

PROJECT COMPLETION REPORT (PCR)

A. PROJECT DATA AND KEY DATES

I. BASIC INFORMATION

Project Number: P-SZ-DB0-10	Project Name: Mbabane Bypass Road Project	Country (ies): Kingdom of Swaziland	Month and Year of 98% Disb. Rate: 2009	Date PCR sent to PCR@afdb.org
Lending Instrument(s) African Development Bank (ADF)		Sector: Transport	Environmental Classification: Category 1	
Original Commitment: UA 37.19 million	Amount Cancelled	Amount Disbursed: SZL361,660,874.01 (UA 30,23)	Percent Disbursed: 96.8%	
Borrower: Ministry of Finance				
Executing Agency(ies) [List the main Ministries, Project Implementation Units, Agencies and civil society organizations responsible for implementing project activities.]: The Roads Department under the Ministry of Public Works and Transport was the Executing Agency. A Project Coordinator was designated to monitor the activities during implementation.				
Co-financers and other External Partners [List all other sources and amounts of financing, technical assistance or other resources used in this project]: Government of Swaziland in the amount of UA 8.93 million				

II. KEY DATES

Project Concept Approved by Ops. Com. N/A	Note Com. N/A	Appraisal Report Approved by Ops. Com: N/A	Board Approval: 17 December 2003
Restructuring(s)			
	Original Date	Actual Date	Difference in months [Actual-Original]
EFFECTIVENESS	18-août-04	01-Sept. 2004	0,5
MID-TERM REVIEW	N/A	N/A	N/A
CLOSING	02-Mar. 2007	For ongoing projects enter date of 98% disb. Rate: September, 2009	30

III. RATINGS SUMMARY

CRITERIA	SUB-CRITERIA	RATING
PROJECT OUTCOME	Acievement of Outputs	3
	Achievement of Outcomes	4
	Timeliness	2
	OVERALL PROJECT OUTCOME	3
BANK PERFORMANCE	Design and Readiness	3
	Supervision	4
	OVERALL BANK PERFORMANCE	4
BORROWER PERFORMANCE	Design and Readiness	3
	Implementation	3
	OVERALL BORROWER PERFORMANCE	3

IV. RESPONSIBLE BANK STAFF

POSITIONS	AT APPROVAL	AT COMPLETION
Regional Director	N/A	Frank Black
Sector Director	K. Bedoumra	G. Mbesherubusa
Task Manager	H. Nyame-Mensah	Lawrence Kiggundu
PCR Team Leader		J. Mabombo
PCR Team Members		Y. Arcelina and A. Ambo

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B. PROJECT CONTEXT

Sumarize the rationale for Bank assistance. State:

- what development challenge the project concerns,
- the borrower's overall strategy for addressing it,
- Bank activities in this country (ies) and sector over the past year and how they performed, and
- ongoing Bank and other externally financed activities that complement, overlap with or relate to this project.

Please cite relevant sources. Comment on the strength and coherence of the rationale.

[250 words maximum. Any additional narrative about the project's origins and history, if needed, must be place in Annex 5: Project Narrative]

• To fill the missing link on the Matsapha-Mbabane-Ngwenya corridor and provide the vital link towards enhancing regional integration through development of the east/west corridor which forms part of Swaziland's commitment to the SATCC protocol; to ease the traffic flow between the South African border and the interior part of Swaziland which is currently the most heavily trafficked road in the country; to contribute towards achieving the sector goal by providing an efficient and cost-effective transport system for both national and international traffic within Swaziland; and to enhance linkages between Swaziland and the neighbouring countries of Sout Africa and Mozambique.

•The Bank's suport to Swaziland, over the years, has demonstrated a comparative advantage in the road transport sub-sector. The 2001-03 Bank Group medium-term strategy for Swaziland emphasized poverty reduction through targeted interventions in three sectors, namely infrastructure, social sector, agriculture and rural development. In assisting the Government in addressing the challenges of poverty, unemployment, and food security, by improving infrastructure services, the Bank in line with the Poverty Reduction Strategy and Action Plan (PRSAP) in the context of the GoS National Development Strategy (1997-2022) whose vision is that by 2022 Swaziland will have moved to the top 10 per cent of the medium human development group of countries founded on sustainable economic development, social justice and political stability.

• In 1999 the Transport Sector Project financed by the Bank was completed. This project aimed at providing Technical Assistance and Training to the Ministry of Works and Construction (MOWC) and the Ministry of Transport and Communications (MOTC) to improve operational performance of public institutions responsible for the transport sector, and upgrading to bitumin standard of the 27 km Mbabane-Matsapa Road, a crucial link of Ngwenha-Mbabane-Manzini road corridor which is the main east/west transport corridor in the country linking Ngwenya, Mbabane, Manzini and Lomasha (Mozambique border). In this project a section of 5km length of the existing road was left out. Thus, the Mbabane Bypass Road Rehabilitation project has taken into account this section of 5 km plus 6 km from SCOT Junction to Nkoyoyo of the road leading to Ngwenya, the border with South Africa totalling 11 km project.

•The Country Strategy Paper for Swaziland (2001-2003) that was based on the Government's National Development Strategy (NDS), the Economic and Social Reform Agenda (ESRA), the 1999-2000 and 2000-2001 Budget Statements and other reports, states in its "Overall Strategy" that the Bank Group medium-term strategy is oriented towards contributing to the government of Swaziland's agenda to reduce poverty through supporting projects and programmes for economic growth and sustainable development, creation of employment opportunities, human resources development and creation of an enabling environment for private sector development, particularly by supporting further development of economic and social infrastructure.

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C. PROJECT OBJECTIVES AND LOGICAL FRAMEWORK

1. State the Project Development Objective(s) (as set out in the appraisal report)

i. To improve the quality of road transport services levels; and (ii) Reduce vehicle operating costs on the Mbabane Bypass

2. Describe the major project components and indicate how each will contribute to achieving the Project Development Objectives.

The project had three components; (i) **Civil Works. This component comprised** Upgrading of 5-km of existing two-lane paved road and construction of 6-km road to 50-mm thick asphalt concrete dual carriageway (2x7.0-m lanes per direction) and 2.0-meter wide paved shoulders on each side of the Mbabane Bypass (total length 11 km); (ii) **Consultant services for the supervision of the civil works**; this included the recruitment of an experienced firm of consultants that on behalf of the Executing Agency undertook pre-contract and supervision services of the civil works. The responsibility of the consultant included also the following: assisting the Executing Agency in tendering and tender evaluation process, contract award process for the civil works, review of land acquisition requirements, administer the construction contract, inspect the works, supervise the necessary quality control testing performed by the contractor, track the progress and the cost, preparation and submission of monthly, quarterly and final completion reports, and maintain close relation with the Executing Agency and relevant ministries, and (iii) **Project audit services** that included an appointment by the Auditor General's Office of a firm of external auditors that provided audit services for the overall project. The purpose of the audit service is to ensure that proceeds of the loan were utilised solely for the purpose for which they were intended. The responsibility of the selected auditor included periodic verification of the project accounts in relation to the works executed and report to the project management.

RELEVANT	a) Relevant to the country's development priorities	The project was relevant to the country's sector goal of providing efficient and cost-effective transport system for both national and international traffic within the country and the improvement of quality road transport services with reduction of vehicle operating costs.	4
ACHIEVABLE	b) Objectives could in principle be achieved with the project inputs and in the expected timeframe	The objectives could have been achieved if project was implemented according to its implementation plan. However, significant cost overruns and time delays resulted due to poor implementation of resettlement activities.	2
CONSISTENT	c) Consistent with the Bank's country or regional strategy	The project was consistent with the Bank's lending programme in Swaziland which was targeted to transport level enhancement and regional integration.	4
	d) Consistent with the Bank's corporate priorities	The project was consistent with the Bank's corporate priorities of transport development, regional integration, and sustainable economic growth.	4

4. Lay out the log. frame. If a log. frame does not exist, complete the table below, indicating the overall project development objective, the major components (minimum of two) of the project, the major activities (minimum of two) of each component and their expected outputs, outcomes, and indicators for measuring the achievement of outcomes. Please add additional rows for components, activities, outputs or outcomes if needed.

COMPONENTS	ACTIVITIES	OUTPUTS	EXPECTED OUTCOMES	INDICATORS TO BE MEASURED
Component i. Civil works	Activity 1. Procurement for civil works (SPN, PQ, evaluation and award)	List of pre-qualified contractors	Competitive bidding	Bids comparable to going rates
	Activity 2. Upgrading/ construction of 11 km of Mbabane Bypass Road including 10 footbridges, 6 GSI, single slope medium barrier and street lighting.	A 5-km of upgraded road with two-lanes dual carriageway, 6-km bypass with two lanes dual carriageway and 2-meter shoulder on either side of the road along the 11-km section of the project road.	Reduced vehicle operating costs by 30% when the road is open to traffic, average roughness about 3,000 mm/km throughout the life of the road, reduced travel time by 40%, reduced road accidents, and reduced maintenance costs. In addition, the Bypass is expected to provide a relief link between Swaziland to other neighboring countries. Minimized pedestrians accidents.	Maintenance cost saving, vehicle operating cost savings and time travel savings, road roughness, traffic counts. Number of pedestrian accidents.
Consultancy Services for Supervision of Works	Undertake pre-contract services for pre-qualification and tendering	Design review reports, bidding documents and bid evaluation report	Smooth bidding process	Quality of documents.
	Supervision of the Mbabane-Ngwenya Road	Monthly and quarterly reports	good quality of the works in conformity with the project specifications and expected time. Cost effective project.	Project activities undertaken within the agreed timeframe in conformity with the project design.
Carry out audit Services	Carry out audity services.	Audit reports	Compliance with loan agreement provision	Financial management

5. For each dimension of the log. frame, provide a brief assessment (up to two sentences) of the extent to which the log. frame achieved the following. Insert a working score, using the scoring scale provided in Appendix 1. If no log. frame exists, score this section as a 1 (one).

LOG. FRAME DIMENSIONS		ASSESSMENT	WORKING SCORE
LOGICAL	a) Presents a logical causal chain for achieving the project development objectives	The Appraisal Report presents a project matrix in a logical framework approach that captures the project development objectives.	2
MEASURABLE	b) Expresses objectives and outcomes in a way that is measurable and quantifiable	The project matrix expresses the objectives and outcomes in a measurable and quantifiable way.	3
THOROUGH	c) States the risks and key assumptions	Partially. Some project implementation related risks (resettlement) were not captured.	1

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D. OUTPUTS AND OUTCOMES

I. ACHIEVEMENT OF OUTPUTS

In the table below, assess the achievement of expected vs. actual outputs for each major activity. Import the expected outputs from the log. frame in Section C. Score the extent to which the expected outputs were achieved. Weight the scores by the activities' approximate share of project costs. The overall output score will be auto-calculated as the sum of the weighted scores. Override the auto-calculated score, if desired, and provide justification.

MAJOR ACTIVITIES		Working Score	Share of Project Costs (as stated in Appraisal Report)	Weighted Score
Expected Outputs	Actual Outputs			
1. A 5-km of upgraded road with two-lanes dual carriageway, 6-km bypass with two lanes dual carriageway and 2-meter shoulder on either side of the road along the 11-km section of the project road, six grade-separated intersections, 10 footbridges. single slop median barrier, lighting along the full length of the road.	A 5-km of upgraded road with two-lanes dual carriageway, 6-km bypass with two lanes dual carriageway and 2-meter shoulder on either side of the road along the 11-km section of the project road and 8 footbridges, and 30-km of access roads, lighting along the full length of the road,	4	80,24	3,2096
2. Undertaking quality supervision on upgrading 5-km of existing road and construction of a 6-km bypass in accordance to the designs.	Quality supervision of road projects but modest support provided to GOS in respect to on time technical options advise (e.g. graves).	3	5,78	0,1734
3. Produce and submit the required audit reports	Audit reports were overdue and disbursements were suspended.	3	0,16	0,0048
OVERAL OUTPUT SCORE [Score is calculated as the sum of weighted scores]				3

Check here to override the calculated score


Provide justification for over-riding the auto-calculated score

Insert the new score or re-enter the autocalculated score	3
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II. ACHIEVEMENT OF OUTCOMES

1. Using available monitoring data, assess the achievement of expected outcomes. Import the expected outcomes from the log. frame in Section C. Score the extent to which the expected outcomes were achieved. The overall outcome score will be auto-calculated as an average of the working scores. Override the auto-calculated score, if desired, and provide justification.

OUTCOMES		Working Score
Expected	Actual	
1. Reduced vehicle operating costs, travel time, pedestrian accidents, and maintenance costs.	A total net benefit of SZL 621.25 million is calculated during the 20-years life of the project, discounted at 12%, comprising: 62.4% from Vehicle operating cost savings ; 24.2% from time savings; and 13.4% from maintenance cost savings.	4
2. Good quality of the works and conformity with the project design and expected time. Cost effective project. Highly qualified and experienced contractor in place.	Well supervised 5-km of upgraded road and 6-km of newly constructed bypass. EIRR is 14.5% against 20.3% at appraisal due mainly to cost overrun. Qualified and experienced contractor was in place.	3
3 Proceeds of the loan are utilised solely for the intended purpose and according to Bank's and GOS.	Project partially audited. Some audit reports missing.(2007/2008 audit report outstanding).	2
OVERALL OUTCOME SCORE [Score is calculated as an average of the working scores]		3

 Check here to override the calculated score

Provide justification for over-riding the auto-calculated score

Insert the new score or re-enter the autocalculated score | 4

2. Additional outcomes. Comment on the project's additional outcomes not captured in the log. frame, including cross-cutting issues (e.g., gender).

The project has resulted in resettlement of 287 homesteads with about 1500 individuals under improved environment. In addition, the project has resulted in construction of 30-km of access roads in resettlement areas improving the mobility of the communities in general and settled population in particular. Furthermore, the project has benefited Swazis from employment opportunities on construction activities comprising 85% of the labour force, including 16% of women. The project also contributed to the strengthening of the local SME.

3. Risks to sustained achievement of outcomes. State the factors that affect, or could affect, the long-run or sustained achievement of project outcomes. Indicate if any new activity or institutional change is recommended to help sustain outcomes. The analysis should draw upon the sensitivity analysis in Annex 3

The implementation of the project is almost complete (98%). However, its sustainability depends on provision of proper maintenance and axle load control. However, Road Fund is not established yet although there is a plan to generate revenue through fuel levy, license fees and cross border charges. Currently, the sources of road maintenance financing is from Government budget. As mentioned by the Road Department, the 2007/08 budget is approximately SZL 331 million less than the 5 year average annual budget required to maintain the network at the minimum standards. Compared to the 2007/08 budget, the allocation for recurrent work should increase from SZL 70 million to SZL 417 million. With the current funding, the proportion of the paved network not complying with the minimum standards will increase to almost 59% (595-km) by 2015. In addition to low maintenance budget, there is no effective axle load control. Currently, there is only one weighbridge at Matsapha which however is not functioning. As provided by the GOS, 37% of trucks were overloaded in 2008. The proper placement of weighbridges at strategic locations along the project road is a requirement to sustain up to the end of its 20-years life. Human resources at the Roads Department still not adequate, but this has been minimized by the "Transport Sector Project" financed by the ADB and completed in 1999. This project aimed at providing Technical Assistance and Training to the Ministry of Works and Construction (MOWC) and the Ministry of Transport and Communications (MOTC) to improve operational performance of public institutions responsible for the transport sector. The project coordinator benefited from this training.

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E. PROJECT DESIGN AND READINESS FOR IMPLEMENTATION

1. State the extent to which the Bank and the Borrower ensured the project was commensurate with the borrower's capacity to implement by designing the project appropriately and by putting in place the necessary implementation arrangements. Consider both design aspects (inputs) and actual outcomes. Design aspects include: extent to which project design took account lessons learned from previous PCRs in the sector or the country (please cite key PCRs); whether the project was informed by robust analytical work (please cite key documents); how well Bank and Borrower assessed the capacity of the implementing agencies and Project Implementation Unit; and provisions made for technical assistance. Project outcomes include the extent to which the project was completed on time and activities were implemented as designed.

[200 words maximum. Any additional narrative about implementation should be included at Annex 5: Project Narrative]

- The Roads Department (RD) under the Ministry of Public Works and Transport (MOPWT) is responsible for execution of the project road. BCEOM is the supervision consultant and WBHO Construction (pty) Ltd. is the contractor. The Supervision Consultant had carried out the original design and review of the project road. An engineer has been assigned by MOPWT, with sufficient qualification and experience as the project coordinator for the duration of the implementation of the project.

- The organizational structure of the RD is the same as it was at appraisal. However the government implementation capacity was not adequate, both technically and institutionally. The government was not technically capable of leading the implementation process and therefore relied on the supervision consultant not only for supervision of the day to day activities on site, which is common in road works contracts, but also for strategical decisions. However, the mission appreciated the effort of the GOS in training staff for the strengthening of the institutional capacity. This training was done under the Transport Sector Project and the trained staff have been assigned tasks on project management within the government structure. The institutional set up of the project was well conceived. This included an Environmental and Social Management Plan. However during implementation phase some of the provisions didn't materialize (e.g. full participation of the concerned stakeholders). RD is managed by the Chief Roads Engineer under the Principal Secretary. The Planning & Development, and Operations Divisions are placed under the Chief Engineer. The divisions are staffed by civil engineers lacking other disciplines such as economists, sociologists, statisticians, etc. The legislation for the creation of a Roads Authority (RA) to manage the road network on behalf of Government is advanced expected to outsource the maintenance functions.

- The output and outcomes of the project are satisfactory and the activities were implemented as designed. However the cost increase of about 150% and time overrun of more than 200% due to delay of the resettlement is an important lesson for future management of resettlement of project affected people (PAP) on road projects prior to implementation of civil works. At the commencement of the civil works the resettlement was not completed and consequently the geotechnical investigation was not detailed enough due to occupation of the area allocated to the project along the road alignment.

2. For each dimension of project design and readiness for implementation, provide a brief assessment (up to two sentences). Insert a working score, using the scoring scale provided in Appendix 1.

PROJECT DESIGN AND READINESS FOR IMPLEMENTATION DIMENSIONS		ASSESSMENT	WORKING SCORE
REALISM	a) Project complexity is matched with country capacity and political commitment.	The complexity of the project was matched with the designation of a Project Coordinator reporting directly to the Project Engineer. An independent Dispute Review Board fully financed by Government was also appointed to resolve any issues arising. Government was fully committed to the project and undertook to finance the cost overrun.	3

RISK ASSESSMENT AND MITIGATION	b) Project design includes adequate risk analysis.	The project design included risk analysis based on lessons learned from previous projects and mitigation measures. However, the risk of encountering sub-standard foundation materials that required haulage to waste and using fill from materials blended with crushed rock and materials hauled from distant borrow-pits which led to an increase in costs. This was due to limited access to the project area then occupied by Project Affected People. In addition, the commencement of the civil works prior to compensation and resettlement of the entire PAP resulted in delayed possession of site by the contractor and therefore claims for delay costs.	1	
USE OF COUNTRY SYSTEMS	c) Project procurement, financial management, monitoring and/or other systems are based on those already in use by government and/or other partners.	All procurement, financial management, and monitoring systems used by the project were in line with government procedures as well as with Bank rules and procedures. No PIU was created, implementation under the GoS structure.	4	
For the following dimensions, provide separate working scores for Bank performance and Borrower performance:			WORKING SCORE	
			Bank	Borrower
CLARITY	d) Responsibilities for project implementation are clearly defined.	Responsibility for project implementation was clearly defined at appraisal. The Resettlement Plan was well prepared.	3,5	2,5
PROCUREMENT READINESS	e) Necessary implementation documents (e.g. specifications, design, procurement documents) are ready at appraisal.	The necessary implementation documents in respect of road designs and resettlement plan were ready at appraisal. Procurement rules and procedures were in place at appropriate time.	4	4
MONITORING READINESS	f) Monitoring indicators and monitoring plan are agreed upon.	Monitoring indicators and monitoring plans were agreed upon. However, undermined the timing and subsequently the project implementation.	3	3
BASELINE DATA	h) Baseline data are available or are being collected.	The project was designed by an international consultant and the required data to implement the project were not totally available prior to commencement of the project. In regards to the engineering design comprehensive geotechnical data were missing. In the case of resettlement, the required data were available. However, the criteria for compensation of the PAP was controversial.	3	2

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F. IMPLEMENTATION

1. State the major characteristics of project implementation with reference to: adherence to schedules, quality of construction or other work, performance of consultants, effectiveness of Bank supervision, and effectiveness of Borrower oversight. Assess how well the Bank and the Borrower ensured compliance with safeguards. Briefly list what was accomplished at the time of project closing.

[200 words maximum. [Any additional narrative about implementation should be included at Annex 5: Project Narrative.]

The implementation period for the project was planned to be between 1st September 2004 and 2nd March 2007. Although the project was started on schedule, the completion date was extended by 24 months to 29th February 2009 due to: increase in earthworks, increase in the number of resettlement houses, and delay in removal of obstructions. The Program was further revised by the Contractor to a new completion date of 2nd September 2009, additional time extension of six months. According to the revised work program, as of 12th June 2009, the progress stands at 98% against an elapsed time of 95%. However, the quality of construction of the road is in accordance to the design and in good standard. The performance of the Consultant was satisfactory. The performance of the Contractor is also satisfactory.

The Bank performed seven (7) field missions for project supervision. The missions teams, the Government, the Consultant and the Contractor worked in co-ordination. The field missions were effective in producing quality reports. However, the implementation of resettlement activities was not on time adversely affecting the implementation of the road in respect of costs and time. In this regard, there is an increase in the project cost of the road works by 122% from SZL398.67 million to SZL886.00 million, including price escalation up to the new completion date of 2nd September 2009. The project cost of consulting services increased by 129.54% from SZL20.75 million to SZL47.63 million. In terms of time, the project was planned to be completed in 30 months between 1st September 2004 and 2nd March 2007; however it is now expected to be completed in September 2009, after 66 months with time overrun of 120%. There were delays in submission of audit reports.

The original design of the road and the resettlement plan were of good quality. However the implementation of resettlement activities was not managed as desired. As a result, the project resulted to be an expensive undertaking to the Government.

At completion, the project will result in good quality road of 6-km Bypass between Mbabane, Mangwaneni and SCOTT Junction; a 5-km upgraded road between SCOT Junction to Nkoyoyo, and resettlement of 287 homesteads of about 1,500 persons. An "As Built Report" is expected from the consultant at the end of the project.

2. Comment on the role of other partners (e.g. donors, NGOs, contractors, etc.). Assess the effectiveness of co-financing arrangements and of donor coordination, if applicable.

Other donors and NGOs did not participate in the project.

3. Harmonization. State whether the Bank made explicit efforts to harmonize instruments, systems and/or approaches.

Compliance with Bank rules was ensured.

4. For each dimension of project implementation, assess the extent to which the project achieved the following. Provide a brief assessment (up to two sentences) and insert a working score, using the scoring scale provided in Appendix 1.

PROJECT IMPLEMENTATION DIMENSIONS		ASSESSMENT		WORKING SCORE
TIMELINESS	a) Project was completed on time. Draw directly from Section A on Project Data and Key Data. Calculate the ratio of planned time from approval to closing. Score "4" if the ratio is 1.0, score "1" if the ratio is 2.0, score "0" if ratio is greater than 2.0 (i.e. project completion took more than twice as long as planned)].	Difference in months between original closing date and actual closing date or date of 98% disb. Rate.	The implementation period was planned to start on 1st September 2004 and end on 2nd March 2007, within 30 months. Although the project started on time the completion date was extended to September 2009, with 66 months of completion and time overrun of 120%.	2
		36		
BANK PERFORMANCE	b) Bank complied with:			
	Environmental Safeguards	The Bank prepared the road infrastructure project with consideration of the environmental safeguards (approved ESMP). The Swaziland Environmental Authority has actively participated during the project implementation processes.		4
	Fiduciary Requirements	The Bank ensured that its fiduciary rules and procedures were adhered to through project implementation in granting its "No Objections" to Government's requests.		4
	Project Covenants	All project covenants were fulfilled.		4
	c) Bank provided quality supervision in the form of skills mix provided and practicality of solutions	The Bank performed seven (7) supervision missions during the project implementation period. The skills mix was not always adequate. Missions were composed of experts in the transport sector and also socio-economists. The missions would have benefitted from inclusion of environmental and gender experts. Lack of timely reconciliation of the project's accounts led to the undisbursed amount of SZL12.02 million (3.2%) as of 30 April 2008.		3
d) Bank provided quality management oversight	The Bank has granted disbursements in line with Government's requests. The Bank's role on overall management of the project is commendable on the basis of proper execution of the project road.		4	

BORROWER PERFORMANCE	e) Borrower complied with:		
	Environmental Safeguards	Swaziland has an Environmental Authority to safeguard environment in the country. The Authority has been closely monitoring the implementation of project. Generally, they are satisfied with the project	3
	Fiduciary Requirements	Government mostly followed the fiduciary requirements of the Bank and its own rules and procedures through out project implementation. The 2008/09 Audit Report is still outstanding.	3
	Project Covenants	All covenants were fulfilled by Government	4
	f) Borrower was responsive to Bank supervision findings and recommendations	The Government generally agreed to the Bank's supervision missions findings and recommendations, however not always implemented.	3
	g) Borrower collected and used monitoring information for decision making	Generally, the Borrower used monitoring information for decision making. Nevrttheless staff turnover hindered implementation.	3

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G. COMPLETION

Briefly describe the PCR Process. Describe the Borrower's and co-financers' involvement in producing the document. Highlight any discrepancies concerning the assessments made in this PCR. Describe the team composition and confirm whether an in-sight visit was undertaken. Mention any major collaboration from other development partners. State the extent of field office involvement in producing the report.

The PCR has been prepared in consultation with pertinent Government agencies. These agencies were informed that the PCR would be prepared jointly with the Government and the Bank. The Project Coordinator worked with the mission during the visit. The Bank PCR team was composed of Messers J. Mabombo, Infrastructure Specialist, MZFO, A. Yolanda, Social Sector Specialist, MZFO and A. Ambo, Transport Economist/ Consultant. The mission contacted government agencies mainly; Ministry of Finance, Ministry of Economic Planning and Development, Ministry of Public Works and Transport, Ministry of Housing and Urban Development, Swaziland Environmental Authority, Mbabane Municipality, BCEOM/Consultant, and WBHO Construction (pty) Ltd., representatives of the Resettlement Committee including community leaders, resettled communities. The mission visited the project road and resettlement areas, including access roads. Statistical data was obtained from the concerned government institution. In addition, vehicle & tyre retailers, and fuel distributors were visited to acquire data for use in HDM-4 (economic evaluation). Major difference of opinion concerns the degree of participation of the different stakeholders in the implementation of the resettlement component of the project. (detailed information is provided in annex 3)

H. LESSONS LEARNED

Summarize key lessons for the Bank and the Borrower suggested by the project's outcomes [250 words maximum. Any additional narrative about lessons learned, if needed, must be placed in Annex 5: Project Narrative]

- (i) To avoid cost overruns and design change, compensation and resettlement should have been completed first before handing the site for commencement of the civil works.
- (ii) Critical review of the design documents is necessary to avoid modification to the scope of works
- (iii) Lack of capacity of the Executing Agency affects effectiveness of project supervision of projects. A mix of skills was required for the project, like socio-economist and sociologist to monitor ESMP implementation.
- (iv) Good record keeping is necessary for post evaluation purposes.
- (v) late submission of audit reports makes it difficult for the Bank to identify disbursement irregularities.
- (vi) Bank should adequately involve the adequate mix skills throughout project implementation to monitor the implementation of the ESMP.
- (vii) Bank should ensure sustainability of the roads sub-sector and the project in particular by building in support for road sector reforms.
- (viii) Specialized activities that are not part of the core business of the Executing Agency such as resettlement, environmental issues, etc. should be implemented with full involvement of stakeholders and institutions with the required skills to undertake the work. The GOS should consider the creation of a dedicated unit in MOPWT to deal with environmental and social issues.
- (ix) The involvement/participation of all the concerned stakeholders right from the beginning (conceptual phase) will improve the quality of the design and consequently reducing on cost increases due to delay in implementation.
- (x) The project should have developed instruments to strategically address specific gender needs and perspectives to insure full participation and benefit from both women and men. Concrete activities would include disaggregated data collection, capacity building and training program with gender sensitive training materials, and having in place a monitoring system with gender sensitive indicators.
- (xi) Uplifting of the standards of resettled people should be always preceded by education and information process of the project affected people. Subjects such as the use of public utilities, road safety, sanitation, etc, should be included in the PAP training activities well before resettlement. Whenever possible, specialised entities including NGOs should be involved in training of PAP on community development matters such as micro-finance and income generation.
- (xii) Relevant policies and legislation should be in place prior to implementation, to address specific project issues; for example land and property ownership regulations for the establishment of the new townships prior to the transfer of the resettlement areas to the Municipality. Lessons learned and experiences from previous activities should always be taken into consideration, particularly on compensation and resettlement

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I. PROJECT RATINGS SUMMARY

All working scores are auto-generated by the computer from the relevant section in the PCR.

CRITERIA	SUB-CRITERIA	WORKING SCORE
PROJECT OUTCOME	Achievement of outputs	3
	Achievement of outcomes	4
	Timeliness	2
	OVERALL PROJECT OUTCOME SCORE	3
BANK PERFORMANCE	Design and Readiness	
	Project Objectives are relevant to country development priorities.	4
	Project Objectives could in principle be achieved with the project inputs and in the expected time frame.	2
	Project Objectives are consistent with the Bank's country or regional strategy	4
	Project Objectives are consistent with the Bank's corporate priorities	4
	The log frame presents a logical causal chain for achieving the project development objectives.	2
	The log frame expresses objectives and outcomes in a way that is measurable and quantifiable.	3
	The log frame states the risks and key assumptions.	1
	Project complexity is matched with country capacity and political commitment.	3
	Project design includes adequate risk analysis.	1
	Project procurement, financial management, monitoring and/or other systems are based on those already in use by government and/or other partners.	4
	Responsibilities for project implementation are clearly defined.	3,5
	Necessary implementation documents (e.g. specifications, design, procurement documents) are ready at appraisal.	4
	Monitoring indicators and monitoring plan are agreed upon.	3
	Baseline data are available or are being collected.	3
	PROJECT DESIGN AND READINESS SUB-SCORE	3
	Supervision:	
	Bank complied with:	
	Environmental Safeguards	4
	Fiduciary Requirements	4
	Project Covenants	4
	Bank provided quality supervision in the form of skills mix provided and practicality of solutions.	3
	Bank provided quality management oversight.	4
SUPERVISION SUB-SCORE	4	
OVERALL BANK PERFORMANCE SCORE	4	

BORROWER PERFORMANCE	Design and Readiness	
	Responsibilities for project implementation are clearly defined.	2,5
	Necessary implementation documents (e.g. specifications, design, procurement documents) are ready at appraisal.	4
	Monitoring indicators and monitoring plan are agreed upon and baseline data are available or are being collected	3
	PROJECT DESIGN AND READINESS SCORE	
	Implementation	
	Borrower complied with:	
	Environmental Safeguards	3
	Fiduciary Requirements	3
	Project Covenants	4
	Borrower was responsive to Bank supervision findings and recommendations.	3
	Borrower collected and used of monitoring information for decision-making.	3
	IMPLEMENTATION SUB-SCORE	
OVERALL BORROWER PERFORMANCE SCORE		

J. PROCESSING

STEP	SIGNATURE AND COMMENTS	DATE
Sector Manager Clearance		
Regional Director Clearance		
Sector Director Approval		

Annex 1

PCR Objectives, Mission findings & Overview of the Project

1. Objectives and Project Details

The overall sector goal is to provide efficient and cost effective transport system for both national and international traffic within the country. The objectives of the project are to improve the quality of road transport service levels and reduce vehicle operating costs on the Mbabane Bypass.

An ADB loan amounting to SZL373.68 million or UA37.19 million was approved by the Board of Directors on 17 December 2003 and the loan agreement signed on 25 May 2004. The loan became effective in August 2004 for a closing date of 31 December 2007.

The project comprises; (i) Upgrading 5-km of existing two-lane paved road and construction of 6-km road to 50-mm thick asphalt concrete dual carriageway (2x3.7m lanes per direction) and 2.0-meter wide paved shoulders on each side of the Mbabane Bypass (total length 11 km); The civil works also include the construction of six grade separated intersections, ten footbridges, single slope median barrier and street lighting along the full length of the road plus access roads; (ii) Consulting services for the supervision of the civil works; and; (iii) Project audit services.

2. Mission Fact Findings

The mission discussed the project implementation aspects of the project with all the concerned stakeholders and collected data for the assessment of the completeness of the project. One important aspect to take into account when analysing the Mbabane Bypass Road Project is the involvement of different multidisciplinary entities in the implementation of the project, fact that requires a good and functional institutional set up. Coordination among the involved entities is also a key element for success of the project and sharing of information was referred not to have been explored exhaustively.

2.1 Institutional Set Up

The Mbabane By-pass Road Project is under the Ministry of Public Works and Transport and is being implemented by the Department of Roads. Due to the nature of the project that includes an important component on resettlement and environmental aspects, other stakeholders are also involved in different ways such as; the By-pass Resettlement Committee (BRC) tasked with responsibility to monitor compliance with the regulations of the GOS in different disciplines, provision of guidance to the project implementers, etc.

For that purpose the BCR was set up comprising representatives from the Ministry of Housing and Urban Development (MHUD) – Chair, Ministry of Economic Planning and Development (MEPD) – Member, City Council's Community Liaison Officer (MbCC) – Member, Ministry of Public Works and Transport Project Coordinator (MPWT) – Member, Non-Governmental Organisation's representative (NGO) – Member, Human Settlement Authority representative (HAS) – Member, Swaziland Environmental Authority representative (SEA) – Member. Overall, the institutional set up for implementation of the project is adequate and well structured. The establishment of the Bay-pass Resettlement Committee (BRC) comprising different entities with a stake in the project was found by the mission to be a very positive approach for steering the resettlement activities.

Nonetheless, the mission is of the opinion that given the magnitude and seriousness of the problems encountered by the project during implementation phase the BCR should have met more frequently and regularly.

2.2 Litigation

An application by some PAP to the High Court for an interdict from proceeding with the works on the project until such time that their complaints were addressed was heard in October 2007 and an interim order was issued for the complaints to be looked into by the Compensation Determination Sub-Committee of the Bypass Resettlement

Committee. However before final judgement scheduled for 07 April 2008, the parties agreed to settle the complaints out of court. The complaints are currently being dealt with successfully out of court.

2.3 Implementation Status

98% of the civil works have been completed so far. This figure excludes the resettlement work, which falls under the responsibility of the Government of Swaziland. Details on the implementation status of each of the project components are given below;

2.3.1 Procurement

The civil works contract was signed on 01 September 2004 with WBHO of South Africa for SZL419 942 881.69. The time for completion of the works according to the original contract was 30 months from 01 October 2004 to 02 March 2007. The consulting contract was signed on 01 September 2004 with BCEOM of France for SZL20 744 944.00. KPMG signed a contract on 03 November 2006 for auditing of the project for an amount of SZL489,050.88 excluding VAT. There are no outstanding procurement issues.

2.3.2 Project Execution

Road Works Progress:

The project has been implemented in two sections as follows:

Section A: Mangwaneni to SCOT junction (6 km) on a new alignment to the west of the existing MR3;

Section B: SCOT junction to Nkoyoyo (5 km) on the existing alignment of MR3;

According to the original contract the date for substantial completion of the project was 02 March 2007. However the contract was extended by 24 months to 29 February 2009 due to increase in earthworks, increase in number of resettlement houses and delay in removal of obstructions necessitating the revision of the BoQ and work program. The program has further been revised by the contractor to a new completion date of 26 October 2009. According to the revised work program, as of 12 June 2009 progress stands at 98% against a lapse of time of 95% according to the new completion date. Progress on road works is as follows:

<u>Pay Item</u>		<u>Revised BoQ</u>
General Provisions	:	91.2%
Earthworks	:	97.5%
Drainage	:	98.3%
Pavement	:	93.2%
Reinforced Earth Structures	:	100.0%
Concrete Works	:	98.4%
Road Furniture	:	99.1%

2.3.3 Revised Cost Estimate

Overall Cost: The projected total cost of the project inclusive of civil works and consulting services has increased by 149.6% from SZL440.69 million to SZL1.1 billion as detailed in the following sections.

Road Works: There is an increase in the projected cost of the road works by 122% from the SZL398.67 million to SZL886.00 million including price escalation up to the new completion date of 26 October 2009 and the projected cost of consulting services by 129.54% from SZL20.75 million to SZL47.63million.

The significant increases in the individual items of the BoQ for the road works are indicated in the Table below:

Item	Original Amount in SZL million	Increase in SZL million	% Increase
General Provisions	99.73	93.97	94.0
Control of Works	2.43	3.30	135.8
Earthworks	73.49	116.21	158.13
Reinforced Earth	49.54	30.22	61.00
Concrete Works	40.43	16.97	41.97

Resettlement: The number of residential houses for the resettlement of the project affected people has risen to 287 as compared to the 110 houses in the original contract. The cost of resettlement has increased from SZL21.28 million to SZL172.51 million an increase of 710.67%. The total cost of consulting services attributed to resettlement amounts to SZL8.77 million increasing by 101.1% from the original SZL4.36 million. A total of 230 of 287 houses have been completed so far. 7 (seven) completed houses are ready for allocation to PAP. Currently GOS is renting 45 units and 13 pre-fabricated houses have been erected to accommodate the PAP that have been moved from the corridor awaiting completion of the resettlement houses. Some of the PAP opted for financial compensation and negotiated with GOS.

Delay and Disruption Costs: Due to delay in relocation of services and resettlement of the project affected people, GOS has disbursed a total of SZL59.4 million as of 12 June 2009.

Escalation Costs: The escalation costs (Contract Price Adjustment) resulting from the extension of time of 30 months beyond the original completion date of 02 March 2007 to 26 October 2009, is estimated at SZL168.63 million for the road works and SZL30.15 million for resettlement.

2.4 Financing of Cost Overrun

An amount of SZL220 million was provided in the 2007/08 financial year budget for the project and supplementary financing amounting to SZL129 million was approved by Parliament during the same year. For the 2008/09 financial year a provision of SZL14.95 million to complete the project has been approved.

2.5 Taking Over of Works

Resettlement: 223 of the 287 resettlement houses have been allocated to the project affected people as follows:

- . 7 No at Maduma I
- . 61 No at Manzana
- . 30 No at Maduma II&III
- . 116 No at Mangwaneni
- . 6 No at Police Compound
- . 1 No at Mpolonjeni
- . 1 No at Nkoyoyo
- . 1 No at Makholokholo

Road Works: The road works for Section B between Nkoyoyo and the SCOT grade separated intersection were taken over on 05 December 2007 and is open to traffic.

2.6 Audit and Account Records

Submission of the audit reports to the Bank has been inconsistent. The Surveyor General is responsible for recruitment of the auditor to carry out auditing services for the project. Unfortunately, there is a delay in the submission of the audit report of 2007/2008. This report was promised to be sent to the Bank by 30 September 2008 and still pending.

2.7 Disbursement

Loan Balance: The last date of disbursement of the loan was 31 December 2007. An extension has been granted and the new completion date is 2 September 2009. The balance is due for cancellation in accordance with the provisions of Section 9.01 (a) (iv) of the General Conditions Applicable to Loan and Guarantee Agreements.

Overall: The disbursement under the project by the ADB as of 12 June 2009 stood at SZL361,660,874.01 equivalent to 96.8% of the loan amount of SZL373,680,000.00 covering DP Nos 1 – 27 for the civil works contract, Invoices Nos 1-27 for supervision consultancy services and 3 invoices for audit services. The un-disbursed amount of the loan as of 30 April 2008 was SZL12,019,125.99 and still unchanged. The Government on its part has disbursed a total amount of SZL470,750,848.25 in counterpart funds for road works and supervision services and resettlement. The issue of using the balance still pending. Clarification is needed from both the GoS and the Bank.

Road-works: The allocation to road-works from the loan proceeds amounts to **SZL356,387,544.48** of which the SZL347,219,500.69 or 97.4% has been disbursed to date leaving a balance of SZL9,168,043.79. Government has disbursed **SZL454,513,211.86** as counterpart funding for road-works.

Supervision Services: The original supervision contract amounts SZL20,744,944.00 of which the allocation from the loan proceeds is SZL16,803,404.64 (81%). Total disbursement to date amounts to SZL14,268,856.17 or 84.9% leaving a balance of SZL2,534,548.47. Government has disbursed SZL16,237,636.39 as counterpart funding.

Audit Services: The audit services contract amounts to SZL489,050.88 excluding Value Added Tax (VAT) to be covered entirely by the Bank. GOS pays Value Added Tax (VAT). Total disbursement to date amounts to SZL172,520 or 35.3%. GOS was preparing disbursement requests for the auditor's services for the two audit reports covering 2006/07 and 2007/08 financial years.

2.8 Reporting

Monthly and quarterly progress reports are being submitted by the GOS on the project. The monthly progress report for February and March 2009 as well as the quarterly progress report for January, February, March 2009 were delivered during the mission. The GOS explained the lack of consistency in sending the progress reports as attributable to staff turnover within the Ministry of Public Works and Transport.

3 Mission's Overview of the Project

3.1 Civil Works

Overall, the road infrastructure is sound and of good quality. The riding quality is good and the drainage structure has been provided for. Other road furniture elements were also built such as; footbridges to prevent pedestrians from crossing the highway using the pavement. Traffic signs were also provided along the road and were part of the safety component of the project. Due to budget constraints the project built 8 footbridges instead of 10 as previously planned by the design.

As to the resettled houses, despite complains of leaking in some houses, in general the quality is considered to be satisfactory and they meet the expectations of the beneficiaries. However, conceptual issues remain unresolved on the definition of household and the correspondent resettled house. Access roads to the resettled houses were

built and public utilities such as electricity, running water have been provided for the relocated people. To avoid imbalances, host communities are also benefiting from these public utilities.

The project has contributed immensely to the improvement of the road traffic in the MR3 corridor particularly in the section close to Mbabane coming from either Lomahasha or Ngwenya borders.

3.2 Delays in the Implementation

The engineering design of the Mbabane Bypass was done during a period when the resettlement has not been done by the GOS. This led to an inconclusive geotechnical investigation until the commencement of the civil works on 01 October 2004. During the course of the works, when some areas vacated on account of resettlement, the consultant finalised the material investigation just to find that the quantities anticipated during the study were not available in the then identified borrow pits. Consequently, some design adjustments had to be done to respond to a new situation encountered on the site. Remedial measures such as crushing and blending rock materials. were adopted with direct implication in the time schedule compliance of the project. Furthermore, the project faced constraints related to change of quantities. One typical example is the increase of quantities of material to cut and spoil instead of cut to fill. The haulage distance also, increased dramatically as a result of change in the available material quantity, in the identified borrow pits.

Increase of Project Costs

The change on material design for earth work (crush and blending rock material), haulage distance, implementation delay, escalation costs due to volatile international market along the last few years, interdependency between the resettlement of project affected people and civil works, has paved way for cost overrun that had to be beard by the GOS. The anticipated 149,6% increase of the total project cost up to the new completion date (26 October 2009) is on the higher side and is an indication of a lesson to learn from and avoid similar situation in future.

3.3 Institutional Set Up

As stated above the project is implemented by the Ministry of Public Works and Transport. Due to the importance of the resettlement in this project a Bypass Resettlement Committee (BRC) was established to overseeing the implementation of the project. This set up envisaged a team work involving different expertises, sharing technical information that would allow the project to overcome any potential constraint. Conceptually the project was very well structured and most of the possible scenarios were anticipated during the design phase. The resettlement Plan for instance is a good example for adoption of multidisciplinary team approach to resolve the problems.

3.4 Inter-Ministerial Coordination

This was the approach adopted by the project at conceptual phase. However, the idea of involving different expertises in the project steering never materialize for any reason that needs to be identified and resolved internally by the GOS. Issues like resettlement involves expertise from the Municipality, Ministry of Housing and Urban Development, Swaziland Environment Authority and others. Despite the inclusion of all these entities in the BRC, the performance of this organ was not satisfactory. BRC should have met regularly given the importance of the social component of the project. Its regular involvement in the beginning of the resettlement could have assisted to come up with a compensation scheme acceptable to the project affected people and avoid proliferation of complaints as it is currently the case.

3.5 Lessons Learnt

Some lessons can be learned from the implementation of the Mbabane By-Pass Road Project as follows:

(i) The cost of road works has risen by 53.5% from the SZL398.67 million to SZL611.74 million and the cost of consulting services by 111.2% from SZL20.75 million to SZL43.83million. GOS has however made budgetary provisions to finance the cost overruns.

This increase is due to, inter alia, (a) extension of time with fixed and time related obligations, (b) increase in quantities, (c) increase in haulage distances due to change in material sourcing, (d) increase in cut to spoil instead of cut to fill as originally designed, (e) crushing and blending rock materials previously not anticipated, (f) escalation costs, and (g) delay and disruption costs.

Most of the above identified causes for increase in the costs, are due to the quality of the engineering design. For earth work the design was conceived based on assumptions in quality and quantity of material for earth work that didn't materialise. The consultant could not investigate deeply through geotechnical testing the availability of construction material since the area was still occupied by the project affected people by the time of soil investigation.

In future efforts should be made by both the Bank and the beneficiary Government to only start the works when the area is cleared and people relocated accordingly. In cases where the quality of the design can be affected by the resettles the same principle applies; to do the design when the area is free need of resettlement.

(ii) Specialised activities that are not part of the core business such as resettlement, environmental issues, etc. should be implemented with full involvement of all stakeholders particularly the entities with the required skills to do the job (Municipalities, Housing, Local Government, etc).

(iii) Uplifting of the standards of resettled people should be always preceded by education and information process of the project affected people. Subjects such as; the use of public utilities, road safety, sanitation, etc, should be included in the PAP training activities well before resettlement. Whenever possible, specialised entities including NGOs should be involved in training of PAP on community development matters such as micro-finance and income generation.

(iv) All projects should develop instruments to strategically address specific gender needs and perspectives to insure full participation and benefit from both women and men

Socio Economic Context

1 - Socio Economic Context

Swaziland is a small landlocked country surrounded by South Africa and Mozambique. It covers a land surface area of 17,364 sq km and has a population of around 1,134,400. The country is classified as a lower middle-income country with an average annual per capita income (in current US\$) of US\$1,360 in 1999 and US\$ 2251 in 2008. However, country's socioeconomic indicators show stunning scenario characterized by widespread poverty and large disparities in the distribution of wealth, reflecting huge inequality in access to services and opportunities to meet basic human needs. According to the UN MDG Monitor Swaziland has problems in meeting a number of Millennium Development Goals (MDGs) and targets because of high rates of poverty, food insecurity, and HIV/AIDS. Whether Swaziland will attain the MDGs will depend on, the ability of the government to simultaneously address the issues of poverty, HIV/AIDS, drought-like conditions exacerbated by climate change, and pervasive gender inequality.

It is estimated that about 43 percent of the population live in extreme poverty and 76 percent of the poor live in rural areas. The HIV/AIDS pandemic poses a severe development challenge to Swaziland. The country has the highest HIV prevalence rate (32.4 percent), the highest death rate and, at 31 years, the lowest average life expectancy of any country in the world. Women bear the burden of the HIV/AIDS crisis, causing life expectancy for women to drop below that of men. One third of Swazi children are orphans or vulnerable. Swaziland's literacy rate is 79.6 percent. Net primary school enrolment is 77 percent, but only 44 percent at secondary school level.

Swaziland is a predominantly rural society, with most of the population dependent on subsistence agriculture for their livelihoods. The country has a dual land tenure system namely (i) Swazi Nation Land (SNL) where 60 percent of the total land area is held in trust by the King and allocated to households by traditional chiefs on his behalf, and (ii) the Title Deed Land (TDL) which is freehold and owned by, companies, some individuals and the Government owned land (crown land).

The poor performance of the economy has led to a worsening unemployment situation, currently estimated at 40% of the available workforce. The annual growth rate of employment is a mere 1% compared to a growth of 3% in the size of the labour force. Women are largely dependent financially on men, or culturally conditioned to submit. In general, written guarantees of gender equality in the constitution are largely undermined by cultural practices.

2. Background Mbabane Bypass Project

According to the Bank's Environmental and Social Guidelines and the Involuntary Resettlement Guidelines, the project was classified as Category I, and a Full Resettlement Plan (FRP) was in place. The road passes through a built urban environment crossing the informal settlements of Mangwaneni and Manzana. Initially it was estimated, prior to construction, the resettlement to an adjacent neighborhood of 106 homesteads with an approximation of 1,350 people affected. According to the plan main socio-economic impacts were identified as follows:

Statistics:

Total population: 1,134,000

Gross national income per capita
(PPP international \$): 4,700

Life expectancy at birth m/f (years):
41/43

Healthy life expectancy at birth m/f
(years, 2003): 33/35

Probability of dying under five (per 1
000 live births): 164

Probability of dying between 15 and
60 years m/f (per 1 000 population):
690/643

Total expenditure on health per capita
(Intl \$, 2006): 353

Negative

- Loss of Land (Land Acquisition Plan)
- Changes to Settlement Pattern (Settlement Plan)
- Loss of houses, structures (Housing Plan)
- Impact on Infrastructure, water sources (Infrastructure Plan)
- Loss of income, fruit trees, etc. (Compensation Plan)
- Impact on Cultural Resources (Cultural Plan)
- Impact on Social Affairs (Social Monitoring Plan, Social Services Plan)

Positive

- Security in Land Tenure
- Formal Planned Settlement
- Permanent Housing
- Improved Infrastructure
- Biophysical Impacts
- Loss of biodiversity
- Impact on Soils
- Hydrological Impacts
- Aesthetic Impacts (Passive and Open Space Zones, Solid Wastes)

An assessment of the environmental impacts of the resettlement was carried out. The impacts and mitigation measures were articulated as an Environmental Protection Plan, which consisted of the following:

Environmental Protection

- Biodiversity Protection and Monitoring Plan for the loss of Biodiversity
- Soil Conservation/ Rehabilitation Monitoring Plan for the impact on soils
- Water Pollution Prevention Plan for the hydrological impacts
- Solid Waste Management Plan for the sanitation and hygiene impacts

3. PCR Mission Findings

3.1 Resettlement

General opinion expressed by the stakeholders, namely government institutions, implementing agencies and both direct and indirect affected people, is that the resettlement process has created the basis for community development. This included upgrading of standard of houses and the roads network, improvement of access to social services, such as water and energy and better health and environment conditions (sanitation).

The Resettlement Program has experienced and still experiencing various challenges. Initially the road construction at the affected areas would not start until all the project-affected people had been resettled. However, till June 2009, this process has not yet been finalized. Final date of completion is 26 October 2009. The plan was too ambitious (chronogram) considering that essential issues were not dealt with or in place namely land ownership, compensation package and sensitive questions like relocation of graves in Sidwashini & Makholokholo areas. In addition, negative impacts were identified but mitigation measures were not implemented as planned. Negative impacts on the resettlement process are loss of economic livelihood and increase on expenses with transport, water and electricity bills.

Accomplishment: A total of 230 of 287 houses have been completed so far. 7 (seven) completed houses are ready for allocation to PAP. Around 25% of completed houses belong to women-headed households. Currently GOS is renting 45 units and 13 pre-fabricated houses have been erected to accommodate the PAP moved from the corridor awaiting completion of the resettlement houses. Some of the PAP opted for financial compensation and negotiated with GOS. Activities undertaken to implement the Resettlement Plan also comprehended: 30 km of access roads, compensation for non-building assets, and installation of displaced persons.

SZL Million

Item	Planned	Achieved	%	Comments
Cost of resettlement (infrastructure)	21.28 million	172.51 million	710.67%	
Cost of consulting services	4.36 million	8.77 million	101.1%	
Compensation costs		41,8 million		
Number of houses	110	230 (of 287)	260.9%	
Number of affected people	1.350	No information	-	Number to be obtained by the survey

Coordination: In the Resettlement Plan, a number of key actors and their functions were well identified including the establishment of the Bypass Resettlement Committee (BRC) constituted of representatives from the GoS, City Council, representatives of NGOs and representatives of affected population. The role of the BRC is to oversee and approve the development of the resettlement plan, administer the resettlement and establish mechanisms for compensation and resolution of conflicts. The BRC did not function regularly as desired (the TORs establishes that BRC meetings are called on ad hoc basis). In general, stakeholders fill that they have not been involved on time and adequately. Involvement in some cases was requested only when the situation became unbearable. Weak collaboration of specialized institutions allowed that crucial technical decisions were not in place on time.

Community participation & Communication: Stakeholders consider that the required and structured information and communication flow was in place. Uncertainties and lack of timely feedback shaped the adequate atmosphere for speculation and misunderstanding. The City Council through the Planning and Community Affairs services should have been more directly involved creating also the basis for a smooth transition after resettlement. A real participatory approach at all stages of project cycle should have been in place rather than a consultation mechanism. Beneficiaries should have been more involved not also as *pacific receptors* (demanding/ complaining) but whenever possible developing their own solutions, turning into actors of development. The mission did not find evidences of an active participation of NGO or other civil society organizations

Institutional set up: The resettlement plan document states that “The Supervision Consultant for the road project, designs the resettlement plan and is also responsible for managing resettlement through the use of sub-consultants namely: Resettlement, Environmental Management, Training, Monitoring and Evaluation Specialists”. The proposed institutional arrangement would raise conflict of interest. However, due to shortage of budget the envisaged services were not provided by the Supervision Consultant. The absence of this vital service has had substantial effect on the management of the resettlement component. Considering the complexity of the process, the multiplicity of actions and the number of institutions involved, full dedicated service provider for specific areas of expertise was a must.

Project design and implementation: The information generated by the studies was not considered, as well as recent experiences from the different national institutions. For example, studies have identified an extended family trend and homestead average size of 6.4, 9.0, and 7.3 members in Mangwaneni, Manzana and

Makholokholo/Madunall respectively. However, the compensation homestead packages correspond to types 1, 2 and 3 houses proper for a nuclear family size. Inadequate implementation resulted in substantial additional costs.

Compensation: Initially, cultural and social dimensions were not adequately taken into consideration. The revised strategy from a people-centred approach to a property/market approach had a tremendous implication on the costs of the resettlement. There is a concern that the compensation regulation is too general and that people tried to exaggerate their demands and exploiting the situation. Government has been receiving complaints from the resettled people who demand different types of facilities throughout the project, a consistent filling system within the proponent (MOPWT) is recommended.

Capacity building: The establishment of the Bypass Road project and in particular the resettlement component had positive and negative impacts. Some measures to overcome or reduce the negative impacts were proposed including a training package under the Institutional and Capacity Building Plan. This crucial activity was in some extent neglected. No actions are in place; for example, to reduce the impact and increase the ability of the PAP to meet costs associated with the newly acquired homes, namely; utility bills (electricity and water) and future requirement to pay city taxes once the areas have been registered as townships.

Land & Property ownership: PAPs are expected to receive completed houses and lease-hold certificates as well as security of land tenure. Host families do not own the land. Considering that they are also taken as project beneficiaries, enhancements for hosts in terms of land tenure should include the same measures. The needed Urban Plan still missing. It should be developed in the resettlement area with participation of the Mbabane City Council, the Ministry of Housing and Urban Development, the Ministry of Public Transport, Swaziland Environment Authority, Communities and any other entity deemed necessary.

3.2 Environment

Environmental Compliance: An Environmental and Social Management Plan (ESMP) is in place in accordance to the Bank's guidelines and laws and regulations of the Government of Swaziland. The mission met with Swaziland Environmental Authority (SEA) and, regarding the compliance of the contractor to the Environmental Management Plan, the authority indicated its satisfaction with the compliance by the contractor to most of mitigation measures. The SEA has confirmed its involvement and close cooperation with MOPWT. SEA has responded and followed complaints and issues rose by other stakeholders and affected parties.

Reporting: The Bank has received, on a regular basis, Compliance Monitoring Reports prepared by the Consultants on behalf of the Proponent, the MOPWT. Performance of the main players in the process of implementing the Comprehensive Mitigation Plan (CMP) is therefore satisfactory.

Pending issues: The host communities appreciate the fact that the project had provided running water not only for the resettles but also for them. However, community at Mangwaneni claims that during construction works springs were destroyed by the movement of machinery leaving the people without any source of water. So, while the host community is preparing to connect running water a provisional solution should be adopted.

The project included provision of sanitation infrastructure (Septic Tank) for the households and the project has been maintaining the system through regular cleaning of sewage. Concerns exist that after the completion of the project the community may face difficulties to maintain the system.

Waste disposal management will be also a challenge for the new communities and need to be considered with the involvement of the City Council. As of now there is no any waste disposal collection system in place and this is a matter of public health. The mission was informed that this issue is being attended to.

3.3 Entrepreneurial Opportunities

The project is expected to create investment and entrepreneurial opportunities for local and aspiring business persons. Sixteen percent of works and activities have been sub-contracted to local firms with a total value of SZL69.0 million.

3.4 Gender issues

The project is referred to be “gender blind” during resettlement, compensation and employment conduct. However, the following are facts:

- i. In most developing countries, women have historically had less opportunity than men which has led to the situation that women are generally worse off than men in most aspects in particular in regards to access to resources, decision making and generally having their voices heard. Women are largely dependent financially on men, or culturally conditioned to submit. In general, written guarantees of gender equality in the constitutions are largely undermined by cultural practices. This situation has given rise to *gender gaps* in critical livelihood aspects, which further reinforce the existing gender inequities.
- ii. Development programs should always have in place strategic elements necessary to understand and reduce the gender role disparities, a requirement not foreseen in the project. As a result, in regards to recruiting personnel to the project, the number of women has significantly lagged behind. Data from 2008 show that on the average out of the total work-force of 778, women's share of employment ranged between 4% and 9.4%.
- iii. In the project area women-headed households represent a high proportion namely; 65% in Mangwaneni, 45% in Manzana and 40% in Makhokholo/Madunall, so considerations regarding access to and control over resources are fundamental. Resources include economic/ productive, such as land and employment, as well as political/ negotiation resources, such decision-making, leadership, participation. These resources, when adjusted to have gender equity, will become the effective mechanism for sustainable development to be established.

3.5 HIV/AIDS Prevention and Awareness Campaigns

HIV/ AIDs issues were well capture in the project's appraisal. However, while a set of activities and support actions were in place for the construction workers such as; counseling, information materials and voluntary testing, implementation at community level was very limited. Involvement of specialized institutions including NGOs should have been timely planned.

HIV/AIDS awareness and education campaign about the spread and prevention are in place for the work-force. Following the recommendations of the 2008 supervision, the program was also extended to target communities interfacing with the construction workers both along the project and resettled areas. NGOs have been contacted to undertake substantial activities in this regard.

4. Lessons learned

Institutional structure (i) – To ensure an adequate implementation the right institutional set up properly defined lines of responsibility and accountability between the different stakeholders (project staff, key institution and beneficiaries) is important. In addition it is important that (1) appropriate agencies are identified as early as possible in the project preparation, (2) the agencies are in fact involved in the planning process and (3) receive a clear mandate.

Institutional structure (ii)- Specialized activities that are not part of the core business such as resettlement, environmental issues, etc. should be implemented with full involvement of stakeholders and institutions with the required skills to undertake the work. The GOS should consider the creation of a dedicated unit in MOPWT to deal with environmental and social issues.

Participation & Communication - The involvement/participation of all the concerned stakeholders right from the beginning (conceptual phase) may improve the quality of the design and consequently reducing an escalation of the project's cost.

Gender -The project should have developed instruments to strategically address specific gender needs and perspectives to insure full participation and benefit from both women and men. Concrete activities would include disaggregated data collection, capacity building and training program with gender sensitive training materials, and having in place a monitoring system with gender sensitive indicators.

Restoration of livelihood and income- Uplifting of the standards of resettled people should be always preceded by education and information process of the project affected people. Subjects such as the use of public utilities, road safety, sanitation, etc, should be included in the PAP training activities well before resettlement. Whenever possible, specialised entities including NGOs should be involved in training of PAP on community development matters such as micro-finance and income generation.

Law and regulations -Relevant policies and legislation should be in place prior to implementation, to address specific project issues, for example land and property ownership regulations for the establishment of the new townships, prior to the transfer of the resettlement areas to the Municipality. Lessons learned and experiences from previous activities should always be taken into consideration, particularly on compensatory approach.

Economic Benefits and Costs

1.0 The components of the project road are upgrading of 5-km section from two-lane dual carriageway between SCOT Junction and Nkoyoyo, and a four-lane new alignment between SCOT Junction and down town Mbabane. The major benefits of the project are vehicle operating cost savings (VOCS) and time savings. Savings are also envisaged from maintenance of the project road between before and after implementation. The VOCS consist of differences in vehicle operating costs related to both distance and time between the improved and existing road options and also due to changes in road roughness. In the case of time savings, road users currently using the few lanes will be operating on increased lanes shorting their time of travels. With regard to road maintenance cost savings, the upgraded road will involve much lower maintenance costs compared to deteriorated and/or lower grade road surface that require constant attention in terms of maintenance. The impact of VOCS, time savings, and maintenance cost savings were generated using the Highway Development and Management (HDM-4) Tool. Accident savings were not accounted for since proper enforcement is not assured yet. Improved roads without proper enforcement could result even in more accidents. The major causes of road accidents in Swaziland are: driver error of judgement and negligence (22%), over-speeding (18%), drive inattentiveness (18%), and driving under the influence of alcohol (4%) which all aggregated to 62%. If proper traffic enforcement is not in place, road accidents could be even worse on the improved project road.

2.0 Qualitative benefits would emanate from the project road which however cannot be quantified. Road users, including public passengers, would benefit from reduced travel times. Other benefits such as increased comfort, reliability, frequency, and accessibility of transport services would be gained as a result of constructing and upgrading the project road. The project road will create conducive environment for implementation of the tollgate planned at the Ngwenya Border Post along the Mbabane-Manzini Highway near the Ezulwini turnoff. Revenues from tollgates are part of the cost recovery effort for maintenance of roads. Benefits have been generated from local employment opportunities during the construction and upgrading of the project road i.e. 85% of employees are Swazis constituting 16% of women. There are also benefits generated from resettlement activities; a total of 287 homesteads are presumed to resettle of which 223 have settled already. The re-settlers would benefit from improved living conditions and developed accessibility.

3.0 There is a concern that continual flow of road maintenance costs may not be available since Road Fund is not established, although under discussion in Parliament. As provided by the Roads Department (RD), the 2007/08 maintenance budgets of SZL331 million is less by SZL70 million from the 5 year annual average required. With current funding, the proportion of the paved road network not complying with the minimum standard will increase to almost 59% (595-km) by 2015. Paved roads represent 93% of the total assets carrying 79% of the traffic; but, only 26% of the total road budget is allocated to paved roads. Similarly, axle load control stations are not actively in place. There is only one weighbridge at Matsapha which is not currently functioning. Presently, 37% of the trucks operating in Swaziland are overloaded.

4.0 The methodology applied for the economic analysis of the project road was based on the comparison of "without" and 'with' project case over 20 year period as the economic life of the project road. Upgrading the SCOT Junction-Nkoyoyo road section to dual carriageway standard represents the 'with' project case while the existing road without improvement represents the 'without' project case. The economic analysis of generating net present value (NPV) and economic internal rate of return (EIRR) was carried out using HDM-4. The economic road construction and upgrading costs include: value of civil works, delay and disruption, escalation, materials on site, interest for late payment, and costs for audit services. Escalation cost was not included at appraisal presumably it was uncertain. However, it is included in the PCR since it has actually happened. Furthermore, additional NPV and EIRR were generated using only costs related to civil works in order to observe the impact of delays on project implementation. A factor of 0.75 was used to convert financial costs to economic costs and also salvage value of the road at the end of the

20-year life was assumed to be 36%, both applied at appraisal. Similarly, economic costs of vehicles, tyres, fuel, etc. were used after deducting duties and taxes from the financial costs.

5.0 The economic cost used for routine maintenance of the paved road was SZL16,520/km. Economic costs for resealing, light rehabilitation and heavy rehabilitation were used as SZL44.0/m², SZL150.0 m² and 265.0 m² as provided by the Roads Department. The maintenance policy of the GOS on existing road entails routine maintenance, patching 100% of the potholes and resealing every 6 years. Similarly, maintenance policy on the new asphalt concrete road entails routine maintenance, patching of 100% of potholes and 30-mm overlay every 10 years.

6.0 Traffic growth rates were based on data obtained from the road feasibility study of the project road and on future economic growth of Swaziland as provided by the Ministry of Economic Planning and Development. It is anticipated that economic growth will be maintained in excess of 5%. The traffic growth rates provided by BCEOM, supervision consultant, were between 4.1% and 5.1% for light vehicles, between 4% and 5.0% for buses, and between 3.9% and 4.8% for trucks. Seven types of vehicles were considered for analysis using HDM-4 i.e. medium car, 4WD, medium bus, small truck, medium truck, heavy truck and articulated truck. The traffic growth rates used as input in HDM-4 were: between 4.0% and 5.1% for cars; between 4.0% and 5.0% for buses, and between 4.5% and 4.8% for trucks.

7.0 The economic analysis of the project road accounting for only quantifiable benefits resulted in EIRR of 14.5% and NPV of SZL144.13 million at 12% opportunity cost of capital with consideration of all associated costs. The respective values at appraisal were 20.3% and SZL229.0 million. The reduction of benefits is attributed to the civil work costs increase by 122% from original estimates of SZL398.67 million to SZL886.00 million, including: costs of delay and disruption (SZL59.40 million), escalation (SZL163.91 million), materials on site (SZL1.75 million), and interest for late payment (SZL3.0 million). EIRR and NPV were also generated using only costs of civil works and resulted at EIRR of 17.3% and NPV of SZL260.73 million.

Sensitivity Analysis

8.0 Sensitivity analyses were carried out to observe the impacts of changes in the values of important variables such as construction costs and vehicle operating cost savings (VOCS) on the economic viability of the project road. Sensitivity analyses were conducted under the following scenarios: construction costs increased by 20%; construction costs reduced by 20%; VOCS increased by 20%; VOCS reduced by 20%; and a combined 20% increase in construction costs and 20% a decrease in VOCS. The analyses were conducted with considerations of all costs including: delay in disruption, escalation, and interest for late payment. Similarly, analyses were conducted considering only costs related to civil works to observe the impact of cost overruns.

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9.0 The results of the sensitivity analyses and other economic criteria are tabulated below. At appraisal, only VOCS were considered on the side of benefits. The results at PCR illustrated both positive and negative values indicating the sensitiveness of the project to increase in costs and reduction in VOCS. When all costs were accounted for, the values of all parameters became below the discount rate of 12%. On the other hand, when only costs of civil works were accounted for i.e. without costs of delay and disruption, escalation and interest for late payment, the project is less sensitive to either cost increases or VOCS reduction. Results based on comparison of capital costs and only VOCS underestimated the contribution of project road. If all benefits, including maintenance and time savings were included, the results would be enhanced which should be the case. This is because VOCS represented 62.4% of benefits while maintenance cost savings represented 13.4%. and time savings represented 24.2%. Thus, 62.4% of the benefits were compared with 100% of costs. With this understanding, sensitivity analyses were also conducted accounting for all benefits. The results are depicted in Table 2.2. As shown in the table, the project is viable under all alternatives except when costs were increased by 20% and benefits reduced by 20%. In addition, it needs to be emphasized that the project has resulted in significant intangible benefits, as stated in paragraph 2. Therefore, the results of the sensitivity analyses showed that the project road is economically viable.

Table 2.1: Summary of Economic and Sensitivity Analysis Comparing Costs and VOCS

Alternative	Appraisal	PCR	
		Cost on Civil Works	All Costs
Base Case	20.3	17.3	14.5
Construction Costs Increased by 20%	17.7	10.2	7.8
Construction Costs Reduced by 20%	23.9	14.1	11.4
VOCs Increased by 20%	23.2	13.7	11.0
VOCs Reduced by 20%	17.0	9.9	7.5
Construction Costs Increased by 20% and VOCs Reduced by 20%	14.7	8.3	6.0

Table 2.2: Summary of Economic and Sensitivity Analysis Comparing Costs and All Benefits

Alternative	PCR	
	Cost on Civil Works	All Costs
Base Case	17.3	14.5
Construction Costs Increased by 20%	14.9	12.3
Construction Costs Reduced by 20%	19.0	16.1
VOCs Increased by 20%	18.5	15.7
VOCs Reduced by 20%	14.5	11.9
Construction Costs Increased by 20% and VOCs Reduced by 20%	12.8	10.4

Table 2.3: Annual Average Daily Traffic (vehicles/day)

Mbabane-Scot Junction

Year	Car	4WD	Medium Bus	Small Truck	Medium Truck	Heavy Truck	Articulated	Total
2009	2,487	2,706	109	125	57	79	199	5,761
2010	2,623	2,855	115	131	60	83	209	6,076
2011	2,768	3,012	121	138	63	88	219	6,407
2012	2,920	3,177	127	145	66	92	230	6,757
2013	3,081	3,352	134	152	69	97	242	7,126
2014	3,265	3,553	141	159	72	101	252	7,544
2015	3,461	3,766	149	166	75	105	264	7,987
2016	3,669	3,992	157	173	79	110	276	8,457
2017	3,889	4,232	166	181	82	115	288	8,954
2018	4,122	4,486	175	189	86	120	301	9,480
2019	4,349	4,733	184	197	89	125	313	9,990
2020	4,588	4,993	193	205	93	130	326	10,528
2021	4,841	5,268	203	213	97	135	339	11,094
2022	5,107	5,557	213	221	101	141	352	11,692
2023	5,388	5,863	224	230	105	146	366	12,322
2024	5,684	6,185	235	239	109	152	381	12,986
2025	5,997	6,526	246	249	113	158	396	13,685
2026	6,327	6,884	259	259	118	165	412	14,423
2027	6,675	7,263	272	269	122	171	428	15,201
2028	7,042	7,663	285	280	127	178	446	16,021

Table 2.3: Annual Average Daily Traffic (vehicles/day) (cont'd)

Scot Junction-Nkoyoyo

Year	Car	4WD	Bus	Small Truck	Medium Truck	Heavy Truck	Articulated	Total
2009	5,366	5,972	239	373	50	50	559	12,608
2010	5,661	6,301	251	391	52	52	587	13,296
2011	5,973	6,647	265	411	55	55	616	14,022
2012	6,301	7,013	279	431	58	58	647	14,787
2013	6,648	7,399	293	453	60	60	680	15,593
2014	7,047	7,843	309	473	63	63	710	16,509
2015	7,470	8,313	326	495	66	66	742	17,478
2016	7,918	8,812	344	517	69	69	775	18,505
2017	8,393	9,341	363	540	72	72	810	19,592
2018	8,896	9,901	383	565	75	75	847	20,743
2019	9,386	10,446	402	587	78	78	881	21,858
2020	9,902	11,020	423	611	81	81	916	23,034
2021	10,447	11,626	444	635	85	85	953	24,274
2022	11,021	12,266	466	660	88	88	991	25,580
2023	11,627	12,940	489	687	92	92	1,030	26,957
2024	12,267	13,652	514	714	95	95	1,072	28,409
2025	12,941	14,403	539	743	99	99	1,114	29,939
2026	13,653	15,195	566	773	103	103	1,159	31,552
2027	14,404	16,031	595	804	107	107	1,205	33,253
2028	15,196	16,913	624	836	111	111	1,254	35,046

Table 2.4: Economic Costs and Sensitivity Analysis with All Project Costs (SZL million)

Undiscounted Cash Flows (SZL million)							Sensitivity Analysis With Only VOCS					Sensitivity Analysis With All Benefits				
Year	Capital Costs	Benefits					Costs (+) by 20% and VOCS Same	Costs (-) by 20% and VOCS Same	VOCS (+) by 20% and Costs Same	VOCS (-) by 20% and Costs Same	Costs (+) by 20% and VOCS (-) by 20%	Costs (+) by 20% and Benefits Same	Costs (-) by 20% and Benefits Same	Benefits (+) by 20% and Costs Same	Benefits (-) by 20% and Costs Same	Costs (+) by 20% Benefits (-) by 20%
		Mtce. Cost Savings	VOCS	Time	Total	Net Benefits										
2004	118.78	0.00	0.00	0.00	0.00	-118.78	-142.54	-95.03	-118.78	-118.78	-142.54	-142.54	-95.03	-118.78	-118.78	-142.54
2005	224.65	0.01	2.60	0.54	3.15	-221.50	-269.58	-179.72	-224.65	-224.65	-269.58	-269.58	-179.72	-224.65	-224.65	-269.58
2006	198.81	0.02	5.70	1.32	7.04	-191.77	-238.57	-159.05	-198.81	-198.81	-238.57	-238.57	-159.05	-198.81	-198.81	-238.57
2007	77.52	0.02	9.29	2.46	11.77	-65.75	-93.02	-62.02	-77.52	-77.52	-93.02	-93.02	-62.02	-77.52	-77.52	-93.02
2008	26.24	0.01	13.60	4.00	17.62	-8.62	-31.48	-20.99	-26.24	-26.24	-31.48	-31.48	-20.99	-26.24	-26.24	-31.48
2009	0.00	0.02	39.27	8.38	47.67	47.67	39.27	39.27	47.12	31.42	31.42	47.67	47.67	57.21	38.14	38.14
2010	0.00	0.02	46.16	11.08	57.26	57.26	46.16	46.16	55.39	36.93	36.93	57.26	57.26	68.71	45.81	45.81
2011	0.00	0.02	53.84	14.25	68.11	68.11	53.84	53.84	64.61	43.07	43.07	68.11	68.11	81.73	54.48	54.48
2012	0.00	0.02	61.64	18.10	79.76	79.76	61.64	61.64	73.97	49.31	49.31	79.76	79.76	95.71	63.80	63.80
2013	0.00	0.02	69.85	22.69	92.56	92.56	69.85	69.85	83.82	55.88	55.88	92.56	92.56	111.08	74.05	74.05
2014	0.00	0.02	79.44	28.16	107.62	107.62	79.44	79.44	95.32	63.55	63.55	107.62	107.62	129.14	86.09	86.09
2015	0.00	43.52	90.16	34.57	168.24	168.24	90.16	90.16	108.19	72.13	72.13	168.24	168.24	201.89	134.59	134.59
2016	0.00	43.52	101.86	41.77	187.16	187.16	101.86	101.86	122.24	81.49	81.49	187.16	187.16	224.59	149.72	149.72
2017	0.00	43.52	115.03	50.13	208.68	208.68	115.03	115.03	138.04	92.02	92.02	208.68	208.68	250.42	166.94	166.94
2018	0.00	43.52	126.12	56.54	226.18	226.18	126.12	126.12	151.34	100.90	100.90	226.18	226.18	271.42	180.94	180.94
2019	0.00	43.52	132.64	60.68	236.84	236.84	132.64	132.64	159.17	106.11	106.11	236.84	236.84	284.20	189.47	189.47
2020	0.00	43.53	138.31	64.78	246.62	246.62	138.31	138.31	165.97	110.65	110.65	246.62	246.62	295.95	197.30	197.30
2021	0.00	43.53	143.85	68.73	256.10	256.10	143.85	143.85	172.62	115.08	115.08	256.10	256.10	307.32	204.88	204.88
2022	0.00	43.53	149.29	72.38	265.19	265.19	149.29	149.29	179.14	119.43	119.43	265.19	265.19	318.23	212.15	212.15
2023	0.00	43.53	151.82	73.80	269.15	269.15	151.82	151.82	182.18	121.45	121.45	269.15	269.15	322.98	215.32	215.32
2024	0.00	43.53	151.22	73.54	268.29	268.29	151.22	151.22	181.46	120.97	120.97	268.29	268.29	321.94	214.63	214.63
2025	0.00	43.53	148.91	72.50	264.94	264.94	148.91	148.91	178.69	119.12	119.12	264.94	264.94	317.92	211.95	211.95
2026	0.00	43.53	144.33	69.95	257.81	257.81	144.33	144.33	173.19	115.46	115.46	257.81	257.81	309.37	206.25	206.25
2027	0.00	43.54	129.15	61.09	233.78	233.78	129.15	129.15	154.98	103.32	103.32	233.78	233.78	280.54	187.02	187.02
2028	-232.56	43.54	104.41	45.75	193.69	426.25	104.41	104.41	125.29	83.52	83.52	426.25	426.25	511.50	341.00	341.00
NPV (SZL millions)						144.13	-220.67	-24.35	-48.85	-196.17	-294.33	20.97	217.29	241.12	-2.86	-101.02
EIRR						14.5%	7.8%	11.4%	11.0%	7.5%	6.0%	12.3%	16.1%	15.7%	11.9%	10.4%

Table 2.4: Economic Costs and Sensitivity Analysis with Only Costs of Civil Works (SZL million) (cont'd)

Undiscounted Cash Flows (SZL millions)							Sensitivity Analysis Only with VOCS					Sensitivity Analysis with All Benefits				
							Costs (+)	Costs (-)	VOCS (+)	VOCS (-)	Costs (+)	Costs (+)	Costs (-)	Benefits (+)	Benefits (-)	Costs (+)
Benefits							by 20%	by 20%	by 20%	by 20%	by 20% and	by 20%	by 20% and	by 20%	by 20%	by 20%
	Capital	Mtce. Costs		Time			and VOCS	and VOCS	and Costs	and Costs	VOCS (-)	and Benefits	Benefits	and Costs	and Costs	Benefits (-)
Year	Costs	Savings	VOCS	Savings	Total	Net	Same	Same	Same	Same	by 20%	Same	Same	Same	Same	by 20%
2004	89.80	0.00	0.00	0.00	0.00	-89.80	-107.76	-71.84	-89.80	-89.80	-107.76	-107.76	-71.84	-89.80	-89.80	-107.76
2005	169.84	0.01	2.60	0.54	3.15	-166.69	-203.81	-135.87	-169.84	-169.84	-203.81	-203.81	-135.87	-169.84	-169.84	-203.81
2006	150.32	0.02	5.70	1.32	7.04	-143.28	-180.38	-120.25	-150.32	-150.32	-180.38	-180.38	-120.25	-150.32	-150.32	-180.38
2007	58.56	0.02	9.29	2.46	11.77	-46.79	-70.28	-46.85	-58.56	-58.56	-70.28	-70.28	-46.85	-58.56	-58.56	-70.28
2008	19.51	0.01	13.60	4.00	17.62	-1.90	-23.42	-15.61	-19.51	-19.51	-23.42	-23.42	-15.61	-19.51	-19.51	-23.42
2009	0.00	0.02	39.27	8.38	47.67	47.67	39.27	39.27	47.12	31.42	31.42	47.67	47.67	57.21	38.14	38.14
2010	0.00	0.02	46.16	11.08	57.26	57.26	46.16	46.16	55.39	36.93	36.93	57.26	57.26	68.71	45.81	45.81
2011	0.00	0.02	53.84	14.25	68.11	68.11	53.84	53.84	64.61	43.07	43.07	68.11	68.11	81.73	54.48	54.48
2012	0.00	0.02	61.64	18.10	79.76	79.76	61.64	61.64	73.97	49.31	49.31	79.76	79.76	95.71	63.80	63.80
2013	0.00	0.02	69.85	22.69	92.56	92.56	69.85	69.85	83.82	55.88	55.88	92.56	92.56	111.08	74.05	74.05
2014	0.00	0.02	79.44	28.16	107.62	107.62	79.44	79.44	95.32	63.55	63.55	107.62	107.62	129.14	86.09	86.09
2015	0.00	43.52	90.16	34.57	168.24	168.24	90.16	90.16	108.19	72.13	72.13	168.24	168.24	201.89	134.59	134.59
2016	0.00	43.52	101.86	41.77	187.16	187.16	101.86	101.86	122.24	81.49	81.49	187.16	187.16	224.59	149.72	149.72
2017	0.00	43.52	115.03	50.13	208.68	208.68	115.03	115.03	138.04	92.02	92.02	208.68	208.68	250.42	166.94	166.94
2018	0.00	43.52	126.12	56.54	226.18	226.18	126.12	126.12	151.34	100.90	100.90	226.18	226.18	271.42	180.94	180.94
2019	0.00	43.52	132.64	60.68	236.84	236.84	132.64	132.64	159.17	106.11	106.11	236.84	236.84	284.20	189.47	189.47
2020	0.00	43.53	138.31	64.78	246.62	246.62	138.31	138.31	165.97	110.65	110.65	246.62	246.62	295.95	197.30	197.30
2021	0.00	43.53	143.85	68.73	256.10	256.10	143.85	143.85	172.62	115.08	115.08	256.10	256.10	307.32	204.88	204.88
2022	0.00	43.53	149.29	72.38	265.19	265.19	149.29	149.29	179.14	119.43	119.43	265.19	265.19	318.23	212.15	212.15
2023	0.00	43.53	151.82	73.80	269.15	269.15	151.82	151.82	182.18	121.45	121.45	269.15	269.15	322.98	215.32	215.32
2024	0.00	43.53	151.22	73.54	268.29	268.29	151.22	151.22	181.46	120.97	120.97	268.29	268.29	321.94	214.63	214.63
2025	0.00	43.53	148.91	72.50	264.94	264.94	148.91	148.91	178.69	119.12	119.12	264.94	264.94	317.92	211.95	211.95
2026	0.00	43.53	144.33	69.95	257.81	257.81	144.33	144.33	173.19	115.46	115.46	257.81	257.81	309.37	206.25	206.25
2027	0.00	43.54	129.15	61.09	233.78	233.78	129.15	129.15	154.98	103.32	103.32	233.78	233.78	280.54	187.02	187.02
2028	-175.69	43.54	104.41	45.75	193.69	369.38	104.41	104.41	125.29	83.52	83.52	369.38	369.38	443.26	295.51	295.51
NPV (SZL millions)						260.73	-76.73	71.61	71.10	-76.22	-150.39	161.56	309.90	357.05	114.42	40.24
EIRR						17.3%	10.2%	14.1%	13.7%	9.9%	8.3%	14.9%	19.0%	18.5%	14.5%	12.8%

Table 2.5: AADT, ESAL and Annual Road Condition

Year	Mbabane-Scot Junction = 6-km				Scot Junction-Nkoyoyo = 5-km			
	MT AADT	ESAL millions /ELANE	IRI Avg. m/km	Rut Depth mm	MT AADT	ESAL millions /ELANE	IRI Avg. m/km	Rut Depth mm
2009	5,761	0.24	2.12	2.91	12,608	0.56	2.16	1.74
2010	6,076	0.25	2.27	3.50	13,296	0.59	2.50	3.51
2011	6,407	0.26	2.35	4.11	14,022	0.62	2.90	5.37
2012	6,757	0.28	2.43	4.74	14,787	0.65	3.36	7.32
2013	7,126	0.29	2.52	5.40	15,593	0.69	3.82	9.36
2014	7,544	0.31	2.61	6.07	16,509	0.72	4.29	11.49
2015	7,987	0.32	2.70	6.77	17,478	0.75	4.76	13.72
2016	8,457	0.33	2.80	7.49	18,505	0.79	5.23	16.03
2017	8,954	0.35	2.89	8.24	19,592	0.82	5.72	18.44
2018	9,480	0.37	3.00	9.01	20,743	0.86	6.23	20.96
2019	9,990	0.38	3.10	9.80	21,858	0.89	3.05	3.55
2020	10,528	0.40	3.21	10.62	23,034	0.93	3.31	5.45
2021	11,094	0.41	3.33	11.47	24,274	0.97	3.78	7.90
2022	11,692	0.43	3.45	12.34	25,580	1.01	4.02	9.55
2023	12,322	0.45	3.57	13.24	26,957	1.05	4.45	12.05
2024	12,985	0.47	3.70	14.17	28,409	1.10	4.72	12.89
2025	13,685	0.49	3.83	15.13	29,939	1.14	5.57	15.05
2026	14,423	0.51	3.98	16.12	31,552	1.19	6.07	16.56
2027	15,201	0.53	4.15	17.15	33,253	1.24	6.75	19.55
2028	16,021	0.55	4.35	18.21	35,046	1.29	7.08	20.54

Project Construction Cost

Summary of ADB Project Costs by Component at Appraisal

		ZAR (million)			UA (Million)		
COMPONENTS		F.E.	L.C.	Total	F.E.	L.C.	Total
1	Civil Works	299.83	69.76	369.59	29.84	6.94	36.79
2	Supervision	21.60	2.40	24.00	2.15	0.24	2.39
3	Audit services	0.60	-	0.60	0.06	-	0.06
Total Base Cost		322.03	72.16	394.19	32.05	7.18	39.23
	Contingencies	32.20	7.21	39.41	3.20	0.72	3.92
	Price Escalation	19.45	10.40	29.85	1.94	1.03	2.97
	Total Project Cost	373.68	89.77	463.45	37.19	8.93	46.13

Project Costs by Source of Finance at Appraisal

SOURCES	ZAR (million)			UA (million)		
	F.E.	L.C.	TOTAL	F.E.	L.C.	TOTAL
ADB	373.68	-	373.68	37.19	-	37.19
GOS	-	89.77	89.77	-	8.93	8.93
TOTAL	373.68	89.77	463.45	37.19	8.93	46.13
Percentage	81	19	100	81	19	100

PROJECT COST BY CATEGORY OF EXPENDITURE (2005 - 2006 in million ZAR)

Categories	Total Expenditure 2004	Total Expenditure 2005	Total Expenditure 2006	Total Expenditure 2005-2006
	ZAR	ZAR	ZAR	ZAR
A – Civil Works	173.88	195.61	65.21	434.70
B – Consultancy Services	11.26	11.26	5.63	28.15
- Supervision	0.20	0.20	0.20	0.60
- Audit				
Total	185.34	207.07	71.04	463.45

Summary of Financing Plan and Actual Disbursement by Component (ZAR million)

Component	Appraisal									PCR								
	ADB			GOS			Total			ADB			GOS			Total		
	F.E.	L.C.	Total	F.E.	L.C.	Total.	F.E.	L.C.	Total	F.E.	L.C.	Total	F.E.	L.C.	Total	F.E.	L.C.	Total
Civil Works	299.83	-	299.83	-	69.76	69.76	299.83	69.76	369.59	347.22	-	347.22	-	454.51	454.51	347.22	454.51	801.73
Supervision	21.6	-	21.6	-	2.40	2.40	21.6	2.40	24.00	14.30	-	14.30	-	16.24	16.24	14.30	16.24	30.54
Audit Services	0.6	-	0.6	-	-	-	0.6	-	0.60	0.17	-	0.17	-	-	-	0.17	-	0.17
Contingencies	51.65	-	51.65	-	17.61	17.61	51.65	17.61	69.26	-	-	-	-	-	-	-	-	-
Total	373.68	-	373.68	-	89.77	89.77	373.68	89.77	463.45	361.69	-	361.69	-	470.75	470.75	361.69	470.75	832.94
%	80.6			19.4			100			43.4			56.6			100		

Annex 5

ADB Supervision Data

ADB SUPERVISION DATA

List of previous Missions	Start Date (if applicable)	End Date (if applicable)	Mission Co mp osit ion
DESK SUPERVISION	04.04.2005	05.04.2005	
FIELD SUPERVISION	12.07.2004	21.07.2004	
FIELD MISSION	21.05.2005	28.05.2005	
FIELD MISSION	14.10.2005	22.10.2005	
FIELD MISSION	18.04.2006	24.04.2006	
FIELD MISSION	24.02.2007	03.03.2007	
FIELD MISSION	11.08.2007	18.08.2007	
FIELD MISSION	01.05.2008	11.05.2009	
FIELD MISSION			

Annex 6

Project Performance

INDICATORS	RATINGS				
	Precedings report				This report 01.05.2008
	14.10.2005	18.04.2006	24.02.2007	11.08.2007	
A. PROJECT IMPLEMENTATION					
Compliance with loan conditions precedent to entry into force	3	3	3	3	3
Compliance with General Conditions	2	2	2	2	2
Compliance with Other Conditions	2	2	2	2	2
B. PROCUREMENT PERFORMANCE					
Procurement of Consultancy Services	3	2	2	2	2
Procurement of Goods and Works	3	3	3	3	3
C. FINANCIAL PERFORMANCE					
Availability of Foreign Exchange	3	3	3	3	3
Availability of Local Currency	3	2	2	2	2
Disbursement Flows	2	2	2	2	2
Cost Management	3	1	1	1	1
Performance of Co-Financiers	0		0	0	0
D. ACTIVITIES AND WORKS					
Adherence to implementation schedule	2	2	1	1	1
Performance of Consultants or Technical Assistance	3	2	1	1	2
Performance of Contractors	3	2	2	2	2
Performance of Project Management	3	2	2	2	2
E. IMPACT ON DEVELOPMENT					
Likelihood of achieving development Objectives	3	2	2	3	3
Likelihood that benefits will be realized and sustained beyo	3	2	2	3	3
Likely contribution of the project towards an increase in	3	2	2	2	2
Current Rate of Return	3	2	2	2	3
F. OVERALL PROJECT ASSESMENT					
Current Supervision Average	2.61	2.12	1.89	2.00	2.11
Current Trend over time					2.15

RATINGS: 3 = Highly Satisfactory, 2 = Satisfactory, 1 = Unsatisfactory, 0 = Highly Unsatisfactory, ' ' = Non applicable

STATUS

Implementation Progress (IP) = 1.93

Development Objectives (DO) = 2.75

OVERALL STATUS : NON PROBLEMATIC PROJECT / NON POTENTIALY PROBLEMATIC PROJECT /

JUSTIFICATION OF RATINGS

Annex 7

List of Persons Met

MINISTRY OF FINANCE

- Mr. V. Nxumalo : Acting Principal Secretary
- Ms. T. Mlangeni : Acting Director: Budget & Economic Affairs
- Mr. T. Dlamini : Finance Analyst

MINISTRY OF ECONOMIC PLANNING AND DEVELOPMENT

- Mr. S. Dlamini : Principal Secretary
- Ms. T. Zwane : Senior Planning Officer
- Ms. N. Tibane : Chief Economist

MINISTRY OF PUBLIC WORKS AND TRANSPORT

- Mr. P. Nkambule : Principal Secretary
- Mr. N. Ntezinde : CPO
- Mr. I. Fakudze : Project Coordinator
- Mr. M. Mndawe : Principal Roads Engineer

MINISTRY OF HOUSING AND URBAN DEVELOPMENT

- Mr. M. Bhekithemba : PS
- Mr. J. Ndlangamandla : Acting Principal Secretary
- Mr. A. Mthunzi : Planning Officer
- Mr. T. Simelane : Director Urban Government
- Mr. S. Dlamini : Principal Planner
- Mr. K. Simelane : PAS
- Ms. B. Mokoena : PA
- Mr. Q. Masuku : Local Government Officer

SURVEYOR GENERAL'S OFFICE

Mr. A. Mhlanga : Surveyor General/Chairman Compensation Determination
Sub-Committee

SWAZILAND ENVIRONMENTAL AUTHORITY

Mr. J. D. Vilakati : Executive Director

Mr. M Dlamini : Director Environment Assessment

Mr. S Zuke : Director Policy Planning

Ms. C. Z. Dlamini : Legal Counsel

MBABANE MUNICIPALITY

Ms. F. Dlamini : Director, Planning and Community Development

Mr. S. Malenja : Director, Public Works

Mr. M. David : Ass. City Planner

Mr. B. Magagula : Community Liaison Officer

Mr. H. Dlamini : ADPW

Mr. B. Gamedze : Professional Assistant

CONSULTANTS

Mr. S. Mahadnac : Resident Engineer, BCOEM

Mr. S Mamba : Environmentalist, BCOEM

CONTRACTOR

Mr. S. Lesper : Site Agent WBHO

Mr. G. Voubert : WBHO

COMMUNITY

Mr. M. Dlamini : Monzana Community Representative

Mr. S. Ndzingane : Mangwaneni Community Representative

Mr. S Mnisi : Mangwaneni Community Representative

Various from resettled and host communities

Annex 8

Map of Swaziland



Annex 9

List of Supporting Documents

1. Audit Reports
2. Bank Appraisal Report
3. Bank Supervision Mission Reports
4. Contract Documents for Contractor
5. Contract Documents for Consultant
6. Environmental Compliance Monitoring Reports
7. Environmental and Social Management Plan (ESMP)
8. Mbabane By-Pass – Scot Corner & Mangwaneni Slope Instability Remediation
9. Project Completion Report, Transport Sector Project, December 2004.
10. Project Progress Reports
11. Resettlement Plan Monitoring Reports
12. Supervision Missions Reports
13. Swaziland: 2001-2003 Country Strategy Paper
14. Swaziland's Business Year Book, 2009
15. Two international Roads Project, Project Completion Report: October 2004

Annex 10

Bank Inputs

Preparation	H. Nyame Mensah Task Manager	B. Turay Principal Transport Engineer	W. Soliman Principal Environmentalist	T. Fadayomi Principal Socio- Economist
Supervision	Lawrence Kiggundu Task Manager	Noel Kulemeka Principal Socio- Economist		
Completion	João Mabombo PCR Mission Leader	Arcelina Yolanda Social Sector Specialist	Alemayehu Ambo Transport Economist (Consultant)	