centered on an affordable flat fare structure for DART users. The baseline fare adopted in the business model is as follows:

Trunk/Feeder	500
Trunk Only	400
Feeder Only	400

Customers will enter stations and feeder buses with smart cards. There will be an option to pay cash both on the feeder buses and in the stations. The DART agency has set baseline fares at T Sh 400 for trunk feeder service. Transferring customers (trunk bus to a feeder or vice versa) will pay an additional TSh. 100 if using a smart card. It is proposed that once the system becomes operational, smart cards (similar to mobile phone prepaid cards) are made readily available at kiosks along the route and entrance to stations. The current (April 2008) minimum fare paid for a daladala trip in Dar es Salaam is TSh 250, but most destinations require at least two daladala fares.

C.5 Projected System Revenue and Expenditure

42. Based on the proposed fares and demand focus, projected total fare income is estimated to be US$ 39.9 million in the project's first year of operation, rising to US$ 44.5 million year five. The respective expenditures are US$ 38.4 million and US$ 41.0 million.

C.6 Proposed Investments

43. **Capital Investments**: The DART project is a "green field" investment for which phase 1 investment are estimated to be US$ 158.2 million comprising the following:

Government and IDA contribution to infrastructure development:

Civil works:	US$ 103.5 million
Supervision	US$ 3.5 million
TA, training, office equipment and operating costs:	US$ 3.0 million

Resettlement costs	US$ 10.0 million
Private sector contribution to operations:	
Buses:	US$ 35.8 million
Fare collection system:	US$ 2.4 million

C.7 Economic and Commercial Viability

44. The financial and economic viability of the DART is discussed in more detail in Annex 9. The analysis for a project life of 25 years discounted at the 12 percent interest rate results in robust **economic indicators** as presented in table A4.2.

Table A4.2: Economic Indicators

Measure	Value (US$ m)
Benefit present value	165.02
Cost present value	142.51
Net present value	22.51
Benefit / cost ratio	1.16
EIRR (%)	14.52

45. The **financial analysis** of the operations of DART also demonstrates that with a public fare of TSh 400 for each ride on either trunk or feeder and TSh 100 per transfer, the proposed investments are viable in both conservative and optimistic scenarios and the system is viable and attractive to private investors. The table below presents a conservative scenario with markups of 25 and 24 percent (for bus operators and fare collector respectively), fraud of 3 percent, and a special fare category (50 per cent of adult fare) of 15 percent. The scenario is for operations on all three lines—Morogoro, Kariakoo, and Kawawa—with operations scheduled to commence in 2010.

Table A4.3: Estimated Revenue Collection and Allocation for Phase 1 of the DART (Conservative Scenario)

DART system revenue allocation (USD)	2010	2011	2012	2013	2014
Conservative					
Tariff revenue (USD)	39,864,132	41,237,417	42,658,011	43,548,333	44,469,960
Government subsidy (USD)	0				
Revenue allocated to systems (USD)	38,375,286	38,432,633	41,291,931	41,127,882	40,971,234
Operator 1	14,016,419	14,162,601	14,249,887	14,194,886	14,126,969
Operator 2	19,540,840	19,725,868	19,852,677	19,699,282	19,553,396
Fare collection company	4,796,089	4,522,225	4,529,420	4,518,708	4,518,869
Dart executive agency	-	-	2,638,008	2,693,067	2,750,061
Fund manager	21,939	21,939	21,939	21,939	21,939
Contingency fund (USD)	1,488,845	2,804,784	1,366,080	2,420,451	3,498,726

46. At the stated fare, the system is profitable enough to attract private investors to pay for the buses, with a positive NPV and good EIRR, but only if necessary conditions are put in place to attract private investors. These are as follows:

- Services offered by DART are of high standard and affordable to discourage competing daladala operators from the BRT route, and GoT identifies other routes for those daladala that may be displaced.
- Fares are periodically adjusted for inflation rate, to cover for increased operating costs.
- VAT, customs, and excise taxes are waived on the importation of buses in accordance with TIC provisions.
- The bus type is kept as specified in business model.
- Lending rates below commercial interest rates are available from export credit agencies for the bus procurement.

The investment may require a partial government guarantee on the loan.

C.8 Systems Scheduling and Control

47. There are two parts to the system control. The first is scheduling the services—every week, every day, and every hour for each service for the operator. The second is controlling the system to ensure quality of the service, including checking whether the buses are running on time and know if the drivers are going too slow or too fast. Control also involves addressing contingencies if there are problems in operations (such as a bus breaking down or strikes) and the ability to speak directly with drivers to let them know about all these conditions. The fare collector will be responsible for system cohesion and technical integration using appropriate software, Global Positioning System (GPS) equipment, and communication equipment able to transmit voice and data located in the stations and in buses. The fare collector will also be responsible for the installation and operation of the equipment for smooth operation of the system.

48. While the DART agency is responsible for approving and instructing the Bus Operators, the Fare Collector will be responsible for preparing programs and schedules for the bus service and creating monthly, weekly, and daily schedules for the bus operators. It will also produce longer-term schedules in order to help the bus operators plan their operations and schedule maintenance for the buses.

49. The main form of control will be GPS tracking and relaying of information to the control center via GPRS data packets. The buses will be equipped with GPS transponders that are procured by the fare collector. These transponders will record arrival times and location of the bus, and periodically during the day this information will be sent to the control center for verification.

50. The control center is responsible for comparing scheduled versus actual performance, both the time scheduled and the kilometers traveled. That information will be shared with the financial planning team. The onboard computer and software is provided by the fare collector as a bundled unit to the bus operators and the fare collector is responsible for ensuring / guaranteeing data transmission. The Control Center falls under the DART Agency supported by the Fare Collector.

E. Other Support to DART and Resettlement

51. The design of this component of the project takes into account the need to build capacity within DART Agency. The DART agency has recruited most of its key staff by the time the project takes off. However, these professionals will need extensive training. The project also provides funding for agency operations, including equipment and furniture, to supplement GoT grant. Additionally, the design envisages the need to hire technical assistance to support the agency during preparations for implementation, managing the implementation process, commissioning of operations and during the early years of system operations. The project has allocated a total of US$ 3 million for this.

52. Resettlement of project affected people is currently on-going following Bank voluntary resettlement procedures. GoT has budgeted TSh 10 billion for that purpose in the current financial year.

Component B: the trunk road component

A. Background

53. The Korogwe-Mkumbara-Same road forms part of the North East Corridor (T2), which is a major link between the east coast and the popular tourist destinations in the north of Tanzania. It is also the main road link between Dar es Salaam and Nairobi, the major trading centers of Tanzania and Kenya respectively, and the road also serves as an important link between important centers of commerce and industry located in Tanga, Arusha, Moshi, and Dar es Salaam.

54. The road is approximately 172 kilometers long; the first 100 kilometers is in Korogwe district, Tanga region, and the remaining 72 kilometers is located in same district, Kilimanjaro

region. Tanga and Kilimanjaro regions have a combined area of approximately 40,500 square kilometers (4.4 percent of Tanzania area) and a population of three million (8.8 percent) of the total population based on 2002 census. Key activities in this area include agriculture, mining, tourism, and ranching.

55. Korogwe – Mkumbara road section (76 kilometers) was last rehabilitated in 1991–94. The Mkumara – Same section (96 kilometers) received its last periodic maintenance in 1989-91. The sections have mixed traffic and annual average daily traffic varies from 880 to 1,400 vehicles (2007 traffic census). The road is currently in a fair to poor condition; it is narrow with carriageway and shoulder width below specifications for trunk roads.

56. Both sections have a bituminous double-surface-dressed carriageway with varying degrees of deterioration.

B. Road Condition

57. The current condition varies from fair to poor. The carriageway is 6 meters wide with 1 meter shoulders. The pavement contains extensive surface cracking, stripping of the aggregates from the surface dressing, rutting, and occasional base failures and potholes. The Mkumbara-Same section was constructed in early 1960 and has received regular routine maintenance. No major rehabilitation and pavement strengthening has been provided since its construction. The condition of the surface has deteriorated due to increased traffic and ageing. The surface condition varies but includes problems of stripping of surface aggregates and localized potholes and rutting.

C. Proposed Intervention

58. Proposed interventions include the following:

- The existing road has a 6 meter wide carriageway with 1 meter shoulders, which is less than the minimum standard for trunk roads. It is therefore proposed to widen the road over its entire length by 1.5 meters to provide for a 6.5 meter wide carriageway with 1.5 meter wide shoulders.
- Improve drainage by replacing or extending the existing structures, depending on their structural condition and hydraulic capacity.
- Strengthen pavement and surfacing of both sections with a 50 millimeter layer of asphalt concrete.
- Improve the existing geometric alignment to increase radius of some bends and in some areas raise the road to protect it against flooding.
- Improve safety by eliminating four of the six at-grade crossings on the Tanga Railway line.
- Replace the Mombo bridge deck.
- Widen an existing railway bridge over the Tanga railway line.

59. A summary of the economic appraisal for the road is presented in Annex 9. The evaluation was carried out at a 12 percent discount rate over the analysis period (2005–27) and yielded a robust EIRR of 16 percent and NPV of US$ 18.3 million for the proposed 50 millimeter AC surfacing over the rehabilitated bases.

60. Implementation of the works component will comprise two separate construction packages with the possibility of a qualified firm executing the two simultaneously under a slice-and-package arrangement. The contract duration is 30 months with an estimated works cost of US$ 59.3 million.

D Other Support to TANROADS

61. This sub-component supports TANROADS capacity building process and compensates it for the cost incurred for being the implementing entity of the project. The sub-component finances TA, training, operating costs and provision of equipment for TANROADS for a sum of US$ 2.5 million. TANROADS plans to recruit young engineering professionals and to enhance their capacity with training and through locally recruited technical assistance staff.

Component C: the Zanzibar airport component

A. Background

62. The Zanzibar international airport provides both an essential domestic link to the mainland and also is the main point of arrival for the majority of tourists. The airport was first constructed in the 1930s with a 1525-meter-long by 37-meter-wide runway aligned in a north-south direction (18/36), a terminal building with an integrated control tower (now used for administration), a small apron in front of the terminal, and link taxiways. Ten years later the airport was expanded with a new terminal area to the south of the old terminal, a new control tower/administrative block, and a fire station. The runway was extended to 2000 meters with a new apron and taxiway links. These included a new parallel taxiway (C) to the threshold 36 and 90^0 taxiway (B) from the runway to the new apron.

63. In 1990 the runway was widened to 45 meters, extended by 350 meters at threshold 36, and by 112 meters at threshold 18, giving a total length of 2,462 meters. The apron was extended to the south by 65 meters to give an overall size of 205 meters by 125 meters.

64. A new AGL system was installed for the runway and its two approaches, apron, and taxiway B. At both thresholds there is a simple approach lighting system extending to 420 meters from the runway thresholds with a single light bar at 300 meters from the runway end.

65. The initial contract to upgrade the deteriorating runway and taxiways was awarded in 2004 under the IRP2 project but had to be terminated due to the underperformance of the contractor. An attempt to recruit a replacement from the list of the original bidders was unsuccessful. A second attempt, this time through inviting bids from pre-qualified contractors, was also unsuccessful due to excessively high bid prices submitted. In the meantime, the MoCT continues to maintain the runway in an operational state through frequent and expensive patching.

B. Traffic growth

66. Over the past 10 years, sustained economic growth and an improved airport in Tanzania has resulted in increased opportunities for business and tourism. Zanzibar has seen increased

passenger traffic and aircraft movements as demonstrated in table A4.4. Between 2001 and 2007, the growth of passenger traffic has been dramatic, with the achievement of an average annual rate of growth of over 20 percent. The current plans are therefore aimed at improving the existing runway to increase its bearing capacity and quality of riding surface and to complete work on a 560m extension started during the failed contract. The extension will increase the runway length to approximately 3,000 meters to enable it accommodate larger planes, such as the Boeing 767/747, that are often used by charter flights to bring in tourists.

Table A4.4: International and Domestic Aircraft and Passenger Movements

	International			Domestic		
Year	Aircraft movements	Passenger	Passengers/ aircraft	Aircraft movements	Passengers	Passengers/ aircraft
2001	2,551	87,540	34	14,273	90,613	6
2002	3,118	129,213	41	20,519	125,272	6
2003	3,103	110,610	36	21,307	149,227	7
2004	3,661	151,037	41	24,816	207,672	8
2005	3,147	183,282	58	24,633	231,528	9
2006	3,526	197,564	56	26,583	279,804	11
2007	4,104	254,041	62	29,445	343,448	12

C. Airport Location and Characteristics

67. Zanzibar airport lies approximately 7 kilometers to the south of the "Stone Town" of Zanzibar. The general topography of the airport area is flat with the southern approach over the sea and the northern over the town of Zanzibar.

68. The airport has the following facilities:

- single runway of flexible construction, orientation 18/36, 2,462 meters long by 45 meters wide
- three taxiways link with a partial parallel taxiway to threshold 36
- terminal building and annex
- control tower building and offices
- aircraft parking apron
- access and car parking
- cargo facility
- rescue and fire fighting facilities
- aircraft hangar
- administration building (old terminal building)
- fuel facility

69. The surface and basic structure of the runway are severely deteriorated. The bitumen binder of the surface paving has suffered oxidation such that potholes are frequent, especially in the key central area. The runway base also shows signs of severe longitudinal cracking in the central section. The existing taxiways are inadequate both in structure and geometry and provide a severe limit to expansion of flight operations.

C. Proposed Interventions

70. Initially, the MoCT Zanzibar had proposed to carry out an extensive rehabilitation of the airport. However, and as a result of unsuccessful attempts to rehabilitate the live airport, and following recommendations of a recently completed Zanzibar Transport Master plan Study, the MoCT has opted for a two pronged approach involving medium term and long term solutions. The medium term solution described below is expected to provide a reliable runway over a 5 year design period. For the long term solution, it is proposed to construct a second runway with the existing runway serving as a future taxiway and parking and alternate runway if required. The current project provides for the implementation of the medium term solution and appraisal and design of the second runway under the long term solution. In the meantime, and considering that implementation of medium term works is unlikely to commence before first quarter of 2009, MoCT has opted to contract the repairs and maintenance of the runway to a local contractor till the works are awarded.

71. The current project is intended to improve the riding quality, increase the bearing capacity and extend the life of the current runway by about five years. Amongst proposed interventions are the following:

- overlay over the exiting runway and its extension
- limited improvement of the drainage and runoff characteristics of the runway
- improvement of the air control systems including rehabilitation of existing AGL system
- maintenance of the runway during construction

72. The cost of works component is estimated as US$ 16.1 million. Supervision services will cost US$ 0.3 million. An amount of US$ 0.6 million has been set aside for the design of the second runway.

73. The estimated construction period is 15 months.

D. Economic Justification

74. The results of economic analysis are presented in Annex 9 and the main indicators are shown in Table A4.5 below. Rehabilitation of the runaway is viable when both Airport income and airport passenger taxes (currently US$ 30 for nonresidents and US$ 4.8 for residents) are factored in. When other value additions are included in the analysis, the proposed investment becomes all the more justified from both a financial and economic standpoint.

Table A4.5: Economic Justification

	Airport income only	Airport income + airport passenger taxes	Airport income + airport passenger taxes + tourism value addition
IRR	<1%	39%	650%
NPV (US$m)	(−)11.21	11.85	396.17
B/C	0.22	1.83	28.73

E. Other Support MoCT Zanzibar

75. The design of this component of the project takes into account the need to continue to build capacity and to support increased operational costs within the MoCT, Zanzibar and provides US$ 0.6 million to cater for these costs.

Annex 5: Project Costs

TANZANIA: Second Central Transport Corridor Project

Project cost by component and/or activity	Total project cost US$ million	GoT US$ million	Private sector US$ million	IDA US$ million	Financing Gap US$ million
A. DSM Urban Transport Component (DART)					
A.1 Civil works	103.5	—	—	91.7	11.8
A. 2 Supervision	3.5	—	—	3.5	—
A. 3 Technical Assistance to DART	1.0	—	—	1.0	—
A. 4 Training for DART	0.5	—	—	0.5	—
A. 5 Furniture + Equipment for DART	0.5	—	—	0.5	—
A. 6 Operating cost of DART	1.0	—	—	1.0	—
A. 7 Resettlement action	10.0	10.0	—	—	—
A. 8 Bus procurement	35.8	—	35.8	—	—
A.9 Fare collection system	2.4	—	2.4	—	—
Total Component A	**158.2**	**10.0**	**38.2**	**98.2**	**11.8**
B. Trunk Road Component					
B.1 Civil works Korogwe-Mkumbara	29.0	—	—	25.6	3.4
B.2 Civil works Mkumbara-Same	30.3	—	—	26.8	3.5
B.3 Supervision of Korogwe - Same	2.5	—	—	2.5	—
B.4 Technical Assistance to TANROADS	0.5	—	—	0.5	
B.5 Training for TANROADS	0.5	—	—	0.5	—
B.6 Equipment for TANROADS	1.0	—	—	1.0	—
B.7 Operating costs of TANROADS	0.5	—	—	0.5	—
Total Component B	**64.3**	—	—	**57.4**	**6.9**
C. Zanzibar Airport Component					
C.1 Runway Repair/strengthening	16.1	—	—	14.2	1.9
C.2 Supervision	0.3	—	—	0.3	—
C.3 Design of New runway	0.6	—	—	0.6	—
C.4 Technical Assistance to MoCT Zanzibar	0.2	—	—	0.2	—
C.5 Training for MoCT Zanzibar	0.2	—	—	0.2	—
C.6 Operating cost of MoCT Zanzibar	0.2	—	—	0.2	—
Total Component C	**17.6**	—	—	**15.7**	**1.9**
Total baseline cost	**240.1**	**10.0**	**38.2**	**171.3**	**20.5**
Total Contingencies	**24.3**	**0.7**	**2.7**	**18.7**	**2.2**
Price Contingencies (7%)	16.2	0.0	2.7	12.1	1.4
Physical Contingencies (4%)	8.1	0.7	-	6.6	0.8
Total Project Costs	**264.4**	**10.7**	**40.9**	**190.0**	**22.8**

Annex 6: Implementation Arrangements

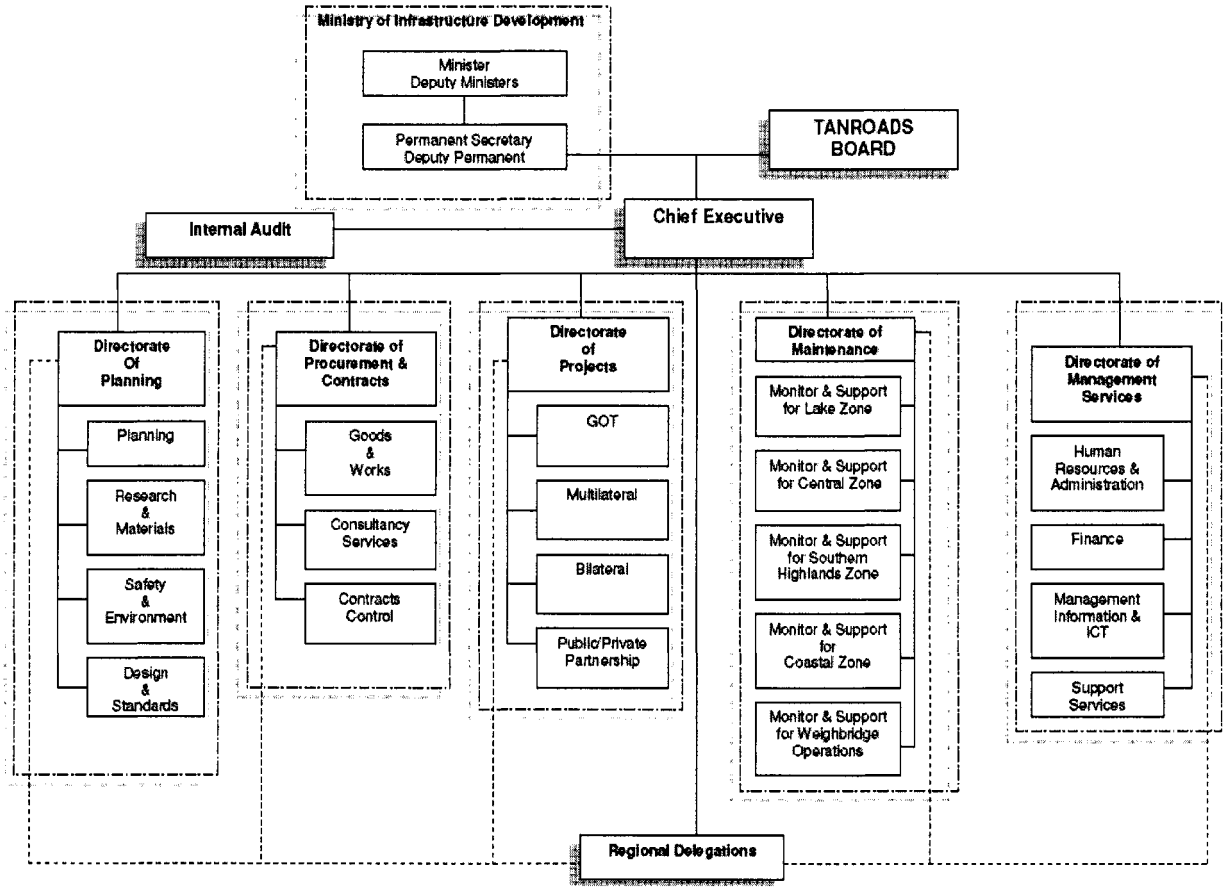
TANZANIA: Second Central Transport Corridor Project

A. Responsibility for Overall Project Implementation

1. Following the successful implementation of the CTCP, TANROADS will retain the overall responsibility for the implementation of the CTCP2 project. This will include (i) management of the designated account, (ii) financial management and reporting of the overall project, (iii) ensuring the execution of the audit of the project, (iv) preparation of quarterly financial and progress reports, and (v) oversight of the procurement and contract management activities of the other executing agencies (DART and MoCT Zanzibar).

2. In addition to the overall responsibility for project implementation, TANROADS will also directly be responsible for the implementation of the components for the rehabilitation/upgrading of the Korogwe-Mkumbara-Same road and for the DART infrastructure. All these activities will be executed fully mainstreamed within its overall organizational structure as shown in figure A6.1 below.

Figure A6.1: Organization Structure for TANROADS' Headquarters



B. Implementation of Component A: the Dar es Salaam urban transport component

3. The implementation responsibility for this component will be shared between the DART agency and TANROADS. The DART agency will be responsible for the competitive procurement of the contracts for bus operators, fare collector, fund manager, and system auditor, as well as for its own capacity building (through the procurement of technical assistance, staff training, and procurement of equipment). TANROADS will implement the contracts for the construction of the phase 1 infrastructure. The main reasons for that are (i) the corridor essentially lies on the Morogoro trunk road for which TANROADS is responsible,[15] and (ii) DART does not have and is not planned to have the capacity for the procurement and management of large civil works contracts. TANROADS therefore will (i) review all DART designs to ensure that they conform to sound international engineering principles and local specifications; (ii) review bidding documents to ensure they conform with World Bank guidelines; (iii) guide the bidding process following Bank procurement guidelines including internal processing and bid evaluation; (iv) award and sign contracts with successful firms; and (v) supervise the construction phase. In execution of these activities, TANROADS will keep DART agency fully involved and informed as will be described in the Project Implementation Plan.

4. Maintenance of infrastructure (particularly the bus-ways) to an acceptable level of service is critical to the success of bus operations and the operator will need to be assured that this is the case. Performance-based maintenance contracts for the bus-ways and traffic signals are proposed to be entered into. Funding for the bus-way maintenance contract should be provided by the Road Fund since bus operations will contribute substantial to the fuel levy as demonstrated in table A6.1. The estimated annual collection is about US$1.3 million equivalent.

Table A6.1: Estimate of Contribution by DART to Road Fund

Item	Estimated total (km/year)	Consumption (km/liter)	Annual consumption (liters)	Levy (TSh)	Total (TSh million)
Trunk buses	13,915,590	2.6	5,352,150	200	1,070
Feeder buses	6,830,918	2.9	2,355,489	200	471
Total					**1,542**

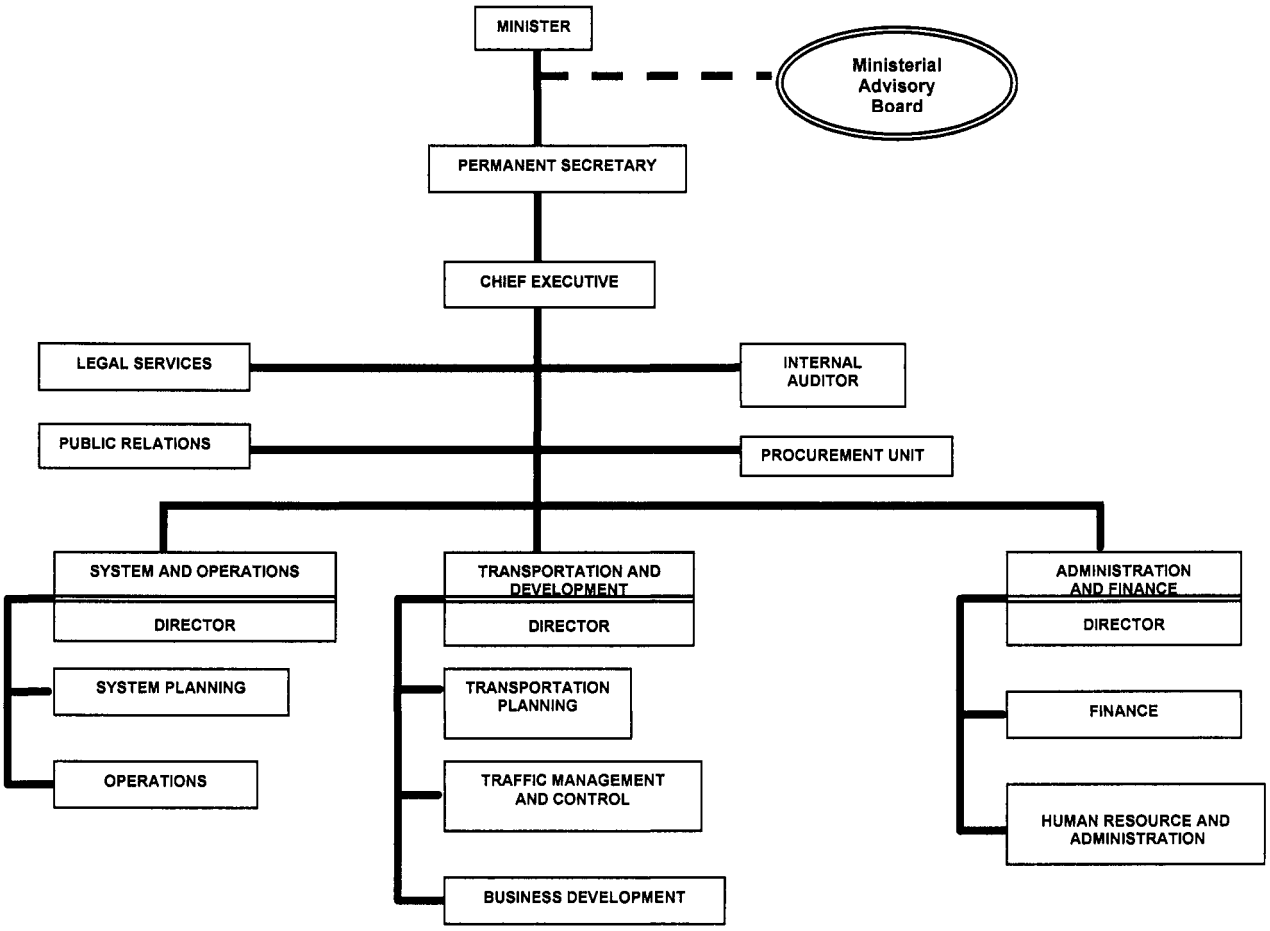
Funds for the maintenance of station infrastructure will come from system revenue and the responsibility for station maintenance will be with the fare collector.

5. The DART agency was established by Order of May 25, 2007 published in Government Notice No. 120. The Order is based on the Executive Agency Act (Cap.245). DART is placed under PMO-RALG. According to clause 3.1 of the Order the aim of DART is to "effectively plan, coordinate and facilitate the provision of urban transport facilities and services and ensuring improved traffic management in Dar es Salaam." Figure A6.2 below shows the

[15] Some of the phase facilities are actually on land and roads under the Dar es Salaam City Council and municipalities, and special agreements might be necessary between TANROADS and them for the implementation of such facilities—to be clarified in the Project Implementation Plan.

proposed organizational chart for DART. Currently the Chief Executive and the Advisory Board are in place and the staffs are being recruited.

Organogram of the DART agency



6. The DART system envisages five key players who will have distinct responsibilities: (i) the DART agency itself, which will be the system regulator and oversee and which will procure the services of the other three key actors; (ii) two bus operators, who will operate their fleet according to the operating agreements signed with the DART agency and upon instructions of the DART agency; (iii) the fare collector, who will be responsible for setting up ticketing facilities (based on smart cards), collecting fares, and securely transferring revenues to the fund manager (see below), as well as managing and maintaining the system stations and terminals; and preparing bus service periodic programs and services; (iv) a fund manager, who will manage the system funds on behalf of DART; and (v) a system auditor. Specific responsibilities are as follows:

The Responsibilities of the DART Agency

- provide schedules and programs for the bus services operations

- ensure the financial viability and affordability of the system
- maintain DART's image and quality of the service through constant contact with customers
- plan for and address system growth, changes in service, and emergencies

The Responsibilities of the Bus Operators

- procure the buses as per specifications
- hire and train the drivers
- operate the buses along given routes
- maintain the buses at the required standard
- adhere to the bus schedules

The Responsibilities of the Fare Collector

- buy, install, and maintain the fare collection and communication equipment
- hire and train cashiers and customer service agents
- operate the fare collection system smoothly and with transparency
- maintain the stations and the terminals, specifically cleanliness
- ensure security of the system for both the passengers and the revenue
- monitor the bus operations, including timeliness and reliability according to a schedule and program prepared by them and authorized by the DART Agency;
- adhere to the DART system quality goals for good customer service and experience

The Responsibilities of the Fund Manager

- make payments to the system actors upon advice and authorization from the DART agency
- prepare regular financial reports on the system
- facilitate system audits
- invest contingency funds as instructed by the Dart Agency

The Responsibility of the System Auditor

- prepare regular system audits
- ensure proper and transparent conduct of business.

7. The DART agency is expected to build capacity to enable it to perform its role effectively. The project has provided a technical assistance component that will enable the agency hire experts to support it in building internal capacity and provide expert system operational advice, in the fields of project management; procurement of bus, fare collector, and fund manager contracts; bus operations; traffic management; legal and regulatory issues; ICT issues; HR issues; PR issues; and so forth. It is planned that DART will procure the services of a long-term Chief Technical Advisor with funding from CTCP prior to effectiveness of component A, while other, short-term specialists will be procured and financed under CTCP2 as needed.

C. Implementation of Component B: the trunk road component

8. TANROADS will be responsible for the implementation of this component of the project. It will finalize the procurement of works and services and will manage the contracts procured thereafter. While planning for the construction phase, TANROADS has taken into account the large scope of the project, which involves the rehabilitation of 172 kilometers of a busy trunk road. Proposed interventions and the logical location of Mkumbara town at about midpoint determined that the contract consist of two packages: Korogwe-Mkumbara and Mkumbara-Same. Additionally, a slice-and-package procurement method for the works component has been adopted to enable pre-qualified firms bid for one or both packages. One supervising consultant has been retained, who will be expected to mobilize two teams under a Senior Resident Engineer to supervise the two construction contracts.

D. Implementation of Component C: the Zanzibar Airport component

9. This component will be implemented by MoCT Zanzibar with support of TANROADS. With finance from CTCP a transport policy and master plan for Zanzibar has been drawn up. This is currently being processed for approval by cabinet. The master plan proposes sweeping sector reforms including the focusing of MoCT on policy setting, strategic planning, sector oversight, and monitoring. The implementation of these reforms will take time to be put in place. Meanwhile it is proposed that MoCT will procure the services of a Project Manager responsible for the implementation of the airport runway rehabilitation/extension contract with TOR and CV satisfactory to IDA.

10. The mode of collaboration between TANROADS and MoCT Zanzibar is described in the Project Implementation Plan. TANROADS will provide financial management services, and will assist with procurement and technical support. MoCT Zanzibar will appoint a Project Manager, holding such qualifications and experience acceptable to the World Bank, who will be the employers' representative in the implementation of the component. The Project Manager will directly report to the Permanent Secretary of MoCT and will be responsible for the overall implementation of the project. The Project Manager will (i) oversee all the activities of the contractor and supervising consultant and provide appropriate guidance and direction to them as required, (ii) deal with all project correspondences appropriately, (iii) certify payments prior to approval for payment by the Procurement Specialist, (iv) deal with claims emanating from the construction contracts, and (v) closely monitor safety and operations at site. MoCT will provide the Project Manager with such facilities as will enable him or her to perform the assignment effectively during the duration of the project. These include, but are not limited to, an office, transport, IT facilities and connection, and support staff. The appointment and deployment of the Project Manager **is a condition of disbursement** of component C of the project.

11. The original contract for the rehabilitation of the runway was financed under the IRP2 project. Due to poor performance of the contractor, this contract was terminated with only 15 percent of the works executed at the end of the contract period. Attempts to procure a works contract have so far been unsuccessful. The current component aims at completing the outstanding works and will comprise one works and one supervision contract. The estimated cost for the works component is US$ 16.1 million with a 15 month construction period. Because an agreement had been reached on the cost of supervision, it is proposed to retain the same Consulting Engineer, Sir Frederick Snows of the United Kingdom, and transfer the contract, with

appropriate revision to cater for inflation, to the new project. For the works component, designs are expected to be ready by the last quarter of 2008 with award projected by credit effectiveness. Next steps in the procurement process have been agreed between IDA and MoCT.

Annex 7: Financial Management and Disbursement Arrangements

TANZANIA: Second Central Transport Corridor Project

A. Executive Summary of the FM Assessment

1. During the appraisal mission, financial management assessment was carried out by TANROADS. More specifically assessment was carried at the Finance and Accounts Unit, which is under the Directorate of Management Services responsible for agency financial affairs including the current IDA project. The assessment is in line with the "World Bank Financial Management Practices Manual" dated November 2005. This includes identification of financial risks that may affect project implementation and risks mitigation measures.

2. The assessment also draws on the March 2005 and March 2006 Country Public Expenditure Financial Assessment Reviews (PEFARs). The major findings of the financial management assessment carried out during the above review missions revealed that at country level, in the past six years the government continues to strengthen its public financial management systems, which are now generally assessed as satisfactory. The timelines and quality of financial reporting and audits has improved. GoT continues to strengthen the capacity of accountants and auditors at the MDAs and LGAs. The country financial management risk is ***modest.*** At the implementing entities level, the overall assessment indicated that there are adequate financial management systems that satisfy the World Bank's minimum requirements under OP/BP10.02. Entity financial management risk is ***modest.***

3. This is a follow-on project to the (first) Central Transport Corridor Project and TANROADS, which is the same agency implementing the parent project, will be responsible for overall financial management and coordination of the project. Project accounts are an integral part of TANROADS accounts and the Chief Executive Officer of TANROADS is the "Accounting Officer" for the project, assuming the overall responsibility for accounting for the project funds. TANROADS' accounting system is based on a computerized, double-entry, accrual-based software system made by the Epicor company. TANROADS is adequately staffed with highly qualified accountants and internal auditors able to manage and report on the project financial affairs and who are well experienced with World Bank requirements. TANROADS has maintained a satisfactory rating on financial management throughout the implementation period.

4. Disbursements from IDA Credit will be made on quarterly IFR-based disbursements. The external audit will be carried out annually by the National Audit Office (NAO). The auditor will be required to express an opinion on the audited project financial statements, in compliance with international standards on auditing. There are no project audits outstanding for this sector.

B. Overview of Financial Management Implementation Arrangements

5. Project implementation arrangements will be mainstreamed into the existing TANROADS structure and system, including financial management. The Chief Executive Officer of TANROADS will assume overall financial management responsibility for project funds. He/she ensure that the project financial management activities are carried out efficiently and in accordance with acceptable international accounting standards, the Government Public Finance

Act 2001, and the IDA Financing Agreement. TANROADS' computerized accounting system will be used to report on project finances. A project dollar-designated account will be maintained and managed by TANROADS.

C. Country Issues and Risks

6. The various Public Financial Management (PFM) assessments carried out over the last six years revealed that GoT has taken and continues to take significant steps to improve its public financial management system. The country risk is now regarded as modest. Most of the recommendations contained in these reviews have either been implemented or are being implemented under the ongoing Public Financial Management Reform Program (PFMRP) and Local Government Reform Program (LGRP). Significant progress has been made to ensure that the risk associated with lack of clear rules and regulations has been reduced. Also, more useful information is now provided in the annual accounts. The timeliness of financial reporting has improved with all the central government ministries submitting the annual financial statements within the statutory period. For the last two years (FY05, FY06) timeliness and the quality of the audit has improved. The NAO submitted GoT audit reports within the statutory period and the reports are available on NAO's Website for public use. GoT continues to strengthen the capacity of accountants and auditors at the MDAs and LGAs through various training programs. This includes recruitment of additional qualified accountants and auditors (both external and internal). Internal audit units and audit committees have been established in most of the MDAs, and clear TORs and manuals developed. Training on audit techniques is ongoing to enhance the quality of these functions.

7. The financial management assessment identified the fiduciary risks and measures to mitigate the risks as indicated in the risk table below. These risks are weak oversight bodies (including Public Account Committees (PAC), Local Authority Account Committees (LAAC), NAO, and Audit Committees) and internal control systems. Appropriate risk mitigating measures have been identified in the project as indicated in table A7.1. Subject to the implementation of these measures, the overall conclusion of the assessment is that the project's financial management arrangements satisfy the World Bank's minimum requirements under OP/BP10.02. Given the above challenges and the need for the ongoing strengthening of financial management capacity, the overall GoT public financial management systems including various implementing entities is satisfactory and financial management risk is assessed as ***modest.***

8. With a number of development partner–assisted initiatives, such as the Accountability Transparency Integrity Project , PFMRP and LGRP, the government is working to rapidly enhance the financial accountability framework in order to mitigate fiduciary risks in public expenditure management; achieve economy, efficiency, and effectiveness in the use of public funds; enhance transparency and accountability; and strength staff capacity in public financial management.

D. The Assessment and Mitigations

9. Table A7.1 summarizes the financial management risks relating to the project as well as the necessary mitigating measures.

Table A7.1: Risk Mitigating Measures

Risk	Risk rating	Risk mitigating measures incorporated into project design	Condition of negotiations, Board, or effectiveness conditions
Inherent risk			
Country level (i) Weak oversight bodies (such as PAC/LAAC, NAO, and Audit Committees) and internal control systems (ii) Project funds not being used in an efficient, economical way and exclusively for the intended purpose	M M	(i) The government is strengthening the oversight bodies (NAO and Public Accounts Committee), including the internal audit functions, by providing training and equipping these units to carry out performance/value for money audits. Oversight bodies will therefore ensure better follow-up of internal and external audit reports. (ii) At the local authority level, PMO has established a monitoring mechanism involving the Regional Secretariat, PMO-RALG inspectorate unit, and the internal audit unit. this mechanism will help ensure that internal control systems at LGAs are strengthened and that all audit queries are implemented by the LGAs. (iii) The PFM systems are reviewed and monitored during the annual PEFAR and PFMRP reviews. In addition, fiduciary risks are reviewed and monitored during the annual PEFAR mission. (iv) MDAs are subject to performance audits to be conducted by the Public Procurement Regulatory Authority regularly.	
Implementing entity Funds may not be used in an efficient and economical way.	M	TANROADS has an internal audit unit and Audit Committee in place. These will play an oversight role in ensuring that the project funds are used for intended purposes, and that accountability and value for money is achieved. These entities will also follow up on the implementation of the recommendations arising from the annual audit report and internal audit reports.	
Project level Funds may not be used in an efficient and economical way	L	TANROADS has satisfactorily implemented the other two IDA projects and maintained satisfactory rating on financial management through out the implementation period.	
Overall inherent risk	***M***		
Control risk			
Planning & budgeting:	L	MTEF planning and budgeting processes will be applied and will include project disbursement requirements.	
Accounting: accounting policies and procedures and information systems	L		
Staffing	L		
Internal control	L		
Funds flow	L		
Financial reporting and monitoring Delay in the submission of quarterly IFRs and financial statements	M	Customization of project charts of accounts and IFRs will be completed during the first year of the project implementation. Samples of the formats will be agreed upon during negotiations. Training on preparation of IFRs will be completed by negotiations.	Formats of IFRs and annual financial statements were agreed at negotiations.
External audit : Inadequate audit capacity and modern techniques.	M	(i) There are ongoing efforts to strengthen NAO by way of capacity building (including more training and hiring of additional qualified auditors). This is aimed at enabling the NAO to use modernized audit techniques and to focus more on the value for money audit. (ii) A public audit act with the aim of further strengthening the NAO will be submitted to the parliament in April 2008	
Overall control risk	M		
Overall risk assessment	**M**		

Risk rating: *H (high risk), S (substantial risk), M (modest risk), L (low risk)*

E. Main Strengths and Weaknesses

10. TANROADS has satisfactorily implemented the other two IDA projects and maintained a satisfactory rating on financial management throughout the implementation period.

11. A dedicated unit established within Finance and Accounts division to handle donor funds including IDA will continue to process the project financial transactions.

F. Financial Management Arrangements for the Project

12. The objectives of the project financial management arrangements are as follows:

- ensure that funds are used only for their intended purposes in an efficient and economical way
- ensure that funds are properly managed and disbursements are smooth and predictable to meet the objectives of the project
- enable the preparation of accurate and timely financial reports
- enable project management to monitor the efficient implementation of the project
- safeguard the project assets and resources.

13. **Planning and budgeting.** TANROADS has an effective planning and budgeting system, and prepares an annual business plan that incorporates an operational and financial plan. Quarterly financial performance reports that include donor funds are prepared and submitted to the Chief Executive, management, and minister each quarter. These reports are reviewed as being comprehensive in scope, of good quality, and prepared on a basis that is consistent with the preparation of the budget estimates based on the policy guidelines issued by MoFEA. The overall project budget and a disbursement schedule will be drawn up and included in the PAD. IDA funds will be provided in line with this disbursement schedule (as may be subsequently revised). The Annual Work Plans and Budgets (AWP&B) will be prepared and approved based on the policy guidelines issued by MoFEA under the MTEF framework. TANROADS will ensure project funding requirements are fully reflected in the ministry's budget and the annual national budget.

14. **Accounting policies and procedures and information systems.** The financial and accounting manual is in place. The manual was reviewed and found adequate. TANROADS financial statements are prepared on accrual basis in accordance with international accounting standards (IAS) and reported in accordance with international financial reporting standards (IFRS). These statements are prepared within three months after end of the financial year and submitted to the auditors. The accounting system is based on a well-functioning computerized accounting system from EPICOR. This system is used in all 21 regions and at the headquarters to record and report on all financial data including donor funds. In the regions, the captured data is sent to headquarters on a monthly basis and then downloaded to the server for consolidation. TANROADS is in the process of implementing a wide-area network (WAN) financed by the current IDA credit. This will link all the regions and headquarters directly via a satellite. The project accounting arrangements shall comply with the requirements stipulated in TANROADS financial manual and Government Public Finance Act and Regulations of 2001.

15. **Staffing and training.** The capacity of the accounting staff in the Finance and Accounts Unit is satisfactory and staff has undergone training in the use of EPICOR software. The majority of staff members have also attended the World Bank financial management and disbursement workshops within the country and outside the country. The recent restructuring of TANROADS has not affected the staffing of the Finance and Accounts Unit. The three accountants who are currently handling IDA and other donor funds have retained their positions.

16. **Periodic reporting for project monitoring.** Formats of the un-audited IFR are designed to provide quality and timely information to government, the World Bank, and various stakeholders on the project's performance. TANROADS will prepare the reports within 45 days of the end of each quarter and submit them to the World Bank. These reports should contain at a minimum the IFR (which document sources and uses of funds by project activity/component) and statements of actual and budget expenditures, both cumulatively and for the period covered by said report.

17. **Annual financial statements.** Project financial statements will be prepared annually and submitted to NAO within three months after end of the financial year for auditing purposes.

G. Internal Controls and Internal Auditing

18. **Internal controls.** The internal control systems showed satisfactory levels of segregation of duties and controls. The internal control systems and environment is centered on (i) the internal audit function, which reviews day-to-day operations of TANROADS including adequacy and effectiveness of the internal controls; and (ii) the Audit Committee, which provides an oversight role on TANROADS operations and financial matters. This includes following up on implementation of internal and external audit queries as required by the 2001 Public Finance Act.

19. The internal audit is functioning effectively. Generally, the responsibility of the internal auditor is to assist the Chief Executive in managing the systems of internal controls and corporate governance within the agency. The unit is also involved in assisting the Chief Executive in upholding good governance and fighting corruption throughout TANROADS. The unit works very closely with the Integrity Committee, Committee on Good Governance, and senior management. It also has regular contact with other specialized governance agencies like the Prevention and Combating of Corruption Bureau (PCCB) and the Good Governance and Coordination Unit of the President's Office. The unit is independent and is headed by the Director of Internal Audit, who reports directly to Chief Executive and supervises three experienced and qualified internal auditors. The unit has an audit strategy and plan based on risk assessment of the agency. The internal auditor's work is monitored and reviewed by TANROADS's Audit Committee on a quarterly basis to ensure internal control systems are functioning adequately and that issues raised in the internal auditor's report are addressed by management.

20. External Audit: The additional credit will continue to be audited annually by the National Audit Office (NAO). NAO will undertake external financial and performance audit of TANROADS and the project. The auditor is required to express an opinion on the annual audited TANROADS financial statements in compliance with International Standards on Auditing and submit to the World Bank the audit report within six months of the end of the

financial year. In addition, the auditors will provide (i) an opinion on the operation of the Designated Account; and (ii) a detailed management letter containing the auditor's assessment of TANROADS internal controls, accounting system, and in compliance with financial covenants as stipulated in IDA Financing and Project Agreements. The terms of reference for the audits were agreed at negotiations.

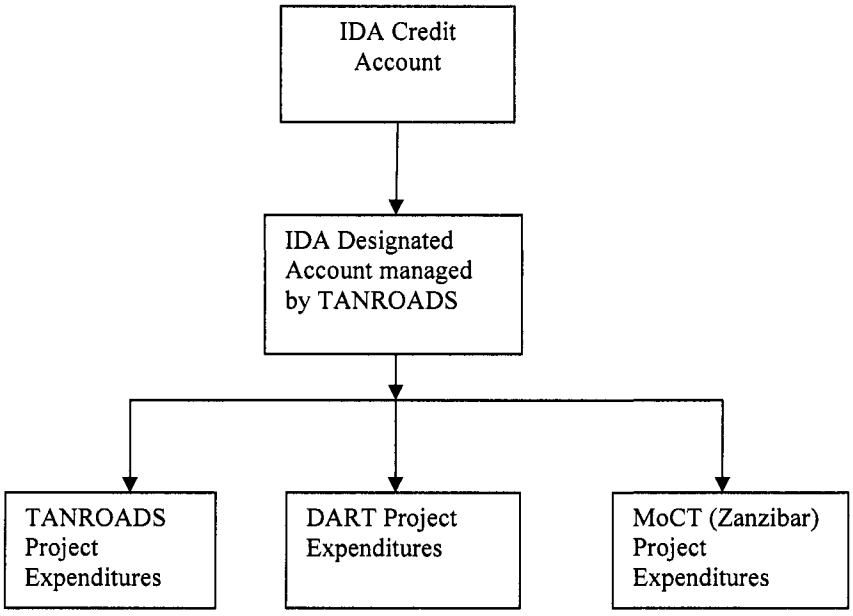
Audit Report	*Due Date*
TANROADS annual financial statements	By December 31 (within six months after end of TANROADS Financial Year)

E. Bank Account and Flow of Funds Arrangements

21. **Designated account:** A U.S. dollar-designated account will be established and operated by TANROADS. This account will be maintained at the Central Bank of Tanzania.

22. *Disbursement of funds from the designated account to meet project expenditures* will follow the "World Bank Disbursement Guidelines for Projects" dated May 2006 and TANROADS payment procedures. Disbursements to meet eligible expenditures will follow agreed disbursement categories as stipulated in the Financing Agreement and Disbursement Letter. Funds from the IDA credit will be disbursed to the Designated Account to be established by TANROADS at a commercial bank approved by the World Bank and cleared by the MoFEA. Funds from the Designated Account will be used to meet all project expenditures (TANROADS and other executing agencies).

Figure A7.1: Disbursement Flow



There will be one Designated Account managed by TANROADS from which payments will be made after certification by DART and MoCT for contracts managed by DART and MoCT.

23. The categories of expenditure that will be financed by the credit and the respective amounts are specified in table A7.2 on allocation of credit proceeds:

Table A7.2: Allocation of Credit Proceeds

Category	Amount of the credit allocated (in US$ million)	Percentage of expenditures to be financed (inclusive of taxes)
(1) Works, goods, consultant services, training and operating costs under component A of the project	98.2	100%
(2) Works, consultant services, training and operating costs under component B of the project	57.4	100%
(3) Works, consultant services, training and operating costs under component C of the project	15.7	100%
(4) Unallocated	18.7	
Total Amount	**190.0**	

24. **Disbursement method.** Disbursements from the IDA Credit will be based on quarterly IFR involving advances to cover cash forecasts of two quarters (six months).

25. Documentation requirements for report-based disbursement are as follows:

(a) IFR
(b) Designated Account Activity Statement
(c) Designated Account Bank Statements
(d) Summary Statement of Designated Account Expenditures for Contracts subject to Prior Review
(e) Summary Statement of Designated Account Expenditures not subject to Prior Review
(f) Projected cash requirements for the next two reporting periods. (Where a project is funded jointly by the Bank, government, and other donors, the forecast should be for the Bank's share only)

All documents supporting the reported expenditures, such as invoices, statements, and bills of lading, should be maintained and retained at the implementing entities and made available for review by auditors as set out in the Financing Agreement.

26. **Submission of withdrawal applications to IDA.** TANROADS should submit the initial withdrawal application after the project has become effective and the Designated Account has been opened. TANROADS should submit initial withdrawal application to the Loan Department of the World Bank, together with two copies of the project's expenditure forecast for the six months. For subsequent withdrawals, TANROADS should submit withdrawal applications to the World Bank, along with the IFR for the quarter ended, the Designated Account Activity Statement, and Summary Designated Account Statements of Expenditures for contracts subject to Prior Review and expenditures not subject to Prior Review.

28. **Due date for submission of the above report.** The Bank must receive all disbursement reports indicated above within 45 days of the end of each reporting period. (Refer to "Financial Monitoring Reports for World Bank-Financed Projects: Guidelines for Borrowers," Annex B.) The Borrower may submit withdrawal application with its quarterly IFR as far as the cash forecast is for the following two quarters.

29. **Procurement arrangements.** The Procurement Specialist has assessed the procurement arrangements for the program. The specific procurement issues are summarized in Annex 8.

30. **Supervision and monitoring.** There will be regular supervision reviews by the World Bank. In addition, the inherent risk of project funds not being used in an efficient, economical way and exclusively for the intended purpose will continue to be addressed through the Public Financial Management Reform Program currently under implementation. Additionally and as currently done, this risk will be reviewed and monitored during the annual PEFAR and PRSC. Additional project monitoring will include oversight by the Project Steering Committee and annual external audit reports. The Financial Management Specialist will also carry out regular reviews of quarterly IFR and annual audit reports, and follow up on any issues and recommendations.

H. Financial Management Effectiveness and Disbursement Conditions

31. There are no financial management conditions for credit effectiveness.

I. Financial Covenants

32. **Financial Covenants.** Standard financial covenants include: (i) maintenance of a satisfactory financial management system of TANROADS; this includes preparation of annual financial statements in accordance with international applied accounting standards; and
(ii) submission of (a) annual audited financial statements of TANROADS within six months after the year-end, and (b) agreed IFRs within 45 days after each financial year quarter, covering such financial quarter to IDA.

Annex 8: Procurement Arrangements

TANZANIA: Second Central Transport Corridor Project

A. General

1. Procurement for the proposed project would be carried out in accordance with (i) the World Bank's "Guidelines: Procurement under IBRD Loans and IDA Credits" dated May 2004, revised October 2006; (ii) "Guidelines: Selection and Employment of Consultants by World Bank Borrowers" dated May 2004, revised October 2006; and (iii) the provisions stipulated in the Legal Agreement. The various items under different expenditure categories are described in general below. For each contract to be financed by the Credit, the different procurement methods or consultant selection methods, the need for prequalification, estimated costs, prior review requirements, and time frame are agreed between the Borrower and the Bank in the Procurement Plan. The Procurement Plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

2. **Procurement of works.** Works estimated to cost US$178.9 million will be procured under this project. This will include (i) the construction of phase 1 of the Dar es Salaam bus rapid transit (DART) infrastructure comprising 20.9 kilometers of trunk lines, 29 trunk stations, 6 integration feeder stations, 5 terminals, 2 bus depots, and the rehabilitation of the upcountry bus station; (ii) rehabilitation/upgrading of the Korogwe-Mkumbara-Same trunk road (172 kilometers); and (iii) the repair/strengthening of the Zanzibar Airport runway. The construction of DART infrastructure, rehabilitation/upgrading of Korogwe – Mkumbara – Same road and repair/strengthening of the Zanzibar airport runway will be procured under international competitive bidding (ICB) procedures and Bank standard bidding documents. Standard bidding evaluation forms will be used and prior review procedures will apply to all contracts. Out of the US$ 178.9 million only US$ 154.1 million is to be financed through this credit while the government will secure additional funds to close the financing gap of US$ 22.8 million. It is a Credit covenant that MoFEA secures additional funds to close the financing gap within 24 months after the effectiveness of the credit.

3. TANROADS has already initiated the prequalification process for the rehabilitation/upgrading of the Korogwe-Mkumbara-Same road in two sections under a slice-and-packaging arrangement. Out of the estimated cost of about US$ 59.3 million the available finance under this credit is about US$ 52.4 million. The government will secure additional funds to close the financing gap of US$ 6.9 million.

4. In April 2004 a contract for rehabilitation/extension of the Zanzibar airport runway financed under the second Integrated Roads Project was terminated by MoCT Zanzibar due to nonperformance of the contractor. A first attempt to request new bids from previously pre-qualified contractors (without the failed contractor) produced one bid that was rejected by the client for being too high. After that a new prequalification process was launched and five firms were pre-qualified and invited to bid. All five firms declined to present a bid. The four European firms stated as reasons for their withdrawal unfair competition from the Chinese allegedly public firm. The Chinese firm finally withdrew as well, stating its lack of capacity to perform. Thereafter, the Bank gave its no objection to invite the four European firms to bid. Three bids

were received on January 11, 2008, but bid prices were more that 100 percent of the engineer's estimate. Therefore MoCT, after receiving the clearance from the Bank, have cancelled the bidding process with rejection of all bids.

5. Following the above developments, the Zanzibar government, based on the recently completed Zanzibar Airport Master plan study, has adopted another strategy for development of the Zanzibar airport which entails strengthening the existing runway by constructing a layer of asphalt concrete overlay that will extend its life for about five years. After completion of the preparation of detailed design and bidding documents through the CTCP, the procurement for the strengthening/repairs to Zanzibar airport runway estimated to cost US$ 16.1 million will be initiated in June 2008 and the contract is planned to be awarded in January 2009. Out of the estimated US$ 16.1 million, US$ 14.2 million are available in this credit while the government will secure additional funds to close the financing gap of US$ 1.9 million.

6. Detailed design and bidding documents for the DART infrastructure contract estimated to cost US$ 103.5 million have been prepared. The available finance under this credit is only about US$ 91.7 million. The government will secure additional funds to close the financing gap of US$ 11.8 million. Based on the recent unsatisfactory experience with the prequalification process in Tanzania and neighboring countries—and particularly the above-described experience with the rehabilitation/extension of Zanzibar airport runway—it has been agreed that TANROADS will request IDA to proceed with a post-qualification process. The post-qualification criteria will be carefully defined and explicitly stated in the advertisement.

7. The prior review threshold for works contracts will remain at US$ 1 million equivalent per contract as per the parent project. Also Works contracts costing less than US$ 5 million equivalent per contract will be procured through National Competitive Bidding (NCB).

8. **Procurement of goods.** Goods estimated to cost the equivalent of US$ 1.5 million will be procured under this project and will include vehicles, office equipment (desktop computers, laptop computers, photocopiers, fax machines, and so forth) and office furniture for TANROADS and the DART agency. No ICB procurement is expected. All goods estimated to cost less than US$ 500,000 equivalent per contract would be procured through the NCB procedures using the standard bidding documents for NCB prepared by the government, which have been found acceptable by the Bank. Goods estimated to cost less than US$ 50,000 equivalent per contract would be procured using the local shopping method. Direct contracting may be used where it can be justified that a competitive method is not advantageous and meets the requirements under paragraph 3.6 of the Procurement Guidelines and after consultation with the Bank. The prior review threshold for goods contract will remain at US$ 500,000 equivalent per contract as per the parent project, the Central Transport Corridor project.

9. **Selection of consultants.** Consulting services estimated to cost US$ 8.6 million will be procured under this project. These are (i) consulting services for the supervision of the construction of the DART infrastructure, (ii) the supervision of the rehabilitation/upgrading of Korogwe-Mkumbara-Same road, (iii) the supervision of the strengthening/repair of the Zanzibar airport runway and (iv) design of new runway at the Zanzibar airport. Other services will include individual consultants related to capacity building for TANROADS, DART and the MoCT

Zanzibar. The appropriate method of selection of consultants will be determined for each assignment or package of assignment in the course of preparing the procurement plan on the basis of nature of assignment and the provisions of the "Consultants Guidelines." Individual consultants would be selected on the basis of their qualifications in accordance with Section V of the "Consultants Guidelines." Single source may be used where it can be justified and after consultation with the Bank. Short lists of consultants for services estimated to cost less than US$ 200,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the "Consultants Guidelines." Consulting services estimated to cost above US$ 200,000 equivalent per contract for firms and US$ 100,000 equivalent per contract for individual consultants and single source selection of consultants will be subject to prior review by the Bank.

10. **Service providers.** DART will enter into agreements with private bus operators, fare collectors, and a fund manager. The private bus operators under phase 1 will be responsible for the procurement of about 248 passenger buses estimated to cost US$ 35.8 million through debt and equity financing. The fare collector will procure fare collection systems estimated to cost US$ 2.4 million. DART assisted by project financed advisors will apply appropriate methods to procure these contracts in a transparent way keeping the Bank informed at all times, and seeking its concurrence and satisfaction in respect of the procedures and documentations. The Bank shall be satisfied that the procedures to be used will fulfill the government's obligations to cause the project to be carried out diligently and efficiently. The Bank shall also be satisfied that the buses, fare collection and fund management systems to be procured (i) are of satisfactory in capacity and quality, and are compatible with the project; (ii) will be delivered or completed in a timely fashion; and (iii) are priced so as not to affect adversely the economic and financial viability of the project.

11. **Operating costs.** US$ 1.7 million (US$ 1 million for DART, US$ 500,000 for TANROADS, and US$ 200,000 for MoCT Zanzibar) has been budgeted to cover project-related additional operating costs of these agencies. These costs are meant to cover project-related vehicle operating cost, office supplies, communication charges, office rent, electricity, and water charges, as well as other operating costs such as per diem and travel costs for staff from the NAO and PPRA when traveling on duty carrying out annual financial and procurement audits respectively. These costs will be financed by the project and procured in accordance with the Public Procurement Act (PPA) of 2004.

12. **Others**: **training.** US$ 1.2 million (US$ 500,000 for DART, US$ 500,000 for TANROADS, and US$ 200,000 for MoCT Zanzibar) has been budgeted for training programs. Each agency will prepare an annual training plan as part of the project's annual work plan and its lump-sum amount will be reflected in the annual procurement plan. The annual training plan (including proposed budget, participants, location of training, and other relevant details) will be reviewed by the Bank before training commences.

B. Assessment of the Agency's Capacity to Implement Procurement

13. Procurement activities will be carried out by TANROADS, the DART agency, and MoCT of Zanzibar. Recently, TANROADS has introduced a new organizational structure geared to

streamline its operations. It has established a directorate of procurement and contracts that reports directly to the Chief Executive Officer. It is this directorate that performs the function of the Procurement Management Unit (PMU) in line with the Tanzania PPA of 2004. It is staffed with competent and qualified specialists to carry out procurement effectively. This directorate will be responsible for day-to-day procurement functions of TANROADS. In addition, TANROADS has established three technical directorates: the Directorate of Planning, Directorate of Projects, and Directorate of Maintenance. All directorates are staffed with qualified technical people to provide support to the procurement directorate. TANROADS has established a Tender Board composed of eight members (including a Chair-person and Secretary) as per PPA requirements. The Tender Board sits twice a month but the number of sittings can be increased if need arises. Members of the Tender Board receive sitting allowances. The lump-sum amount is included in TANROADS' budget for FY08 and includes the lump-sum amount planned for Tender Board sittings for this project. TANROADS has delegated procurement authority to its 21 regional offices for up to TSh 2.5 billion (equivalent to US$ 2 million). However, the Directorate of Procurement has a role of capacity building for these offices.

14. The organization structure of the DART agency shows that DART will establish a procurement department headed by a procurement specialist with adequate procurement experience. The head of the procurement department will be reporting directly to the Chief Executive Officer. The procurement department will also serve as the procurement management unit for Individual Technical Assistance and goods for the BRT component of the project. During appraisal neither the PMU nor the Tender Board was in place. Until the PMU and Tender Board are established to the satisfaction of IDA, the DART agency has delegated their procurement responsibility for this project to TANROADS.

15. MoCT Zanzibar will set up a PMU to manage the rehabilitation/extension of the Zanzibar airport runway. TANROADS will provide technical backstopping to MoCT Zanzibar in the areas of procurement and contract management and administration. Currently, MoCT Zanzibar has a unit (Coordination Unit for Donor Funded Projects—CODAP) that deals specifically with donor-funded projects. It is directly answerable to the Principal Secretary. This unit is responsible for procurement of donor-funded projects including the World Bank project. Contracts financed by government funds are executed through force account procedures under the department of roads. CODAP is staffed with four professionals (two are consultants) who are technical advisors on procurement and contract management. MoCT Zanzibar established a tender board as required per the Zanzibar, Public Procurement and Disposal of Public Assets Act No. 9 of 2005 on December 28, 2005. The tender board is being chaired by the deputy principal secretary and heads of directorates under MoCT are board members.

16. TANROADS will be responsible for overall implementation of all project components. It has adequate experience in implementing World Bank–funded projects including the ongoing CTCP. A procurement capacity assessment of TANROADS was carried out by the Bank's procurement specialist in September 2007 after the new organizational structure was established. The assessment reviewed the overall organizational setup, the structure of the directorate of procurement, its staffing, experience of the staff doing procurement, filing and record keeping

system, and whether procurement is done in accordance with the new PPA (2004) and its associated regulations.

17. The key finding is that TANROADS has adequate capacity because of previous experience in implementing Bank–financed projects including the ongoing CTCP. In this respect, the prior review thresholds that are applicable to CTCP would be retained. The overall TANROADS organizational structure has technical directorates that have technical and qualified staff to support the procurement function. The directorate of procurement presently is not fully staffed. Out of 18 people required (including the director), only seven are on board. All have sufficient qualifications and experience in procurement function. A procurement audit carried out in August 2007 by PPRA concluded that TANROADS has a manual filing and recordkeeping system that needs improvement. In addition, offices of the procurement staff do not have enough space to keep procurement files. TANROADS has internal guidelines which were prepared to provide guidance to their procurement staff, especially at the regional level. The aim is to prepare an operational manual, which will have more details.

18. The corrective measures that have been proposed include the following:

- TANROADS: Hire a consultant to study the existing filing and recordkeeping system and propose its improvement; carry out an annual procurement audit; prepare a procurement manual; prepare a procurement plan covering the first 18 months of the project; and recruit the remaining staff of the directorate of procurement.
- DART: The agency will establish a PMU staffed with a qualified and competent Procurement Specialist with assistants who will handle all procurement issues including procurements under this project. The DART agency will also establish a Tender Board. Until then all procurement will be handled by TANROADS.
- MoCT: Zanzibar will streamline procurement function by establishing a PMU; train staff in procurement management and contract administration; carry out an annual procurement audit; prepare a procurement manual; prepare a procurement plan covering the first 18 months of the project; and hire a Project Manager to oversee and advise the MoCT on procurement and project management issues related to this project.

19. The overall project risk for procurement is **average** as per the current CTCP. Proposed actions to mitigate the risk are summarized in table A8.1.

Table A8.1: Actions to Mitigate Project Risk

Risk factor	Action to mitigate risk	Action by	Deadline for completing action
Directorate of Procurement is not fully staffed at TANROADS	Expedite recruitment of the remaining staff to fill in the current vacancies	TANROADS	During implementation of the project
Inadequate filing and record keeping system	Hire a consultant to review the existing filing and recordkeeping system to make improvements	TANROADS	During implementation of the project
Absence of an approved procurement plan	Prepare a procurement plan of the first 18 months	TANROADS, DART, and MoCT	Before negotiations
Inadequate skills in contract management and	Train procurement staff in contract management and administration	MoCT	During first year of implementation of the

administration			project
Absence of a Project Manager to oversee and coordinate procurement and project management	Hire a consultant reporting directly to Principal Secretary in all project matters	MoCT	Disbursement for the Zanzibar component

C. Procurement Plan

20. The Procurement Plan dated April 23, 2008 for the first 18 months of project implementation was reviewed and agreed upon during negotiations. The agreed Procurement Plan is available in the procurement files. It will also be available in the project's database and in the Bank's external Website. The Procurement Plan will be updated in agreement with the Project Team annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

D. Frequency of Procurement Supervision

21. In addition to the prior review supervision to be carried out by the Bank team, the capacity assessment of the Implementing Agency has recommended that supervision missions visit the field to carry out post review of procurement actions once every six months.

E. Details of the Procurement Arrangements Involving International Competition

22. Goods, works, and non-consulting services

(a) List of contract packages to be procured following ICB and direct contracting:

1	2	3	4	5	6	7	8	9
Ref. no.	**Contract (description)**	**Estimated cost (US$ million)**	**Procure ment method**	**P-Q**	**Domestic preference (yes/no)**	**Review by Bank (prior/post)**	**Expected bid opening date**	**Comments**
WC/A1	Works—BRT Infrastructure Phase 1	103.5	ICB	Post	No	Prior	July 15, 2008	Post-qualification instead of prequalification subject to concurrence by Bank
WC/B1	Works— Rehabilitation of Korogwe-Mkumbara-Same road	29.0						Slice-and-package type of contract. P-Q already done, Bank is reviewing the prequalification report and bidding documents for clearance
WC/B2	Works— Rehabilitation of Korogwe-Mkumbara-Same road	30.3						
	Total	59.3	ICB	Yes	No	Prior	June 30, 2008	
WC/C1	Works— Repair/Strengthe ning of Zanzibar Airport runway	16.1	ICB	Yes	No	Prior	September 15 2008	

(b) ICB contracts for works estimated to cost above US$ 1 million per contract, goods contracts estimated to cost above US$ 0.5 million per contract, and all direct contracting will be subject to prior review by the Bank.

23. **Consulting services**

(a) List of consulting assignments with short list of international firms.

1	2	3	4	5	6	7
Ref. no.	**Description of assignment**	**Estimated cost (US$ million)**	**Selection method**	**Review by Bank (prior/post)**	**Expected proposals submission date**	**Comments**
SC/A2	Supervision of BRT Infrastructure	3.5	QCBS	Prior	June 15, 2008	
SC/B3	Supervision— Rehabilitation of Korogwe-Mkumbara-Same road	2.5	QCBS	Prior	March 17, 2008	RFP issued to short-listed firms. Consultants proposals to be received on March 17, 2008
SC/C3	Supervision— Strengthening/ Repairs of Zanzibar Airport runway	0.30	SSS*	Prior	June 13, 2008	Contract to be negotiated with the firm which was awarded the Contract for Supervision of rehabilitation and extension of Zanzibar airport runway which was cancelled in March 2008 due to too high works bid rates/prices compared to budget.
SC/C4	Design of a new Zanzibar airport runway	0.60	SSS*	Prior	July 2008	MoCT intends to negotiate a contract with the Consultant currently designing seven airports under CTCP.
SC/A3	TA to DART for BRT management and operations	0.80	SSS*	Prior	July 2008	DART intends to recommend SS procurement of the firm which designed the BRT system.

*All proposed SSS to be adopted subject to clearance by the Bank

(b) Consultancy services estimated to cost above US$ 200,000 per contract (firms) and all single source selection of consultants (firms) for assignments will be subject to prior review by the Bank. Consulting services for individuals estimated to cost above US$ 100,000 equivalent per contract will be subject to prior review by the Bank.

(c) Short lists of consultants for services estimated to cost less than US$ 200,000 equivalent per contract may be composed entirely of national consultants in accordance with the provisions of paragraph 2.7 of the "Consultant Guidelines."

Annex 9: Economic and Financial Analysis

TANZANIA: Second Central Transport Corridor Project

Component A: the Dar es Salaam urban transport component

The economic and financial evaluation is presented in subsequent sections of this chapter. The assumptions made are presented at the end of the chapter.

A. Economic Evaluation

1. Construction for the first phase of DART is expected to start in September 2008. Phase 1 corridor comprises the Morogoro line, Kariakoo line and Kawawa Lines with a total length of 20.9km. . The design of the Phase 1 corridor provides for 29 trunk stations, 6 integration/feeder stations, 5 terminals, and 2 bus depots.

2. The economic and financial evaluation of DART presents a robust investment that is viable and attractive to private investors.

B. Methodology

3. The evaluation used the World Bank recommended methodology for economic appraisal of public transportation systems, which compares accruing benefits and investment costs over the lifecycle of the project. The main benefits identified include reductions in operational costs, travel time, pollution, and accidents. Investment costs include construction of infrastructure and its maintenance, and operational costs associated with the DART system. The approach considers the situations with and without DART and projects the costs and benefits for a period of 25 years. The benefits are estimated from the service measures generated by the transportation planning model. The main elements used are passenger-kilometers, passenger-hours, and fleet-distance covered, which were simulated for the morning peak with appropriate expansion to cater for daily flow.

4. Based on the projection of costs and benefits for the period of analysis, economic indicators were calculated. These are: economic internal rate of return (EIRR), benefit/cost ratio (B/C) and net present value (NPV).

C. Inputs/Costs

C.1 Financial and Economic Operational Costs

5. Calculation of the economic operational costs excludes taxes (20 percent VAT) for goods in general. For labor, calculation assumes a 35 percent contribution to operational costs. The percentage composition of infrastructure investment costs is estimated to be; labor 40 percent and materials 60 percent. Table A9.1 presents both the evaluated financial and economic unit rates for the trunk and feeder bus operations.

Table A9.1: Operational Costs

Vehicle	Financial operational costs (US$/km)			Economic operational costs (US$/km)		
	Direct	Variable	Total	Direct	Variable	Total
Feeder	0.37	0.41	0.78	0.30	0.32	0.62
Trunk	0.38	0.68	1. 07	0.31	0.55	0.86

C.2 Economic Investment Costs

Table A9.2 presents the total and economic investment costs for all 3 lines:

Table A9.2: Economic Investment Costs

The investment costs of the DART system are derived from the engineering cost estimates and are as follows:

Investment costs (US$ million) for all three lines		
Items	Total cost	Economic Investment costs
Infrastructure and signaling	63.10	46.69
Stations, Terminals and Depots	38.51	28.49
Rolling stock 2008	45.20	36.16
Systems	2.40	1.92
DART agency management cost and technical assistance / supervision	25.25	18.69
Land acquisition	8.60	6.88
Total	183.05	138.83

D. Evaluation of Economic Benefits

6. The evaluation considers the two types of benefits likely to be accrued by the introduction of the new public transportation system to the users and the country generally. These are direct and indirect benefits. Direct benefits include the reduction of travel time and operational costs whereas indirect benefits include the reduction of costs related to pollution and accidents. The direct benefits result from the positive economic impacts generated internally by the new transportation system, while the indirect benefits relate to the impacts on the urban environment generally.

7. The benefits are calculated based on the difference of the service measures between the situations with and without the project. The measures considered were passenger-kilometer, passenger-hour and fleet-distance covered over the 25-year project life period and excludes the two-year construction period. The benefits are calculated only when the system is operating. The model calculates the net benefit considering the whole system and the 25-year period. The calculations are based on empirical formulae developed for evaluating public transport. Because the DART project is fashioned on BRT projects in South America, various parameters have been adopted from their experience. These are summarized in table A9.3. The data has been used in the formulae for the evaluation of direct and indirect costs described in sections E and F below.

Table A9.3: Data for DART Economic Evaluation

Item	Unit	Value
Demand Peak Factor - daladala system	%	9.35%
Demand Peak Factor - trunk / feeder system	%	9.35%
Supply Peak Factor - daladala system	%	9.35%
Suply Peak Factor - trunk / feeder system	%	9.35%
Accident Cost - bus	US$/1000 Pass x Km	2.5
Pollution Cost - daladala	US$/Km	0.07
Pollution Cost - Feeder	US$/Km	0.07
Pollution Cost - Trunk	US$/Km	0.07
Value of Time	US$/Pass x H	0.25
Daladala / Feeder system Peak Average Occupation	Pass /Vehicle	23
Daladala / Feeder system Out of Peak Average occupation	Pass /Vehicle	16
Trunk System Peak Average Occupation – Phase 1	Pass /Vehicle	130
Trunk System Out of Peak Average Occupation	Pass /Vehicle	91
Diesel Economic Cost	US$/Km	1.03
Number of Days / Year	Days	31.2
Number of Worked Hours / Days	Hours	160
Conversion Factor of Value of Time	%	100%
Management Cost of Public Transportation Factor	%	0.50%
Goods, Spares and Materials attributes	%	20.00%
Labor attribute	%	35.00%

E. Direct Benefits

8. **Reduction of Travel Time.** This type of benefit considers travel time (passenger x hours) for scenarios with and without the project, and the users' value of time considered in the demand study (US$ 0.25/hour) The general equation used to obtain the reduction of travel time is presented as follows:

$$RTT = ((Pass \times hourWOP - Pass \times hourWP) \times VT / PF) \times Days/Year$$

9. **Reduction of Operational Costs.** The direct and variable components of the operational costs of the vehicles used in the system were defined previously. The product of the variable and direct costs by the annual distance covered, in kilometers, considering each type of vehicle, allows for the determination of the total operational costs of the system. The general equation used to obtain the reduction of operational costs of the system is presented follow:

$$ROC = (((Vehic \times kmWOP - Vehic \times kmWP) / PF) \times Cop) \times Days/Year$$

F. Indirect Benefits

10. **Reduction of Pollution.** This benefit is generated by the reduction of the distance covered between the situations with and without DART, and the technological improvement of the vehicles proposed for the new system. The parameters for calculating this type of benefit were obtained in a Brazilian study from August 1998: "Estudo de Redução das Deseconomias Urbanas com a Melhoria do Transporte Público." The study estimated the average cost of pollution generated by public transport vehicles considering the Brazilian case. Due to lack of similar data for Tanzanian, these basic data were adopted in the evaluation. The annual benefits generated by the introduction of the new system were calculated based on the effective reduction of the fleet. A conservative approach was adopted to estimate the level of pollution of the new system. The general equation used to obtain the reduction of pollution of the system is presented as follows:

$$RPC = (((Vehic \times kmWOP - Vehic \times kmWP) \times CPol / PF) \times Days/Year$$

11. **Reduction of Accidents.** This benefit is calculated by comparison of the distance covered by each vehicle considered in the new system, with and without the project. The unitary costs of accidents were obtained from other transportation studies developed by World Bank in Brazil, especially in Rio de Janeiro, São Paulo, Belo Horizonte, and Recife. The procedure adopted for calculating the benefit considers the product of unitary costs by passenger-kilometers, related with each type of vehicle, considering the situations with and without the project. The general equation used to obtain the reduction of accidents of the system is presented as follows:

$$RAcid = ((Pass \times kmWOP - Pass \times kmWP) \times CAcid / FP) \times Days/Year$$

Variables for the three equations above are defined in table A9.4.

Table A9.4: Equation Variables

Direct Benefit	Indirect Benefit
Where: RTT = Reduction of Travel Time Pass x hour WOP = Total of passenger x hour in the morning peak without DART Pass x hour WP = Total of passenger x hour in the morning peak with DART VT = Value of Time PF = Peak Factor Days / Year = Equivalent days / year ROC = Reduction of Operational Cost Vehicle x km WOP = Total of vehicle x kilometers in the morning peak without project Vehicle x km WP = Total of vehicle x kilometers in the morning peak with project PF = Peak Factor Cop = Operational Cost of each type of vehicle considered Days / Year = Equivalent days / year.	**Where:** RPC = Reduction of Pollution Cost Vehicle x km WOP = Total of vehicle x kilometers in the morning peak without DART Vehicle x km WP = Total of vehicle x kilometers in the morning peak with DART PF = Peak Factor C Pol = Pollution cost / kilometer, specific for each type of vehicle Days / Year = Equivalent days / year RAcid = Reduction of Accidents Costs Pass x km WOP = Total of passenger x km in the morning peak without DART Pass x km WP = Total of passenger x km in the morning peak with DART PF = Peak Factor CAcid = Unitary costs of accidents used in other World Bank transportation studies in Brazil Days / Year = Equivalent days / year

12. Based on the values of direct and indirect benefits generated by the project, the economic model was developed. The economic indicators computed at the 12 percent discount rate are EIRR, NPV, and B/C. Table A9.5 presents a summary of the main base case results of economic evaluation for phase 1 of the project.

Table A9.5: Summary of Economic Indicators for Phase 1

Parameter	Unit	Value
Benefit Present Value	US$ million	165.02
Cost Present Value	US$ million	142.51
Cash Flow Net Present Value	US$ million	22.51
Benefit/Cost Ratio (B/C)	—	1.16
Economic Internal Rate of Return (EIRR)	%	14.52

G. Sensitivity Analysis

13. Considering the uncertainties associated with some elements used in the base case of economic evaluation of the project—especially those related to investment costs, operational costs and level of demand of the new system—a sensitivity analysis was done. The sensitivity analysis scenario considers that benefits are stable and constant after the sixth year of operation, and investment values are 10 percent higher than the costs considered in the base case, except rolling stock and operational costs of the trunk system. These are 15 percent higher than the costs considered in the base case.

14. Table A9.6 presents the results of the sensitivity analysis, considering the simultaneous occurrence of the situations listed above.

Table A9.6: Results of the Sensitivity Analysis

Parameter	Unit	Value
Benefit Present Value	US$ million	144.10
Cost Present Value	US$ million	151.50
Cash Flow Net Present Value	US$ million	(7.40)
Benefit/Cost Ratio (B/C)	—	0.95
Economic Internal Rate of Return (EIRR)	%	11.15

H. Conclusions

15. The results obtained show that the project is highly viable from an economic standpoint and the economic benefits justify the proposed investments. In the base case the EIRR obtained is above 14 percent for the overall project and NPV is above US$ 22 million.

16. Considering the stress situation of the sensitivity analysis, where the investment costs (except rolling stock) are 10 percent higher, the operational costs are 15 percent higher and the benefits are stable and constant after the sixth year of operation, the economic indicators obtained demonstrate that the project is viable although the EIRR (11.15 percent) is slightly lower than the discount rate and NPV negative.

I. Financial Evaluation

17. Through partnership with ITDP, Dar es Salaam City Council has engaged Deloitte and Touch to prepare a Business Plan and Investors Document for DART. The **Business Plan for DART** is based on an affordable fare of TSh 400 for single use on either trunk or feeder bus routes. The transfer fare is TSh 100 hence the fare for a consecutive ride on a feeder route and trunk route is TSh 500. It assumes that due to better services provided DART will be the preferred carrier on the trunk line route, fares will be adjusted periodically to cater for inflation, Tanzania Investment Centre rules will apply for the new bus operator and fare collector investors, interest on borrowed funds will be low, and the type of bus specified will be maintained.

18. DART will operate a service over seven trunk lines using 148 18.5-meter-long articulated buses with a 140 passenger capacity and 100 10-meter-long feeder buses with 60 passenger capacity. The design has projected a total of 406,000 passengers per day on the system and 122 million trips annually.

19. Other parameters used to derive the financial model are presented in tables A9.7 and A9.8 below.

Table A9.7: Revenue Parameters

Revenue parameters	Amount
DART agency revenue (% of tariff)	5.55%
Fare collection co. investment markup	24%
Operator 1 investment markup	25%
Operator 2 investment markup	25%
Ticket operation and tariffs	
Percent of fraud	3%
Special fare category (% of demand)	15%
Special fare tariff (% of regular tariff)	50%
Tariff scheme	TSh. 400-plus TSh 100 per transfer
Other key parameters	
GoT initial fleet acquisition	0
GoT contribution to DART operating costs	(year 1 & 2)
Estimated cost of trunk route bus	US$ 257,000
Estimated cost of feeder bus	US$ 82,350
Parts replacement (% of bus cost)	14.4%
Equity financing (buses)	40%

Table A9.8: Payments to Operators

Payment to operators	2010	2011	2012	2013	2014
Operator 1					
Trunk route—TSh '000 per km	2.72	2.66	2.57	2.52	2.46
Feeder—TSh per passenger	379	368	359	354	350
Operator 2					
Trunk route—TSh '000 per km	1.78	1.74	1.70	1.68	1.65
Feeder—TSh per passenger	339	331	323	315	310
Fare collector—TSh per passenger	47	43	42	41	40

Tax exemption (for the purchase of buses and fare collector equipment)
Import duty (25%)
VAT (20%).

20. Table A9.9 presents the projected total fare income and expenditure for the first five years from 2010 when DART commences operations. The results take into account the parameters listed above, which present a **conservative scenario**. The system is financially sound with balances (contingency funds) accruing from year one and is attractive to private sector investors.

Table A9.9: Estimated Revenue Collection and Allocation for Phase 1 of the Project (Conservative Scenario)

DART system revenue allocation (USD)	2010	2011	2012	2013	2014
Conservative					
Tariff revenue (USD)	39,864,132	41,237,417	42,658,011	43,548,333	44,469,960
Government subsidy (USD)	0	0	0	0	0
Revenue allocated to systems (USD)	38,375,286	38,432,633	41,291,931	41,127,882	40,971,234

Operator 1	14,016,419	14,162,601	14,249,887	14,194,886	14,126,969
Operator 2	19,540,840	19,725,868	19,852,677	19,699,282	19,553,396
Fare collection company	4,796,089	4,522,225	4,529,420	4,518,708	4,518,869
Dart executive agency	-	-	2,638,008	2,693,067	2,750,061
Fund manager	21,939	21,939	21,939	21,939	21,939
Contingency fund (USD)	1,488,845	2,804,784	1,366,080	2,420,451	3,498,726

1USD = TSh 1197.89

21. Based on these results, the system is profitable enough to attract private investors to pay for the buses, with a positive NPV and good EIRR, but only if necessary conditions are put in place to attract the private investors. These conditions are as follows:

- Services offered by DART are high quality and affordable to discourage competing daladala operators from using the BRT route and GoT has identified other routes for those daladala that may be displaced.
- Fares are periodically adjusted for inflation as provided for in operating contracts.
- VAT, customs, and excise taxes are waived on the importation of buses in accordance with TIC provisions.
- The bus type is kept as specified in business model.

Table A9.10: Economic and Financial Assumptions

Forecast Period
The financial forecasts have been prepared over a twenty-year period with the operations start date assumed to be October 2010.

Inflation, Growth rate & Treasury Bill Rates
The model used assumes that the 91 day treasury bill rates is 14 percent while the long-term economic growth rate of Tanzania is taken as 6 percent as per the Bank of Tanzania (BoT) projections.

Exchange Rate
The exchange rate used for our projections is US$1= TSh 1,197.89 based on the BoT exchange rate at the beginning of March 2008.

Corporate and Other Taxes
We assumed a corporate tax rate of 30 percent throughout the projections. This is the current tax rate in Tanzania and we do not foresee any increases to this in the near future. We have also considered Pay as You Earn (PAYE), Value Added Tax (VAT), road toll and the Skills & Development levy tax (6 percent). Other statutory payments include NSSF (10 percent) and road license.

Currency
The financial projections in the business plan and forecasts are presented in both TSh and US$

Financing Assumptions
We assumed that all the parties will source their own financing to cover any costs incurred before the system starts operating. The DART Agency is expected to incur mainly salary and set-up costs in 2008 and 2009. The agency will have to source financing from the government or other agencies, such as the World Bank, to fund these costs.

The Bus operators and the Fare collectors will be financed by a combination of loans and equity. Equity financing can range from 25 percent to 50 percent. The loans will be repaid in fixed installments over a period of eight years, as per the contracts with the lending institution.

For purposes of the business plan, we have assumed the rates below:

	Market Rates
Interest rate [a]	14%
Loan fees [b]	1.25%
Tenor of loan	8 years
Notes: a. T-bill rate; b. Commitment fees, front end fees, documentation and other charges.	

Source: Deloitte analysis.

Component B: the trunk road component

22. The estimated cost of the rehabilitation of the road is US$ 61.8 million (includes works and supervision), which averages to approximately US$ 360,000 per kilometer. The design life is 15 years. The proposed works include base repairs and reprocessing, widening of the whole road from the current 6.0 meter carriageway and 1.0 meter wide shoulders to 6.5 meters and 1.5 meters carriageway and shoulders respectively. An economic appraisal of the road was carried out as part of the preparatory design activities to determine whether the proposed investments are economically viable and the methodology and results are summarized below. The results demonstrate that with an EIRR of 16 percent and an NPV of US$ 18.3 million, the investment is viable. The proposed rehabilitation of Korogwe-Mkumbara-Same road is in line with the National Transport Policy goals of population integration, increased regional and international trade, and regional equity improvement

A. Methodology

23. The methodology adopted for evaluation is based on the HDM-4 model guidelines. The model evaluates year-by-year Road Agency Costs (RAC) and Road User Cost (RUC). The RAC costs comprise capital, maintenance, and other special costs. Data collected was therefore aimed at facilitating the running of the model.

B. Data Collection

24. **Population.** Population projections were based on the 2002 census report in which the population of the two regions is as follows: Tanga 1,642,015 and Kilimanjaro 1,381,149. The census report is consistent with the predictions made by various agencies between 1988 and 2002. These predictions show a declining population growth rate in Tanga and Kilimanjaro regions due to a steady shift from rural to urban areas as demonstrated by the evaluated growth of 2.1 percent between 1978 and 1988 and 1.7 percent between 1988 and 2002. For purposes of evaluation of the road, the overall annual growth rate of 1.7 percent was adopted. The rate is among the lowest in the country and it was assumed that it will remain constant for the analysis period.

25. **Gross domestic product (GDP) growth.** The values of GDP were obtained from "The National Account Survey 2004" as shown in table A9.11:

Table A9.11: Historical Growth of Real GDP (GDP/Year)

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004
Tanga	4.2	3.2	4.0	4.7	6.2	8.4	6.1		
Kilimanjaro	4.2	3.3	3.8	4.7	3.5	5.7	6.1		
National	**4.2**	**3.3**	**4.0**	**4.7**	**4.9**	**5.7**	**6.2**	**5.7**	**6.7**

The table gives real GDP growth for the Tanga and Kilimanjaro regions and the Tanzania as a whole. The values show that there is no significant difference in GDP growth between the two regions and the nation. The national GDP values can therefore be used as a basis for evaluation in this appraisal. For the country as a whole the average annual real GDP growth rate from 1996 to 2000 was 4.2 percent and from 2001 to 2004 it was 6.0.

26. **Future GDP growth scenarios.** The macroeconomic framework for the budget FY06 to FY08 projects the national real GDP to grow as follows: 2005—6.9 percent, 2006—7.2 percent, 2007—7.6 percent, and in 2008—7.9 percent. This translates into an average growth of 7.4 percent. Therefore the historical GDP growth from 1990 sets the practical growth scenarios for the future as follows. **Low growth:** With economic performance of the country similar to that between 1990 and 2000, when the average annual growth rate of GDP in real terms was 3.25 percent. This is projected to continue to year 2025. **Medium growth:** This is taken as the realistic growth for the economy and reflects the long-term objectives of the government. GDP growth is assumed to increase gradually from 4.9 percent in 2000 to 7.9 percent in 2008. The annual average growth rate is taken to be 7 percent under this scenario. **High growth:** This is based on the objective set out in the Ten Year Road Sector Development Programme (2002) and general economic review based on the Economic Survey (2004). The average annual growth rate under this scenario is assumed to be 9 percent.

27. **Traffic forecasting.** Traffic forecasting is essentially limited to two types of traffic: normal, and generated or suppressed traffic. Diverted traffic has not been considered because within the study area, there are very few significant alternatives to the project road over any part of its length or over the road as a whole. The only possible source of diverted traffic on the project road is a transfer of the current rail traffic to the project road. However, with concession of Tanzania Railways Corporation, efficiency is expected to improve significantly, which may result in it taking traffic away from the roads instead.

28. Based on analysis of historic traffic growth, government projections, and GDP growth, traffic growth for the two periods 2005–14 and 2015–25 has been determined and is presented in the table below.

Table A9.12: Traffic Growth

	Car	Pickup	Minibus	Light truck	Medium truck	Heavy truck	Articulated truck	Bus
2005–14	9.0	8.5	8.5	7.0	7.0	6.0	5.0	7.0
2015–25	7.0	8.0	8.5	6.0	4.0	6.0	4.0	5.0

The growth projections are based on the following:

- The growth rate for buses will decline as passengers shift to the private car as a result of increased incomes, reduced travel time and cost, and improved safety.
- Pickups and light trucks will grow at a rate greater than average.
- The growth rate for trucks will be slower as proposed investment in rail transport will halt the modal shift in cargo transport from rail to road.
- Growth beyond 2014 is extremely speculative; therefore the rates beyond 2014 will be lower.

C. Evaluation Framework

29. **Overall Objective.** The objective with regard to economic analysis is to establish the economic viability of the road rehabilitation alternatives. For the analysis, the road has been divided into two sections: Korogwe-Mkumbara (chainage 0.00-76.00 kilometers) and Mkumbara-Same (chainage 76.00-172.00 kilometers). This division is based on the pavement construction history, current condition, and maintenance requirements. The earliest year for construction to commence has been taken as 2008 and the road will be fully opened to traffic in 2010.

The following benefits were considered against the investment costs:

- reduction in vehicle operating costs (VOC) as a result of the improved road
- reduction in maintenance costs
- road user time savings resulting from quicker journeys
- benefits to generated traffic, which will be encouraged to use the road as a result of the improved road condition

30. The traffic analysis indicates that there are no benefits from diverted traffic. Also due to lack of data to establish road accident costs as well as a methodology for predicting changes in accidents as a result of specific improvements, the benefits from reduced accidents were not computed. Observations are that accidents increase with road improvement in Tanzania because of speeding.

31. **Do minimum.** Based on current and projected road maintenance funding, this level of maintenance will be insufficient to arrest further deterioration in the condition of the road, particularly during the rainy season. Without major interventions, the road would become increasingly rough each successive year and ultimately become prohibitively expensive to operate on.

32. **Evaluation model.** Evaluation was carried out using HDM-4 (November 2007). The following were major inputs into the model:

- road characteristics
- vehicle operating cost data
- project residual values
- work standards and maintenance criteria
- definition of alternatives

Road characteristics for the two homogeneous sections were derived from materials investigations and study of the topography and alignment.

Vehicle operating cost data: TANROADS retains vehicle fleet characteristic data of eight types of vehicles (cars; pickups; minibuses; light trucks; medium, heavy, and articulated trucks, and buses) and these were applied.

Residual values: The estimation of the residual value of the project assumes the following levels at the end of the project cycle. Earthworks will be satisfactory and have 100 percent residual value. Pavement materials can be reused as sub-base and therefore have 25 percent residual value. Some of the minor drainage structures will be damaged and also all pipes of 600 millimeters diameter will be removed and hence will have a residual value of approximately 50 percent. Bridges and box culverts will have many years of life left and their residual value will be approximately 70 percent. Other project costs such as preliminaries, design and supervision and so forth, will be sunk costs with no residual value. Based on these assumptions, 30 percent of the initial capital cost is taken as the residual value of the road at the end of the analysis period.

33. **Maintenance options.** Two maintenance work standards were considered: the "Do Nothing" and the "Do Something Alternative." The "Do minimum" reflects the ongoing maintenance works and forms the base case against which rehabilitation works are compared. The current maintenance includes routine, periodic, and spot improvement. Pothole patching, crack sealing, and routine drainage maintenance are included for this scenario. In the "Do minimum" case, the cost of maintenance will increase in future as the road deteriorates. This has been factored in the economic evaluation by allowing a 15 percent increase in cost of routine maintenance after 10 years. The "Do Something Alternative" scenario focuses on pavement

maintenance after rehabilitation, assuming accepted standards for the type of construction. The post-rehabilitation maintenance works are mainly routine maintenance on the carriageway and drainage maintenance and include the following: routine works including drainage maintenance every year, pothole repair when potholes exceed 3 per kilometer, crack sealing when wide structural cracks exceed 3 percent, edge repair when edge break exceeds 500 square meters per kilometer, and single bituminous surface treatment when total damaged area exceeds 30 percent.

D. Construction Costs

34. Table A9.13 summarizes the estimated construction costs (2007 prices) for the two alternatives considered: asphalt concrete surfacing (AC) and double surface treatment surfacing (DBST) (exchange rate: US$ 1 to 1,242.89 TSh).

Table A9.13: Construction Costs

Project section	Asphalt concrete surfacing (AC)			
	Km	TSh	US$	US$/km
Korogwe-Mkumbara	76	37,986,868,370.04	30,563,338.97	407,511
Mkumbara-Same	96	40,033,595,653.90	32,210,087.50	332,063
Total	**172**	**78,020,464,023.90**	**62,773,426.47**	**364,962.**
	Double surface treatment surfacing (DBST)			
Korogwe-Mkumbara	76	34,157,420,820	34,157,421.67	449,440
Mkumbara-Same	96	35,147,305,992	32,210,087.50	335,522
Total	**172**	**69,304,726,812**	**66,367,509.17**	**385,858**

E. Economic Costs

35. The construction costs above are financial costs of the project. However, for economic evaluation the capital costs used in the analysis are the economic costs. They are a reflection of the actual use of national resources in the construction of the project. To estimate economic costs, an **economic conversion factor** for the project has been derived as demonstrated in table A9.14. This factor has been derived by deducting taxes from materials and adjusting market wages to reflect opportunity costs. An overall conversion factor of 77.68 percent was adopted to convert capital financial costs to economic costs. The same factor has been applied to convert financial maintenance cost to economic costs. The foreign and local components of construction costs have been estimated at 61.47 percent and 19.38 percent respectively.

Table A9.14: Economic Conversion Factors

Description	Percent of total project costs (%)	Economic factor by component	Approximate conversion factor (%)
Equipment	32	1.0	32
Fuel	10	0.52	5.2
Local materials	11	0.68	7.48
Imported materials	10	1.0	10
Foreign labor	18	1.0	20
Local labor	6	0.5	3
VAT	15	-	
Average economic conversion factor			**77.68**

F. Results

36. **Summary of benefits and costs.** Evaluation was carried out at the 12 percent discount rate over the analysis period (2007–29). Results in terms of NPV and EIRR for the different alternative treatments are summarized in table A9.15:

Table A9.15: Economic Results of 6.5 Meter Carriageway and 1.5 Meter Shoulders

Alternative project	RAC (US$ million)	NPV (US$ million)	EIRR (%)
DBST surfacing over rehabilitated bases	38.04	7.70	14.3
50 mm AC surfacing over rehabilitated bases	44.17	18.27	16.0

Based on the results, a 50 millimeter asphalt concrete overlay offers the better alternative. AC surfacing has been chosen.

G. Sensitivity Analysis

37. Three different sensitivity analyses have been carried out to test the impact of the variation in some of the most important inputs. These inputs are the construction costs, the base traffic volumes, and the traffic growth rates. With cost increases of up to 30 percent, the preferred option had an acceptable EIRR of 13.1 percent. A similar scenario was observed with increased and decreased traffic of 30 percent and 20 percent respectively. EIRRs of 23.4 percent and 13 percent were obtained. The EIRR evaluated for the low- and high-traffic growth is 13.8 percent and 20.7 percent respectively.

The sensitivity analysis demonstrates that the proposed investment is economically viable.

Component C: the Zanzibar airport component

A. Background

38. The proposed rehabilitation and extension of the airport runway is among the most important developments in Zanzibar. The cost of the works component is assessed at US$16.1 million, which is for repair and strengthening of the existing runway and completion of the 560m extension. The airport is the second/alternative gateway out of the island after the port, but unfortunately both are in poor condition. Design and preparation of tender documents for rehabilitation are on-going. The first economic appraisal for the airport was done in 2001 to justify rehabilitation and extension of the existing runway, which as explained in Annex 4 has stalled. The evaluation found the proposed investments to be economically viable with an EIRR of 58 percent. The proposed intervention then involved full reconstruction of weak areas and strengthening of the existing runway pavement and construction of a 560m extension to cater for increased traffic over a 25 year design life.

B. Traffic

39. It has been found necessary to update this economic evaluation because of increased construction costs and increased benefits as a result of increased visitor and aircraft landing in the past seven years as demonstrated in tables A9.16 and A9.17.

Table A9.16: International and Domestic Traffic Movements

Year	International			Domestic		
	Aircraft Movements	Passenger	Passengers/ aircraft	Aircraft Movements.	Passengers	Passengers/ aircraft
2001	2,551	87,540	34	14,273	90,613	6
2002	3,118	129,213	41	20,519	125,272	6
2003	3,103	110,610	36	21,307	149,227	7
2004	3,661	151,037	41	24,816	207,672	8
2005	3,147	183,282	58	24,633	231,528	9
2006	3,526	197,564	56	26,583	279,804	11
2007	4,104	254,041	62	29,445	343,448	12

40. The passenger traffic through the airport showed impressive growth rate between 2001 and 2007. The international traffic increased at 21.2 percent per year and the domestic traffic grew at an even higher rate of 25.3 percent. The total traffic grew at the rate of 23.1 percent. This relatively high growth reflects the increasing business activity by the local community, the increasing number of visits from mainland Tanzania, and the benefits of efforts by the government and tourist organizations in promoting the island as an exciting tourist destination. When this growth rate is set against the grossly inadequate terminal facilities and ongoing repairs to the runway, indications are that, given moderate improvement to the terminal building and a modern and extended runway, the potential for the continuation of higher than industry norm growth rates is not an unrealistic expectation.

C. Summary of Economic Evaluation

41. The proposed intervention for the runway is the repair of weak areas and overlaying the existing runway to give a uniform and smooth running surface and increase bearing capacity (strength) to accommodate the forecast aircraft movements and mix, and to provide a design life of at least 5 years. This is a medium term solution as described in Annex 4. The proposal includes completion of the a 560m extension of the runway to make a total of about 3000 meters in order to attract new business and to be able to compete with other destinations in the region. The runway length is also critical when considering the viability of operations over certain sectors. Currently there are operating restrictions with regard to takeoff weight for large aircrafts. The proposed improvements should increase the confidence of airlines and tour operators in the adequacy and reliability of the airport's facilities and services, resulting in new business and increasing the competitive edge of Zanzibar as a tourist and business destination.

42. The following economic analysis of the project takes into consideration the above. The analysis is carried out on the total cost of the project of US$ 16.1 million, which includes the cost of finishing the 560 meter extension of the runway.

43. The following is a summary of the economic evaluation done for the airport. The calculations were based on a 20-year period and a conservative scenario. If this were to give a satisfactory economic return on investment, then the project would be economically viable. The analysis attempts to mirror the way traffic might grow, first in the absence of a runway extension and secondly with the proposed extension.

44. The analysis for the conservative growth forecasts was based on the following assumptions: (i) current 2001–07 passenger growth that has achieved an average annual rate of growth of 23.1 percent; (ii) future constrained growth of 12.5 percent in the 2008–15 period, 10 percent in 2016–19 period, and 5 percent in 2020–27 period (the later two periods take into account earlier design life of 25 years which has changed as described in Annex 4); (iii) an international departure tax of US$ 30 paid by 50 percent of the passenger traffic; (iv) 10 day average tourist stay with a daily expenditure of U$ 163.55 and value addition of US$ 50; and (v) marginal operational profit of US$ 1.0.

45. In the **methodology** the basic assumption made is that in the first year of operation of the rehabilitated and extended runway, the airport will attract on average one large aircraft per week from hitherto un-served distant destinations. Additionally, the passenger traffic will grow in a manner that could be expected had no work been done. That aircraft is assumed to have a load of 200 passengers both on arrival and on departure, giving an annual increase of traffic of 10,400 passengers or 20,800 terminal passengers in the first year of the project's economic life. This generated traffic grows at the same rate as the base traffic of the airport—that is, at 12.5 percent from 2007–15 (considered in this analysis), 10 percent from 2016 –19, and 5 percent from 2020–2029.

The analysis was carried out to determine whether the US$ 16.1 million investment has any economic merit and was evaluated in three ways:

- against the airport's operational profits from the additional operations
- against the operational profits plus the airport departure taxes generated by the additional operations
- against the operational profits, the additional departure taxes, and the value added to the island's economy by the additional tourists

The analysis is based on projected financial returns as opposed to purely economic returns. It was recognized in the analysis that the do-nothing situation of failing to invest in the reconstruction of the runway would lead to closing the airport and a complete collapse of the tourist economy.

46. In carrying out this analysis it was assumed that the airport will be run along sound financial principles with revenues collected being ploughed back appropriately to meet operational and maintenance expenses. Also, since the airport is not run on a commercial footing, the economic analysis was an examination of the marginal effect of the proposed investment on the economy of Zanzibar.

D. Results

47. The results of the analysis are presented in table A9.18. They indicate that based on airport income alone, the proposed rehabilitation would not be justified. However, taking into account airport passenger taxes that are known, the investments are justified. Furthermore, when projected increased income brought to Zanzibar because of the investment is included, very robust results are obtained. This is supported, for example, by noting that in the first year alone the income from departure tax is US$ 11.8 million—about 73 percent of the proposed US$ 16.1 million investment.

Table A9.17: Growth Analysis

	Airport income only	**Airport Income + Airport taxes**	**Airport Income + Airport taxes + tourism value addition**
IRR	<1%	39%	650%
NPV (US$m)	(-)11.21	11.85	396.17
B/C	0.22	1.83	28.73

48. **Other ancillary benefits** include the following:

- *Increase in tourism*: Significant growth of tourism that could be realized as a result of the runway extension providing as it would be direct access to the central/northern European and Eastern emerging markets.
- *Increased efficiency*: The increased use of larger planes made possible by the longer runway will allow greater efficiency of passenger handling and result in lower handling charges per head. Currently there is a need to use neighboring airports that can accommodate the longer haul aircraft.
- *Seaport*: The seaport is in a poor state. The introduction of the longer-haul air cargo movement that the proposed extension will allow would help to alleviate the congestion currently experienced at the seaport until the port itself undergoes radical improvement. Also export of goods from Zanzibar to the international markets would be much more economic without the need to double-handle goods to neighboring airports.

49. From the above results it can be seen that on the basis of the assumptions made in the analyses, the runway rehabilitation and the extension are economically justified in financial returns to the airport and the Zanzibar economy. Even with very conservative assumptions, the project is viable. This is not surprising, because the airport is a key asset upon which the economy of Zanzibar is dependant.

Annex 10: Safeguard Policy Issues

TANZANIA: Second Central Transport Corridor Project

1. The potential negative environmental and social impacts associated with this project include: dust pollution, noise/vibration, soil and water pollution, creation of water-borne vectors, an increase in the spread of HIV/AIDS and STIs, loss of vegetation, waste production, resettlement and loss of employment and income. The Borrower has prepared several safeguards instruments to address the potential impacts.

2. The borrower prepared a sector environmental assessment (SEA) for the Transport Sector Investment Program as well as Environmental Guidelines that helps the sector to:

- introduce environmental considerations into decision making early, before project location and scale decisions have been made
- allow decision makers to focus on the environmental effect of strategic choices, before specific projects are considered, thus allowing the SEA to consider a broader range of alternative proposals and mitigation measures compared to project-level EA
- allow for the systematic consideration of cumulative and broad-scale (regional and global) environmental effects
- provide a mechanism to incorporate into decision making considerations related to sustainable development

3. To address the social impacts such as land acquisition, the Borrower prepared a Resettlement Policy Framework (RPF) that outlines the principles and procedures for compensation and involuntary resettlement. A resettlement action plan (RAP) was prepared for the BRT component and EAs were conducted for each project component. For DART, an additional EA is being prepared for the Jangwani bus depot. This area was not among the areas proposed for depot location in the original ESIA. The completion of the EA for the Jangwani bus depot and the integration of the proposed measures in the design are required prior to advertising the tender for works (planned in June 2008).

4. Overall responsibility with the implementation of EA/SA measures is with TANROADS. TANROADS has an experienced social and environmental unit being part of its Directorate of Planning. This unit will be required to report quarterly on progress of the implementation of EA/SA measures throughout the project period. The EA/SA reports will be part of the quarterly project progress reports (QPR).

5. Below is the summary of the environmental and social issues as well as the mitigation measures identified for each project component.

Component A: the Dar es Salaam urban transport component

6. **Environmental and Social Impact Assessment.** The scope of the Environmental and Social Impact Assessment (ESIA) study involved collection of physical and biological baseline data, which was then used as a reference framework in the prediction of potential environmental impacts. Extensive consultation was conducted during ESIA preparation. This included a wide variety of stakeholders, including public entities with direct or indirect involvement with the

project, as well as residents and businesses located along the corridor, including those that will be directly affected by expropriation. The main public entities/officers consulted during ESIA preparation included the following: Vice President's Office (VPO), Prime Minister's Office (PMO), National Environmental management Council (NEMC), Tanzania Electric Supply Company (TANEASCO), Dar es Salaam Water and Sewage Corporation (DAWASCO), Tanzania Telephone communication Ltd (TTCL), Tanzania Railways Cooperation (TRC), Dar es Salaam City Council, the municipalities of Temeke, Ilala, and Kinondoni, and Ward executive Officers along the alignment. Further to public entity consultation, several local experts and university professors specialized on transportation planning, urban planning, environmental management, and other pertinent skills were contacted and contributed with their views toward adjustment of the DART project to better meet local needs.

7. During preparation of the ESIA, a Property Survey and a Socio-Economic Survey of all residents and businesses in directly affected properties was conducted through application of detailed questionnaires. One of the main positive environmental impacts of the BRT is the emission reduction of greenhouse gases. A majority of the current daladalas are minibuses called vipanya carry less than 20 people at a time. The amount of emission by DART Trunk buses carrying 140 passengers is estimated at 2100g/km while that of the feeder buses carrying 60 passengers is 1250g/km. The current minibuses emit 70 percent and 50 percent more gases to transport the equivalent amount of passengers to be carried by one trunk bus and one feeder bus respectively. After the completion of DART phase 1, a total of 148 trunk buses and 100 feeder buses (including reserves) will be operating; about 1,500 daladalas will be replaced by these buses. The new buses are expected to reduce current pollution by about 60 percent. Other positive impacts expected from the project are reliable and comfortable transport, reduced accidents and air pollution–related illnesses, increase civic pride and sense of community, reduced noise levels, enhancement of non-motorized transport, more sustainable urban development, and city beautification. Negative impacts identified were grouped into site preparation and mobilization stage, project construction stage, and operation stage impacts. The major potential negative impacts (direct and indirect) include the following: property loss due to displacement and right-of-way acquisition, loss of employment by staff, disruption of public services during construction stage, loss of vegetation adjacent to the road alignment during construction stage, and disruption of traffic flow during construction.

8. An RPF was prepared for the urban transport component and was cleared in February, 2007 and disclosed at Infoshop in July, 2007. A RAP for the urban transport component was prepared in two stages. Phase 1(A) was cleared and disclosed on July 30, 2007, and phase 1(B) was disclosed on December 5, 2007. A Socio-Economic Survey was carried out through application of the Residential Resettlement and Commercial Activities Questionnaires. The Proposed Compensation Schedule was prepared by the RAP team's certified valuer. Summary tables with main Compensation Schedule total values per Ward and Municipality and per type of allowance are included in the RAP. All PAPs whose property will be directly affected were served notice as required by law and became aware of the fact and of the extent of necessary expropriation (partial or total). Several local authorities were consulted during the RAP preparation process. The RAP includes various types of compensation including property compensation bonus, complementary transition allowance, complementary allowance for additional cost of living, tenant unexhausted improvements compensation, moving assistance, search assistance, legal

assistance for purchase, vulnerable PAPs special support, and so forth. Besides measures taken under the RAP for the PAPs, there will be a special program for the compensation of people involved in daladala operations with the objective of providing affected daladala owners, drivers, and conductors with opportunities in the new system once it commence to operate. Owners will be given preferential access to shares that will be made available by the future bus company (and mandated in the operator's contract agreement). Also, affected daladala will be allocated to new routes in hitherto underserved areas. Daladala drivers and conductors that are affected by the DART system will be given training opportunities for the enhancement of their skills which would increase their chances to be engaged by the new bus operators. The Resettlement Planning and Implementation Team (RPIT) will coordinate RAP implementation which will include, among other things, the following: ensure that all PAPs receive all entitlements established for them in the RAP, assistance with the search for new locations in cases where relocation is necessary, assistance with planning of reinstallation within same plot, coordination of other social assistance as per the matrix of eligibility established in RAP, and post-resettlement monitoring as established in RPF. Ex-Post Reports will consist of photographic records of individuals before and after, as well as a comparative table of building characteristics, available utilities, and services and costs affected by resettlement (transport, taxes, rent, utilities, and so forth). Based on evaluations of cost affected by resettlement, eligibility for a complementary allowance for additional costs of living will be established. Thus, it can be stated that all PAPs have a preliminary understanding of the resettlement process, as well as of the main entitlements and respective eligibility criteria. Four public meetings were held on October 18, 24, 29 and 30, 2007, and one on November 3, 2007, following disclosure of final reports. Other meetings will be held during implementation as the need arises. Consultation of all PAPs and relevant stakeholders is an interactive process and will continue during project implementation, per the RAP consultation/participation framework. Through the meetings and media coverage, the project expects that the general public and the PAPs in particular will understand their rights and the applicable procedures.

9. An Environmental Management Plan (EMP) has been prepared for the implementation of mitigation measures and shall involve a number of actors. Summary of the impacts and proposed mitigation measures is presented in the table below.

Table A10.1: Impacts and Proposed Mitigation Measures

SN	IMPACT	MITIGATION MEASURES
A	SITE PREPARATION AND MOBILIZATION STAGE	
1.	Deterioration of air quality	a) Sprinkling water on the construction site b) Switching off machinery, equipment, and vehicles when not in use c) Use of masks by workers to prevent them from inhaling dusts
2.	Noise and vibrations	a) Proper maintenance of machinery, and exhaust fitting for equipment, and vehicles b) Operators of plants be given ear plugs for noise pollution protection
3.	Loss of vegetation	Avoidance of unnecessary removal of vegetation
B.	PROJECT CONSTRUCTION STAGE	
1.	Deterioration of air quality	a) Sprinkling water on the construction site b) Switching off machinery, equipment, and vehicles when not in use

SN	IMPACT	MITIGATION MEASURES
		c) Locating bituminous mixing plants away from residential houses d) Workers to use masks to prevent them from inhaling dusts and bitumen
2.	Production of noise and vibrations	a) Adequate maintenance of machinery, and exhaust fitting for equipment, and vehicles b) Stationary machinery to be located away from residential areas c) Operators of plants to be furnished with ear plugs for noise pollution protection
3.	Solid waste pollution	a) Collection of demolition materials and dispose off to Vingunguti dump site b) Selected reuse of solid wastes from construction for rehabilitation of earth roads c) Encourage residents to used concrete wastes for construction purposes
4.	Impacts due to borrowing and quarrying activities	a) Where possible use existing quarry sites b) Rehabilitate borrow pits and landscape after construction c) Land owners where materials have to be made from their lands to be paid
5	Increased energy consumption	a) Minimization of unnecessary idling of machines and equipment, employee vehicles b) Encourage of carpooling or van pools among construction workers
6	Deterioration of scenic and visual quality	Encouragement of reuse of demolition materials by local residents in the construction industry
7	Loss of vegetation adjacent to the road	a) Avoidance of unnecessary removal of vegetation cover b) Confine activities to road alignment c) Reinstatement of cleared vegetation with natural species immediately after construction
8	Disruption of community access	Adequate provision of cross culverts and concrete slabs
9	Destruction of public utilities	a) Identification of all existing facilities likely to be affected b) Where possible, relocate the facilities before commencement of construction c) Provision of temporary water supply points to ensure the service is available even during relocation
10	Displacement, resettlement and right-of-way acquisition	a) Compensation of affected people be done before commencement construction work b) Affected people to be given time for salvaging useful materials c) Provision of alternative locations with equal or better, social services, and business opportunities. d) This has been covered by RAP
11	Impact due to traffic flow change	a) Introduce traffic management plan through road signs, deployment of personnel to guide traffic movements b) Construction works in critical points (with regard to traffic congestion) should be done during night hours when traffic flow is very minimal c) Temporary access should be built at the interchange of the project road and other roads d) Transportation plan of construction materials should be formulated to avoid their

SN	IMPACT	MITIGATION MEASURES
		delivery at peak hours e) Provision of speed restraining humps in street diversion roads
12	Degradation of surface water quality	a) Concrete works, and washing of concrete handling equipment to be isolated from water courses b) Restrict servicing and refueling of equipment at contractor's yard c) Construction equipment working near river banks to be well serviced to ensure no oil leakage d) Road sections which are potentially source of sediment transport into stream to be paved with concrete, cement or stone, or grown with grass (if do not handle traffic)
13	Public recreation/park resources	Mitigation measures proposed in b(1) above will apply
14	Impact due to hazardous materials	a) If asbestos-containing materials or lead-based paint are present in structures, prior to demolition activities, applicable regulations on their handling and disposal should be followed b) Underground storage tanks located within the project site (if any) should be properly removed before general construction activities are started c) During relocation of electrical transformers care should be taken to make sure that there are no accidental release or spills of oil
C.	OPERATION STAGE OF THE PROJECT	
1	Impacts at bus depots	Provision of waste water handling system
2.	Traffic and safety	a) Provision of elevated pedestrian crossings at every DART station that will force vehicles to slow down. Due to the high traffic level access to the stations between Kimara and Ubungo will be by pedestrian overpasses. b) Provision of speed restrainers like speed humps before and after resettlements c) unsafe operation of busses will be punishable as per specific clauses of the bus operator's agreement
3	Loss of income and employment by Daladala owners and drivers	a) requirement in the bus operating agreements to include local operators both by offering them employment and shareholding options b) provision (by DART) of training to daladala drivers to make them "employable" by the new operator or to get other employment c) relocation of existing daladala routes to other routes d) setting up of appropriate grievances procedures for daladala owners and drivers

10. Cost for the mitigation measure is estimated as US$ 150,000 (including training for daladala drivers).

Implementation and Monitoring

11. The preparation of the contract specifications will be the responsibility of the highway engineer in collaboration with environmental specialist. The role of environmental specialist

will be to ensure implementation of proposed mitigation measures during construction, traffic management and clearing of worksites.

12. The contractor will be responsible for implementation of environmental and social mitigation measures under the supervision of the road inspector from the DART agency and the Consultant's Office in collaboration with Environmental Specialist. This is to ensure that technical and environmental clauses are followed and well understood by the contractor. After the road construction the road supervisors in collaboration with Environmental Unit from the DART agency will be responsible for supervision of operation and maintenance of environmental conservation installations.

13. The implementation of the EMP is the responsibility of TANESCO, TTCL, DAWASCO, the contractor, and the supervising engineer.

Component B: the trunk road component

14. The Environmental and Social Impact Assessment (ESIA) followed a consultation process that involved various stakeholders at national, regional, district, and community levels. The important stakeholders included professionals from relevant institutions such as NEMC, TANROADS, and District Councils. Others were Ward Executive Officers and local community members from several wards. Local NGOs such as the Same Agriculture Improvement Programme (SAIPRO) and Same-Mwanga Environmental Conservation Advisory Office (SMECAO) were also consulted. The professionals consulted provided their views about the project and helped the consulting team with secondary data. The public consultation process identified a number of issues raised by various stakeholders and the local community members from some selected wards. The majority of the people appreciated that the project will have some benefit to them in terms of employment creation and income generation. Other positive benefits of the project are reduced vehicle maintenance and operation costs due to improved road condition and increased tourism activities due to improved road condition with faster and more comfortable journeys.

15. There were also negative impacts identified during assessment. The important issues of major concern to this project identified are soil erosion and sedimentation of road pavement, road safety issues, and HIV/AIDS transmission. Although the project is going to have a number of negative impacts, most of them are going to be mitigated though good engineering practice, and have been taken into account in design and bidding documents. The ESIA was cleared and disclosed on July 30, 2007.

16. Table 10.2 presents the environmental impacts and provides mitigation measures to prevent or minimize adverse environmental impacts that may arise due the implementation of project.

Table A10.2: Environmental and Social Management Plan (ESMP)

ENVIRONMENTAL ISSUES	MITIGATION MEASURES
A1. Dust pollution	Sprinkle water on bare areas and road surface during construction, especially within residential areas to minimize dust.

ENVIRONMENTAL ISSUES	MITIGATION MEASURES
	Vehicles delivering construction materials should be covered to avoid spillage. Concrete mixing equipment should be well sealed, and vibrating equipment should be equipped with dust-removal device. Operators should pay attention to their health by wearing dust protection masks.
A2. Noise/vibration	Workers in vicinity of strong noise should wear earplugs and helmets and their working time should be limited. In construction sites within residential areas, noisy construction should be stopped during the night hours (6 pm–6 am). Maintenance of machinery and vehicles should be enhanced to keep their noise at a minimum. Contractor must follow procedures for noise abatement as prescribed in the Standard Specifications for Road Works (Section 1709).
A3. Soil and water pollution	Measures must be taken at construction sites / borrow pits and quarry sites by providing solid waste collection / garbage tanks and sanitation facilities. Garbage should be collected in a tank and disposed of periodically. Avoid construction of workers camp site facilities close to surface water sources. Borrow pit / quarry sites and camp sites, including temporary work places must be provided with sanitary facilities (toilets) and must be located far from water sources. The facilities must be properly maintained and satisfactorily decommissioned after the project. Solid and liquid waste must be handled as prescribed in the Standard Specification for Road Works *(Section 1713)* Solid waste resulting from road construction works could be disposed of as prescribed in the Standard Specification of Road Works (Section 1713)
A4. Destruction of stream / river bank vegetation	Use a water pump to haul water from the river / stream at a distance of not less than 50 m from the river / stream bank. Contractor must minimize destruction of stream / river bank vegetations by avoiding unnecessary cuttings / excavations during construction. Bare areas around the stream / river banks must be planted with grass / shrubs immediately after construction
A5. Creation of breeding sites for water borne vectors (e.g. mosquitoes)	Drain and restore all borrow pits before abandonment. Get the views of the local communities to determine whether a borrow pit should be retained for use as source of water, especially in drought stricken areas. In case they are to be retained they should be properly designed for the intended purpose and that should be included in to the Contract conditions for contractors.
A6. Destruction of infrastructure / social service utilities	Avoid damage to existing infrastructure and social service utilities. But in case damage cannot be avoided it is important to carry out survey and notify the general public of any possible interruptions prior to commencement of works. Arrangement must be made with responsible authorities before moving or altering the existing infrastructure and/ or service utilities.

ENVIRONMENTAL ISSUES	MITIGATION MEASURES
	The damaged infrastructure / service utilities must be restored immediately to avoid inconveniences to the public. The contractor must follow the prescribed procedures in the Standard Specification for Road Works (*Section 1202)*
A7. Disruption of pedestrians and NMT	Identify potential location of passageways for pedestrians and NMT and designed them to meet the needs of pedestrians and NMT.
A8. Increased incidence of HIV/AIDS and STIs	Locate the construction camp site far from human settlements and employ a large number of unskilled laborers from within the local communities to minimize number of newcomers. Involve the local NGOs and government agencies already active in the project area in awareness creation and educating the local communities on HIV / AIDS and STIs prevention. Some funds must be provided by TANROADS during project implementation to reinforce the effort being done by local NGOs and government agencies in the project area on HIV / AIDS campaigns. The funds should also help the local NGOs to create awareness and educate the contractor's workforce on HIV / AIDS and STIs prevention.
A9. Construction related accidental risks	Safety signal devices should be installed to ensure safety during construction. Effective safety and warning measures should be taken to reduce accidents. Construction workers must be equipped with helmets and other safety gears. The management and use of blasting materials should be done by contractor in strict conformity with the safety requirements for public security as stipulated in the Mining Act of 1998 and Mining (Safety and Occupational Health) Regulation of 1999. The Contractor must follow procedures for handling explosives as prescribed in the Standard Specifications for Road Works (Section 1222)
A10. Disruption of traffic flow during construction	Traffic jam during construction should be minimized through traffic management plan and use of road signs. Contractor should deploy personnel at crucial points to guide traffic movement. Involvement of Traffic Officers should also help to ensure smooth movement of traffic during construction.
B1. Destruction of adjacent land use and properties due to increased runoff, flooding and soil erosion	In slopes and suitable places along the roadside, grass must be planted, and retaining wall, water intercepting ditches, and masonry rubbles must be built to prevent damage to adjacent properties. Temporary and permanent drainage systems must be designed to minimize the impact on adjacent properties during construction and operation, respectively.
B2. Soil erosion and sedimentation of road pavement along Hedaru-Chekelei road section	Problem of soil erosion due to community activities can be mitigated through construction of dam on the upstream side beyond the road pavement and planting of vegetation. Other measures are to educate local communities on good cultivation practice such as agro-forestry and contour farming. This will require provision of some funds to finance involvement of local NGOs that are active in the area. These NGOs should help to educate the local communities on environmental protection and conservation measures such as tree planting, agro-forestry, and contour farming. They will also educate them on alternative source of house construction materials, which do not use wood fuel.

ENVIRONMENTAL ISSUES	MITIGATION MEASURES
	Funds should also be provided to finance on the job training for Road Inspector from TANROADS to participate in the environmental protection and soil conservation activities and general environmental monitoring.
B3. Soil erosion and sedimentation of watercourses	Road run off must be channeled to natural water course through side drains in which baffles and rip rap are placed to check water velocity. Drains must be included at short intervals to cope with runoff. Adequate number of culverts must be designed and placed in such a way that storm water does not damage adjacent land use below the road bed.
B4. Traffic related accidents	Put road signs to warn motorists of crossing livestock and pedestrians. Whenever possible use box culverts as road underpass in appropriate locations for use by crossing livestock. Provide clearly displayed name boards for each village at entrance and exits. Impose speed limits and reinforced by rumble strips at the entrance in village centers. Speed humps should be used sparingly, since they constitute hazards for road users. However, they could be justified near schools and dispensaries but should be clearly marked as pedestrian crossings. Allocate some funds to finance involvement of local communities residing along the road alignment to participate in road safety campaigns during project implementation.
B5. Risk of accidents to livestock and people in borrow pit and quarry sites	All borrow pits and quarry sites must be fenced off during construction to prevent access by livestock and people. All borrow pits must be restored by refilling with overburden before abandonment. Operations of borrow pits and quarry sites must be done as prescribed in the Standard Specifications for Road Works *(Section 3400)* and Mining Regulation.[16]
C1. Restoration of borrow	In some areas, especially in dry areas the borrow pits could be used a source of water supply for the local communities and their livestock. In this case the contractor should design the borrow pits to suit the purpose. Some times the borrow pits could be retained for future use as source of road rehabilitation / construction materials. These borrow pits should be fenced off to prevent access by people, especially children and livestock In case no future use is expected of the borrow pits should be restored by backfilling and planting with trees / shrubs.
C2. Construction equipment / vehicles / machinery	All construction equipment / vehicles and machinery should be removed immediately from the site at the end of defects liability period.
C3. Workers' campsite, workshops and other associated facilities.	The workers' campsite and other facilities should be removed at the end of defect liability period. The removed materials should be transported and kept in safe place for use by the Contractor in other works.

ENVIRONMENTAL ISSUES	MITIGATION MEASURES
	However, in some cases the workers' campsite can be retained for use by the local communities as a school or dispensary as the case may be.
C4. Site clearing	All debris, oils, grease and solid waste should be removed from construction sites The area should be cleaned and all domestic wastes, debris / waste metals, grease and oils must be cleaned up and disposed of in a manner approved by the Resident Engineer.

17. Cost for the mitigation measure is estimated at US$ 68,400.

Implementation and monitoring

18. The contractor will be responsible for implementation of environmental and social mitigation measures under the supervision of the Resident Environmental Officer from TANROADS. This is to ensure that technical and environmental clauses are followed and well implemented by the contractor.

Component C: the Zanzibar Airport component

19. The EA was prepared under the IRP2 credit. The main environmental and social issues were minimum noise pollution, land reserved, and materials. The EA stated that these issues were not significant and easily mitigated through contract clauses. There will be almost no additional noise pollution since the extension is toward the sea and takeoff beyond threshold 36 would be further from town than the present takeoff location of threshold 36. Land has been reserved (within the master plan) for the future runway extension. Materials proposed to be used in the lower levels of construction are readily available (soft local stone). For the wearing course the aggregates will be imported from the mainland.

20. The potential positive impacts anticipated are as follows: the increased use of larger planes, attracting direct services from north European and far eastern markets; increased tourism; air cargo, which could reduce the congestion at the seaport; and the increase in passenger flows will provide major opportunities for improvements in the existing concessions and will provide the drive for the new concessions to be formed.

21. Another EA was recently done for the Zanzibar Airport component. Relevant local authorities in Zanzibar were consulted during the assessment exercise. The EA report was cleared and disclosed on July 30, 2007. Environmental impacts identified under the recently done EA are presented in table A10.3, together with the mitigation measures to prevent or minimize adverse environmental impacts that may arise due the implementation of project.

Table A10.3: Environmental Impacts and Mitigation Measures

S/No.	Impact	Mitigation measure
1	Loss of vegetation and landscape effects	a) Restore the borrow pit and quarry sites where gravel and aggregate will be collected

		b) Sand mining should be avoided along the river banks
2	Disease infection and transmission (HIV/AIDS, malaria etc)	a) Awareness campaign to sensitize the workforce as well as local communities on the risks of STD and HIV/AIDS. b) Distribution of condoms be to the workforce c) Restoration of borrow pits by leveling and re-vegetating
3	Waste production	a) Reusing of remaining materials for construction of infrastructures like roads or buildings b) Leveling and covering unwanted materials by top soil to encourage re-vegetation c) Disposing of other solid waste at the land fill
4	Encroachment	Providing permanent beacons for the boundaries of the airport
5	Occupational health and safety	a) A person responsible for traffic safety to be deployed by the contractor b) Providing workers with proper working gear
6	Increased noise and vibration	a) Proper choice of plant and machinery b) Providing workers with proper working gear

22. Mitigation measures for identified environmental impacts will be included in the bidding documents and implemented through the contract.

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Annex 11: Project Preparation and Supervision

TANZANIA: Second Central Transport Corridor Project

	Planned	Actual
PCN review	10 /05/2006	10/ 17/ 2006
Initial PID to PIC	11/26/2007	11/26/2007
Initial ISDS to PIC	11/01/2007	11/20/2007
Appraisal	11/20/2007	11/20/2007
Negotiations	04/16/2008	04/24/2008
Board/RVP approval	05/27/2008	
Planned date of effectiveness	07/01/2008	
Planned date of mid-term review	09/30/2009	
Planned closing date	12/31/2011	

Key institutions responsible for preparation of the project:

(i) Tanzania National Roads Agency (TANROADS)
(ii) Dar Rapid Transit Agency (DART)
(iii) Ministry of Communications and Transport (MoCT), Zanzibar

Bank staff and consultants who worked on the project included:

Name	Title	Unit
Dieter Schelling	Lead Transport Specialist	AFTTR
Solomon Muhuthu Waithaka	Senior Highway Engineer	AFTTR
Yonas Eliesikia Mchomvu	Transport Specialist	AFTTR
Zena Ahmed Said	Consultant	AFTTR
Mercy Mataro Sabai	Senior Financial Management Specialist	AFTFM
Edith Ruguru Mwenda	Senior Counsel	LEGAF
Pascal Tegwa	Senior Procurement Specialist	AFTPC
Luis Schwarz	Senior Finance Officer	LOAFC
Donald Mneney	Procurement Specialist	AFTPC
Samuel Zimmerman	Sr. Urban Transport Specialist (Peer Reviewer)	ETWTR
Juan Gaviria	Sector Leader (Peer Reviewer)	AFTTR
England Rogasian Maasamba	Team Assistant	AFCE1
Grace Mayala	Team Assistant	AFCE1
Nina Jones	Program Assistant	AFTTR
Nina Chee	Senior Environmental Specialist	AFTEN
Yvette Djachechi	Senior Social Development Specialist	AFTEN
Mary Bitekerezo	Senior Social Development Specialist	AFTCS

Bank funds expended to date on project preparation:

1. Bank resources:	90k
2. Trust funds:	0
3. Total:	90k
Estimated Approval and Supervision costs:	300k
Remaining costs to approval:	20k
Estimated annual supervision cost:	75k

Annex 12: Documents in the Project File

TANZANIA: Second Central Transport Corridor Project

Documents listed below have been filed in IRIS folder P103633 – Second Central Transport Corridor Project

	Document	Date filed
1	National Transport Policy 2003	04/10/2008
2	Transport Sector Investment Programme 2007/08 – 2011/12 (TSIP), November 2007	04/10/2008
3	The Roads Act, 2007 (No.13 of 2007)	04/08/2008
4	National Roads Safety Strategy 2006-10	04/10/2008
5	Sector Environmental Assessment for Transport Sector Investment Program, February 2007	04/10/2008
6	CTCP2 - Procurement Plan	04/29/2008
7	CTCP2 – Integrated Safeguards Data Sheet (Board stage)	04/30/2008
8	Consultancy Service for the Conceptual design of a Long term Integrated Dar es Salaam BRT System and detailed Design for the Initial Corridor (14 reports), December 2006	04/22/2008
9	DART Environmental and Social Impact Assessment (ESIA), February 2007	07/27/2007
10	DART Resettlement Policy Framework (RPF), February 2007	09/24/2007
11	DART Resettlement Action Plan Phase 1(A), May 2007	07/30/2007
12	DART Resettlement Action Plan Phase 1(B), November 2007	12/06/2007
13	DART Business Plan, April 2008	04/28/2008
14	DART Investor's Document, April 2008	04/28/2008
15	Bidding documents for Construction of BRT Infrastructure, April 2008	04/25/2008
16	Draft Bidding & Contract Documents for Bus Operators, April 2007	04/28/2008
17	Draft Bidding & Contract Documents for Fare Collector, April 2007	04/28/2008
18	Baseline rush hour travel time count between Ubungo and Posta, April 2008	04/28/2008
19	Economic Justification report for Korogwe-Same Road, April 2006 & Review of Economic feasibility of Korogwe-Same road, November 2007	04/28/2008
20	Korogwe-Same Environmental and Social Impact Assessment (ESIA), January, 2007	01/31/2007.
21	Tender documents for Lot 1:Korogwe – Mkumbara (76km) and Lot 2: Mkumbara – Same road (96km), November 2007	04/28/2008
22	Environmental Assessment for extension of runway for Zanzibar Airport, February 2007	07/27/2007
23	Zanzibar Transport Master Plan, July 2007	04/10/2008
24	Baseline Survey of Airline and Passenger Satisfaction Rating for Zanzibar Airport, April 2008	04/15/2008
25	Aerodrome Safety Status at Zanzibar International Airport (a letter by TCAA), April 9, 2008	04/09/2008

Annex 13: Statement of Loans and Credits

TANZANIA: Second Central Transport Corridor Project

			Original Amount in US$ Millions						Difference between expected and actual disbursements	
Project ID	FY	Purpose	IBRD	IDA	SF	GEF	Cancel.	Undisb.	Orig.	Frm. Rev'd
P087154	2007	TZ-Water Sector Support SIL	0.00	200.00	0.00	0.00	0.00	202.04	2.00	0.00
P070544	2006	TZ-Accountability, Transparency & Integrity	0.00	40.00	0.00	0.00	0.00	40.16	-1.13	0.00
P084213	2006	TZ-GEF Marine & Coastal Env Mgmt (FY06)	0.00	0.00	0.00	10.00	0.00	7.87	2.07	0.00
P085009	2006	Private Sector/MSME Competitiveness	0.00	95.00	0.00	0.00	0.00	90.21	3.46	0.00
P100314	2006	TZ-Tax Modernization Project	0.00	12.00	0.00	0.00	0.00	12.34	0.29	0.00
P085752	2006	TZ-Agr Sec Dev (FY06)	0.00	90.00	0.00	0.00	0.00	83.84	0.76	0.00
P099231	2006	Financial Sector Support Project	0.00	15.00	0.00	0.00	0.00	15.22	0.10	0.00
P082492	2006	TZ-Marine & Coastal Env Mgmt SIL (FY06)	0.00	51.00	0.00	0.00	0.00	42.57	8.73	0.00
P085786	2005	TZ-Soc Action Fund 2 SIL (FY05)	0.00	129.00	0.00	0.00	0.00	115.07	41.05	0.00
P070736	2005	TZ-Loc Govt Supt SIL (FY05)	0.00	52.00	0.00	0.00	0.00	123.32	12.61	4.40
P082335	2004	TZ-Health Sec Dev II Scale-Up APL (FY07)	0.00	40.00	0.00	0.00	0.00	7.96	4.14	0.00
P078387	2004	TZ-Central Transp Corridor Prj (FY04)	0.00	122.00	0.00	0.00	0.00	79.07	51.22	0.00
P083080	2004	TZ-Sec Edu Dev Prj (FY04)	0.00	123.60	0.00	0.00	0.00	49.10	50.91	0.00
P071014	2004	TZ-HIV/AIDS APL (FY04)	0.00	0.00	0.00	0.00	0.00	50.60	19.31	0.00
P067103	2003	TZ-Partic Agr Dev & Empowerment SIL (FY03)	0.00	56.58	0.00	0.00	0.00	33.23	12.19	0.00
P059073	2003	TZ-Dar Water Suply & Sanitation (FY03)	0.00	61.50	0.00	0.00	0.00	20.53	6.06	-5.30
P073397	2002	TZ-Lower Kihansi Env Mgmt TAL (FY02)	0.00	6.30	0.00	0.00	0.00	0.37	-0.57	0.00
P058706	2002	TZ-Forest Conserv & Mgmt SIL (FY02)	0.00	31.10	0.00	0.00	0.00	22.22	15.47	9.58
P047762	2002	TZ-Rural Water Sply (FY02)	0.00	26.00	0.00	0.00	0.00	9.72	5.13	-1.02
P002797	2002	TZ-Songo Gas Dev & Power Gen (FY02)	0.00	183.00	0.00	0.00	0.00	88.08	59.40	0.00
P069982	2001	Regional Trade Fac. Proj. —Tanzania	0.00	15.00	0.00	0.00	0.00	8.81	7.35	0.00
P060833	2000	TZ-Pub Sec Reform Prgm (FY00)	0.00	41.20	0.00	0.00	0.00	7.63	5.99	5.99
P049838	2000	Privatization & Priv Sec Dev	0.00	45.90	0.00	0.00	0.00	23.01	21.37	16.27
		Total:	0.00	1,436.18	0.00	10.00	0.00	1,132.97	327.91	29.92

TANZANIA
STATEMENT OF IFC's
Held and Disbursed Portfolio
In Millions of US Dollars

	Committed	Disbursed
	IFC	IFC

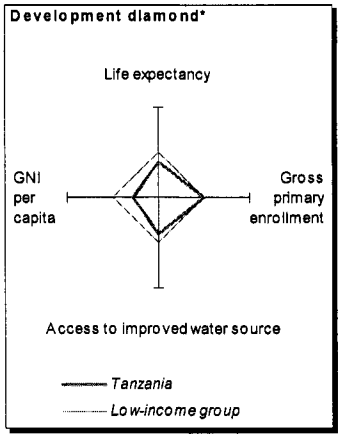
FY Approval	Company	Loan	Equity	Quasi	Partic.	Loan	Equity	Quasi	Partic.
2001	AEF Boundary Hil	0. 20	0. 00	0. 00	0. 00	0. 20	0. 00	0. 00	0. 00
2005	BBL	10. 00	0. 00	0. 00	0. 00	10. 00	0. 00	0. 00	0. 00
2002	Exim Bank	0. 83	0. 00	1. 00	0. 00	0. 83	0. 00	1. 00	0. 00
2000	IOH	2. 10	0. 00	0. 00	0. 00	2. 10	0. 00	0. 00	0. 00
2000	NBC	0. 00	10. 00	0. 00	0. 00	0. 00	4. 00	0. 00	0. 00
1994	Tanzania Brewery	0. 00	3. 43	0. 00	0. 00	0. 00	3. 43	0. 00	0. 00
	Total portfolio:	13. 13	13. 43	1. 00	0. 00	13. 13	7. 43	1. 00	0. 00

		Approvals Pending Commitment			
FY Approval	Company	Loan	Equity	Quasi	Partic.
	Total pending commitment:	0. 00	0. 00	0. 00	0. 00

Annex 14: Country at a Glance

TANZANIA: Second Central Transport Corridor Project

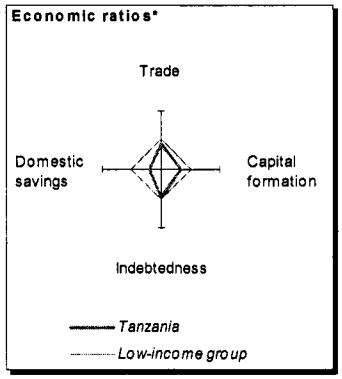
POVERTY and SOCIAL	Tanzania	Sub-Saharan Africa	Low-income
2005			
Population, mid-year *(millions)*	38.3	741	2,353
GNI per capita *(Atlas method, US$)*	330	745	580
GNI *(Atlas method, US$ billions)*	12.6	552	1,364
Average annual growth, 1999-05			
Population *(%)*	2.0	2.3	1.9
Labor force *(%)*	2.2	2.3	2.3
Most recent estimate (latest year available, 1999-05)			
Poverty *(% of population below national poverty line)*	36	..	..
Urban population *(% of total population)*	24	35	30
Life expectancy at birth *(years)*	46	46	59
Infant mortality *(per 1,000 live births)*	78	100	80
Child malnutrition *(% of children under 5)*	29	29	39
Access to an improved water source *(% of population)*	62	56	75
Literacy *(% of population age 15+)*	69	..	62
Gross primary enrollment *(% of school-age population)*	106	93	104
Male	108	99	110
Female	104	87	99



KEY ECONOMIC RATIOS and LONG-TERM TRENDS

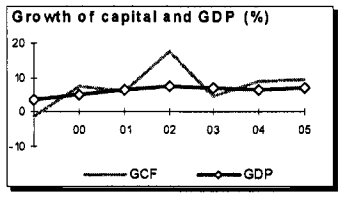
	1985	1995	2004	2005
GDP *(US$ billions)*	..	5.3	11.3	12.1
Gross capital formation/GDP	..	19.8	18.4	18.9
Exports of goods and services/GDP	..	20.7	17.8	17.1
Gross domestic savings/GDP	..	1.9	8.5	9.7
Gross national savings/GDP	..	-0.1	8.0	9.3
Current account balance/GDP	..	-19.9	-12.2	-12.8
Interest payments/GDP	..	1.6	0.4	..
Total debt/GDP	..	141.2	69.0	..
Total debt service/exports	39.1	21.1	5.9	..
Present value of debt/GDP	..	..	19.9	..
Present value of debt/exports	..	..	112.2	..

	1985-95	1995-05	2004	2005	2005-09
(average annual growth)					
GDP	2.5	5.4	6.7	7.0	7.4
GDP per capita	-0.9	3.2	4.7	5.0	5.9
Exports of goods and services	17.8	2.3	-7.0	-1.0	5.7

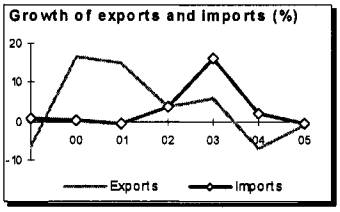


STRUCTURE of the ECONOMY

	1985	1995	2004	2005
(% of GDP)				
Agriculture	..	47.1	46.2	44.5
Industry	..	14.5	16.7	17.8
Manufacturing	..	7.2	7.0	7.5
Services	..	38.4	37.1	37.6
Household final consumption expenditure	..	86.6	78.7	76.8
General gov't final consumption expenditure	..	11.5	12.8	13.6
Imports of goods and services	..	38.6	27.7	26.3



	1985-95	1995-05	2004	2005
(average annual growth)				
Agriculture	2.9	4.1	6.0	5.3
Industry	-0.9	8.2	10.1	11.2
Manufacturing	-0.3	6.3	8.6	9.0
Services	1.3	5.3	6.0	6.7
Household final consumption expenditure	2.7	1.5	-0.3	1.0
General gov't final consumption expenditure	-4.3	16.6	24.4	13.2
Gross capital formation	-3.9	6.8	9.1	9.5
Imports of goods and services	3.9	3.0	2.2	-0.5



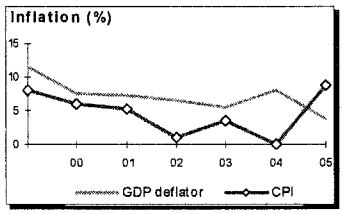
Note: 2005 data are preliminary estimates.

This table was produced from the Development Economics LDB database.

* The diamonds show four key indicators in the country (in bold) compared with its income-group average. If data are missing, the diamond will be incomplete.

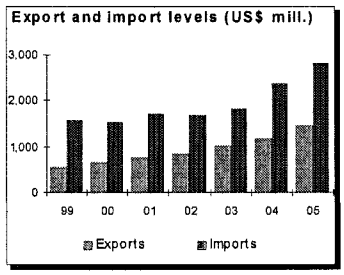
PRICES and GOVERNMENT FINANCE

	1985	1995	2004	2005
Domestic prices				
(%change)				
Consumer prices	33.3	28.4	0.0	8.6
Implicit GDP deflator	..	26.9	8.1	3.7
Government finance				
(%of GDP, includes current grants)				
Current revenue	..	11.0	11.8	13.0
Current budget balance	..	-2.3	-3.5	-4.4
Overall surplus/deficit	..	-5.2	-8.5	-10.8



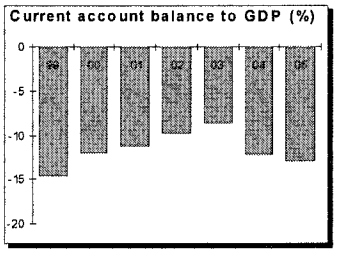
TRADE

	1985	1995	2004	2005
(US$ millions)				
Total exports (fob)	287	593	1,175	1457
Coffee	119	143	41	66
Cotton	30	120	38	98
Manufactures	33	109	95	120
Total imports (cif)	946	1,510	2,366	2,826
Food	85	97	257	203
Fuel and energy	227	186	461	600
Capital goods	390	602	877	1,069
Export price index *(2000=100)*	80	105	108	120
Import price index *(2000=100)*	102	141	133	149
Terms of trade *(2000=100)*	78	74	81	81



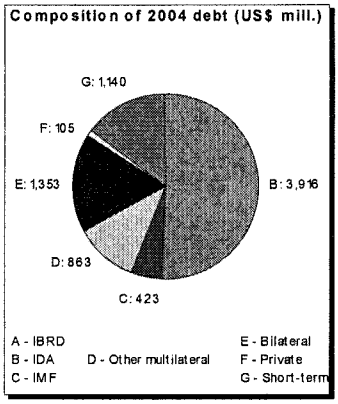
BALANCE of PAYMENTS

	1985	1995	2004	2005
(US$ millions)				
Exports of goods and services	445	1,089	1,911	2,704
Imports of goods and services	1,016	2,029	3,231	4,212
Resource balance	-571	-940	-1,320	-1,507
Net income	-93	-125	-68	-50
Net current transfers	148	18	8	6
Current account balance	-516	-1,047	-1,380	-1,551
Financing items (net)	531	1,093	1,620	1,763
Changes in net reserves	-14	-46	-241	-212
Memo:				
Reserves including gold *(US$ millions)*	16	270	2,296	2,049
Conversion rate *(DEC, local/US$)*	17.5	574.8	1,089.3	1,128.9



EXTERNAL DEBT and RESOURCE FLOWS

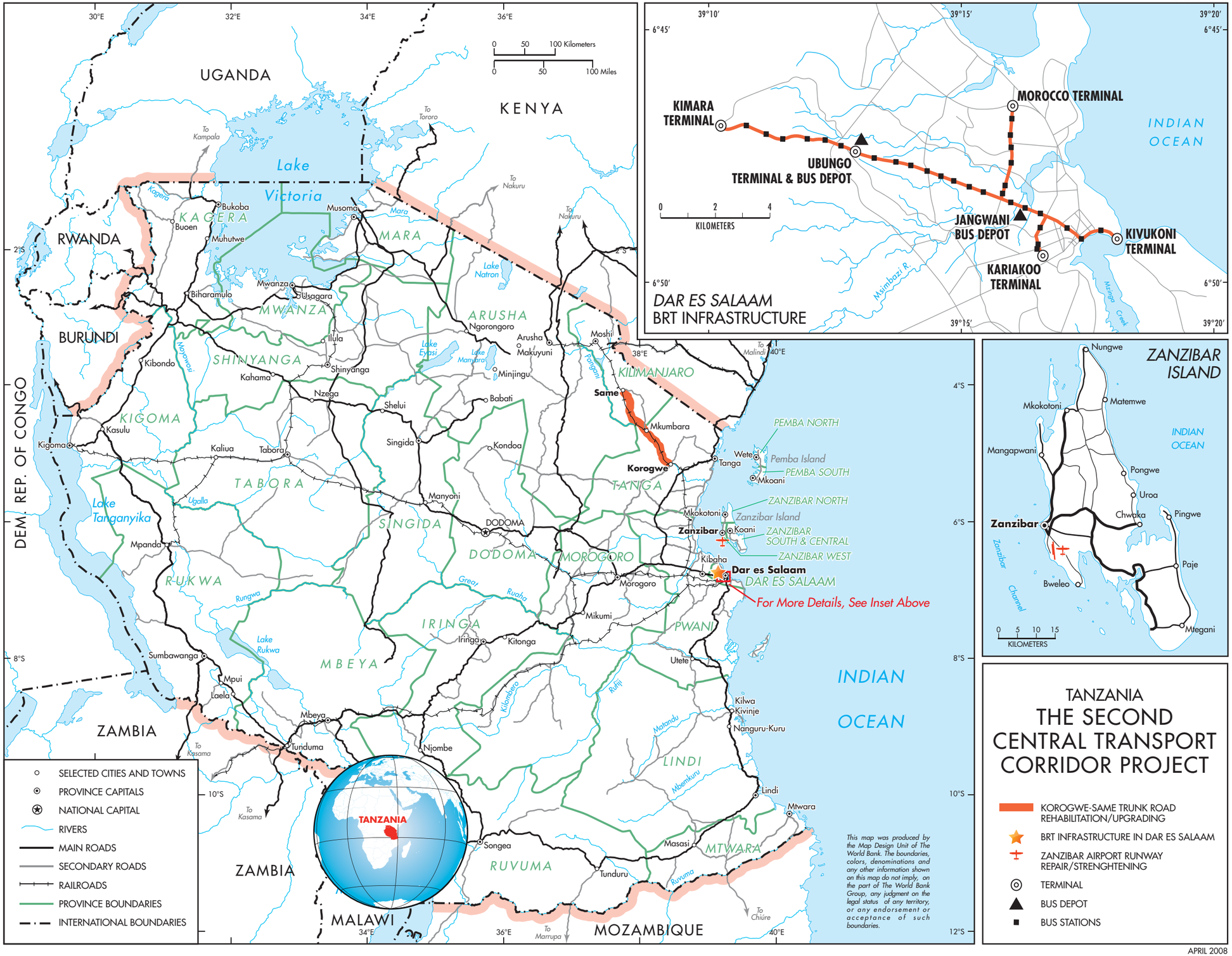
	1985	1995	2004	2005
(US$ millions)				
Total debt outstanding and disbursed	9,105	7,421	7,800	..
IBRD	266	87	0	0
IDA	568	2,182	3,916	3,861
Total debt service	174	233	119	..
IBRD	40	42	3	0
IDA	7	28	41	93
Composition of net resource flows				
Official grants	267	451	1,272	..
Official creditors	54	121	380	..
Private creditors	46	15	-4	..
Foreign direct investment (net inflows)	15	120	249	..
Portfolio equity (net inflows)	0	0	0	..
World Bank program				
Commitments	45	11	393	..
Disbursements	46	160	343	275
Principal repayments	27	46	16	62
Net flows	18	114	327	213
Interest payments	20	24	28	31
Net transfers	-1	90	299	182



Note: This table was produced from the Development Economics LDB database. 8/13/06

MAP SECTION

IBRD 35798



TANZANIA
THE SECOND CENTRAL TRANSPORT CORRIDOR PROJECT

- KOROGWE-SAME TRUNK ROAD REHABILITATION/UPGRADING
- BRT INFRASTRUCTURE IN DAR ES SALAAM
- ZANZIBAR AIRPORT RUNWAY REPAIR/STRENGHTENING
- TERMINAL
- BUS DEPOT
- BUS STATIONS

APRIL 2008