

Annex

1. IDENTIFICATION

Title/Number	Swaziland - Accompanying Measures for Sugar Protocol Countries 2010 - Road Transport Infrastructure - CRIS no SZ/DCI-SUCRE/022-044	
Total cost	EU contribution EUR 12.057.000 (no other contributions)	
Aid method / Method of implementation	Project approach – Partially decentralised management	
DAC-code	21020	Road Transport

2. RATIONALE

2.1. Sector context

The project supports the competitiveness of Swaziland's sugar industry through the improvement of the road network that is used to transport sugar cane from the field to the mill. The sugar industry is of critical importance to Swaziland's development, employing over 12,000 people and contributing 12% to GDP. Swaziland has a clear comparative advantage in the sector, and is ranked in the top-five global sugar producers in terms of efficiency.

Previously Swaziland exported 120,000 tonnes (approximately 20% of annual production) to the EU under the Sugar Protocol, and a further 30,000 tonnes under the Generalised System of Preferences (GSP). In order to further improve the industry's competitiveness, the government and the industry drafted the National Adaptation Strategy (NAS) in 2006. Under the NAS the industry committed itself to investing over €200M in order to increase efficiency, diversify into new products (e.g. electricity co-generation, ethanol) and improve economies of scale by expanding refining capacity. Presently, Swaziland exports about 600,000 tonnes of sugar, of which about 53% to SACU and 258,000 tonnes to the EU. The production cost ranges between 250 and 300 US\$/t¹ being the third most competitive industry among the SADC sugar producers.

Given the substantial sums invested in expanding processing capacity, which has created a greater demand for sugar cane, there is a clear opportunity to reduce poverty by linking trade with aid and expanding the numbers of out-growers. Smallholders currently produce 20% of the sugar cane in Swaziland. However, emergent smallholders have been particularly vulnerable to the lower sucrose prices, as they seek to make the transition from rain-fed subsistence agriculture to the management of irrigated cane.

Transportation costs of cane from the field to the mill are critical. With each ha producing 100 tons of biomass, transport costs represent between 20-40% of production costs. High transport costs have an even greater effect on the profitability of smallholder sugar cane farmers, as they are located further from the mill than the larger commercial growers that established themselves in the early years of the industry. Reducing transport cost is therefore one important NAS measure.

The Ministry of Public Works and Transport (MoPW&T) is responsible for the road sector. The road network consists of approximately 5,050 km, of which 1,370 km are bitumen standard and 3,680 km gravel. The MoPW&T has developed a Road Management System for all gazetted roads, and the road maintenance budget has increased year-on-year from SZL 90M in 2007 (8.5M€) to SZL 120M in 2009 (11.4M€) to SZL 200M (18.9M€) in 2010. It has a generally good record in respect of road maintenance: the present road condition index is 77% (0% is very poor and 100% is very good). In accordance with the National Transport Policy and the SADC Protocol, Swaziland is in the process of establishing a Road Authority and a dedicated Road Fund based on user charges (vehicle license fees, vehicle transit fees, supplementary fuel impositions, and strategic tolls) to cover the future cost of maintaining and expansion of the network. The setting up of the Roads Fund and Roads Authority, as well as the review of enabling legislation, is underway. Raising revenue through road tolls is expected to start in 2011.

¹ Source: LMC (data for 2006-2009)

2.2. Lessons learnt

- a) Experience in the SADC region has shown that there are considerable advantages in constructing paved roads even where traffic volumes are relatively low. This experience has contributed to the preparation of the SADC Guidelines for Low Volume Sealed Roads (July 2003). These guidelines argue for sealing roads with traffic volumes as low as 50 vehicles per day, recognising that gravel wearing course materials are becoming scarce and more expensive in many areas.
- b) There is a need for better sequencing of infrastructure projects in order to improve project implementation and disbursement rates. In the 2008 AAP, the design and works tenders were covered by the same FA, leading to significant delays in committing funds. For the proposed project the design was financed from the 2006 AAP.
- c) Design and supervision of the works are carried out by the same contractor in order to avoid problems in the construction of the works.
- d) Contractual disputes have arisen in cases where the availability of sufficient quantities of materials meeting the required specifications for road works has not been confirmed prior to launching the works contract. The design made available sufficient resources for thorough materials investigations (including culvert foundations, sources of gravel and borrow pits).

2.3. Complementary actions

The project complements other actions financed by the annual AAPs under the MIP 2007-10. The 2007 and 2009 AAPs focus on other measures to enhance smallholder profitability, including extension support; seed cane for replanting; grants to improve infield irrigation and finance for up to 70% of the cost of infield developments for new growers. The 2008 AAP will improve roads in the southern sugar-belt. By the end of 2010, almost 1,400 small growers will be able to irrigate some 2,000 ha of sugar cane, resulting in an estimated average increase in household income of about €900, and additional supply of cane to mills of about 200,000 tons. The main output of 2008 measures is so far the detailed design of roads and bridges to be improved as from 2011, enabling about 2,500 growers to reduce transport costs to the mill. 2009 Financing Agreement has just been signed, but tenders for the improvement of the water supply to a total of 14,000 ha are in preparation including about 3,000 ha benefitting 300 cane growers, and 5,000 other beneficiaries. These measures will provide an additional cane supply of 30,000 tons.

The EU actions will also complement several industry and government initiatives to improve the environment for small growers (e.g.: debt relief, extension services and technical support through recently established outgrower units). The industry is also assisting smallholders to improve transport logistics by forming harvesting groups, which improves the coordination of cane deliveries to the mill and enables the growers (negotiating as a group) to obtain better haulage rates with the larger transport firms. The Royal Swaziland Sugar Corporation (RSSC) is currently re-gravelling the Simunye-Ngomane Road (14 km) which serves the sugar estates as well as a large number of small growers in the Komati Downstream Development Project (KDDP).

The action will complement Swaziland's 2006-16 Prioritised Investment Programme which aims to continuously improve the road network. Finally, it will directly support the KDDP² in Hhohho district, which main infrastructure (dam) was largely financed by the AfDB, while the growers funded the infield irrigation systems through bank loans.

Funds under the previous AAPs of the Sugar Accompanying Measures (AMSP) have been used to support the implementation of the EU Adaptation Strategy. Although the EU Strategy has five areas³ in reality sugar funds have supported only three of these areas, namely a) institutional support, b) improving the productivity, efficiency and viability of out-growers, and c) improving infrastructure. This limited has allowed to avoid overlaps with EDF allocations under the National Indicative Programme for Swaziland. Both the 9th EDF (€ 33 M) and 10th EDF (€ 63 M) are currently being implemented and include support for health, education, water and sanitation, governance, trade, and

² The KDDP has developed approximately 3,000 ha of smallholder sugar-cane since. The project started in 2000, and is largely financed by the AfDB.

³ i) institutional support; ii) the provision of social services; iii) improving the productivity, efficiency and viability of out-growers; iv) improving infrastructure in sugar growing areas; v) support to diversification

agriculture. This approach ensures complementarities between the projects funded by the budget line for Sugar Accompanying Measures (AMSP) and by the EDF. And synergies will be realized in terms of streamlined project management and use of funds. Thus the approach of this AAP 2010 of the Sugar Accompanying Measures (AMSP) respond to the recent 10th EDF MTR exercise which aims also to increase complementarities and to avoid overlaps by a clearer division of labour between EDF and budget funded actions in Swaziland.

2.4. Donor coordination

Although formal donor coordination mechanisms do not exist in the road sector; activities and stakeholder coordination will take place under the NAS structures (Steering Committee and various working groups), which includes representatives of the Ministry of Economic Planning & Development (MEPD), the sugar industry and all relevant line ministries⁴. The NAS Steering Committee is responsible for both overseeing implementation of the NAS and all EU support (EC Strategy, MIPS and AAPs) as well acting as the forum for agreeing on programming priorities.

3. DESCRIPTION

3.1. Objectives

The overall objective of this project is *'To improve the competitiveness of the sugar industry in the Hhohho District'*. The purpose is: *'To reduce the cost of hauling sugar cane from the fields to the mill in the Hhohho District'*.

3.2. Expected results and main activities

The expected result is that 'the road Mananga to Sihhoye is upgraded to paved bitumen standard', leading to reduced transport costs per km and translating into improved profit margins for smallholder sugar cane growers. A cost benefit analysis (CBA) has been performed based on information derived from a traffic count study undertaken in 2010 and latest figures on vehicle operating cost which were obtained from a survey of various road infrastructure projects in Southern Africa in 2009. The financial analysis results in a Net Present Value (NPV) of €2,259 million and a Financial Internal Rate of Return (FIRR) of 6.7 % (compared to a discount rate of 5 %). The improved road is expected to reduce operating costs by about €68 (discounted and capital cost excluded) per ha, assuming a harvest of 103 tons cane per ha. This is above the 15% target for smallholder transport cost reductions for the third specific objective of the Multi-Annual Indicative Programme (2007-2010). The reduction of the operating costs will be monitored against industry norms and farm business plans by the Out Growers Department and other extension services. A profitable small grower sector will also bring other employment opportunities in rural areas, and contribute to a more competitive sugar industry in Swaziland. It is also expected that general traffic using the roads will increase at an annual rate of 4% by 2012 in response to the better road conditions. This will have multiple effects on poverty, such as improved access to social services and public transport; lower transaction costs for farmers and traders; and savings in time.

The main activities to achieve the results will be:

A1: The upgrading to bitumen standard of about 14 km of existing gravel road linking Mananga and Sihhoye in Hhohho District, passing directly through an area of smallholder sugarcane production financed under the KDDP. The growers supply the RSSC's Mhlume mill. The route is classified as the D35 road, and it connects the MR 5 with the MR 6. The design study estimated an AADT⁵ of 205 vehicles per day, including approximately 20 heavy sugar cane trucks. It is classified as a collector road. The current road has a gravel surface of 6.0 to 7.0 meters wide and suffers from poor formation and drainage. It traverses mainly flat to rolling terrain, but there are four steep sections at approaches to river crossings. There are three bridge/causeway structures along the road. Structural examination has been carried out together with the assessment of their hydraulic capacity in order to determine whether to retain, replace or rehabilitate these structures. The upgraded road will have a total

⁴ Ministry of Public Works and Transport, Ministry of Agriculture and Ministry of Natural Resources and Energy.

⁵ Annual Average daily traffic - Total annual traffic in both directions divided by 365

formation width of 10m and a 80kph design speed. The design standards agreed are in accordance with MoPW&T policy (Designs Standards for Roads and Bridges 1996).

The final design standards adopts 3.5m lanes, 1.0m paved shoulders, and 0.5m unpaved shoulders on 30mm asphalt surface layer for a total formation width of 10m. In order to maximise the use of the existing pavement materials and since the materials investigations indicate that natural gravel material of suitable quality may not be available for the base course layer in sufficient quantity from sources within the project corridor; it has been decided to use grade crushed stone materials as the road layer⁶. The new pavement has been designed for a service period of 20 years, considering the traffic and axle load surveys and forecasts, and it has been endorsed by the MoPW&T. The period of 12 months is deemed to be an adequate construction period.

A2: The supervision of the works. The tender for the design phase also included the possibility of awarding the contract for supervision to the same consultant, subject to performance.

3.3. Risks and assumptions

Assumptions/Risks	Mitigation Measures/Remarks
The Swaziland sugar industry is highly competitive	<ul style="list-style-type: none"> The industry is in the top five low costs producers, and is expanding production facilities and diversifying products and markets to take advantage of new opportunities.
Government will provide adequate funds for maintenance of roads	<ul style="list-style-type: none"> The MoPW&T's current record of maintenance is considered good. The upgrading of the existing road proposed will not add to the existing maintenance costs, funded by Government budget The roads are constructed to a standard adequate for bearing cane trucks, preventing damage.
Savings in transportation costs will be passed onto farmers by the transporters	<ul style="list-style-type: none"> There is already a high degree of competition between transport operators, and this is likely to intensify with better road conditions. Farmers are assisted (under AAP 2007 and 2009) to improve their bargaining position/form harvesting groups. Key performance indicator contained in logical framework to monitor the reduction in haulage costs for the farmers in the area.
Rising oil prices/input costs offset the savings in transport (medium-high risk)	<ul style="list-style-type: none"> Rising fuel prices affect all producers worldwide, and the sugar price will have to reflect input costs.
Depreciation of the Euro versus the SZL / ZAR leading to an increase in the Euro cost of the project (medium risk)	<ul style="list-style-type: none"> Rider to 2010 FA using MIP II funds

3.4. Crosscutting Issues

A socio-economic and environmental impact study is being prepared as one element of the detailed road design. It includes an Initial Environmental Evaluation (IEE) and a Comprehensive Mitigation Plan (CMP) in line with Swaziland's environmental law⁷ and EU guidelines for environmental impact assessment⁸. Extensive stakeholders and public participation took place as part of the IEE. The draft final report is still under review by Swaziland Environment Authority as per national requirements.

The positive social benefits are not expected to be offset by any negative consequences of improved roads since the project will only improve the existing network. The Swaziland Environment Authority has assigned the road a Category 2 status (likely to have some significant adverse environmental impacts), but the design consultants considered the impacts well known and easy to predict (e.g.: excavation of borrow pits, storm drains, damage caused by construction machinery). Moreover

⁶ i) Base - 150mm crushed stone G1, ii) Subbase - 250 mm cemented natural gravel C4, iii) Upper Selected Layer - 150mm gravel/soil G7; iv) Insitu Subgrade o- 150mm gravel/soil G9.

⁷ "Environmental Audit, Assessment & Review Regulations - 2000"; "Environment Management Act- 2002"

⁸ "Guidelines on the Integration of Environment and Climate Change in Development Cooperation" November 2009 - EuropeAid

measures can be taken to mitigate the risks. The current climate classification for the Kingdom of Swaziland is humid-subtropical. Therefore, according to the Climate Risk Screening, the project is not considered potentially at risk. However, precipitation in the Lowveld (Hhohho District) is low and consequentially some part could be classified as semi-arid. As part of the design of the road, the consultant has been requested to estimate the level of risk determined by climate exposure, and any factor of vulnerability to climate change as specified on the EuropAid climate risk screening.

The project budget includes a provision for CMP implementation and provided the contractors follow the CMP, further adverse environmental and social impacts are considered unlikely.

In addition, the improvement of family incomes resulting from higher smallholder profitability will reduce stress on persons affected by HIV/AIDS and their families, as will the improved road network. Finally, the EU is carrying out a Strategic Environmental Assessment (SEA) on the whole sugar sector, whose scope of work includes an analysis of the impact of the industry on HIV/AIDS, gender relation and the environment. It is expected to be finalized early August 2010, and its recommendations will be considered in the design/implementation of NAS activities.

Good governance aspects will be taken into consideration specifically dealing with aspects of technical and business management along with transparency in procurement practices.

3.5. Stakeholders

- The Ministry of Economic Planning and Development (MEPD), which coordinates and oversee implementation of the NAS, and is the Contracting Authority for this project as well as the National Authorising Office for the EDF.
- The MoPW&T has endorsed the designs and standards on which the project is based. They will also act as the Supervisor during the construction phase.
- The RSSC's Mhlume mill, which is dependent on a thriving smallholder cane sector to achieve production targets. Industry extension services will help farmers improve their management of cane haulage contracts by assisting them to form cane harvesting groups to lower costs.
- The transport contractors (cane hauliers), who will benefit from lower operational costs. It is assumed that hauliers will pass on these savings to the farmers through reduced charges.
- The Swaziland Sugar Association (SSA) and the Swaziland Cane Growers Association (SGA), which represent the interests of all sugar cane growers and the industry, and provide technical assistance and marketing facilities to their members; they should also play a role in the negotiation with hauliers on charges reduction.
- The target group is the existing and future smallholder sugar cane farmers in areas adjacent to the road identified for upgrading. Data from the project identification mission and projections for irrigation within KDDP indicates that there are currently 945 outgrowers (meaning approximately 7,000 beneficiaries) organised in 10 farmer associations cultivating 1,195 ha of cane.
- The local community through which the road runs. The improved road will lead to very significant benefits in the form of lower transport costs and travel time, better levels of road safety and comfort, and improved mobility of the general public, economic opportunities and remunerative employment.

4. IMPLEMENTATION ISSUES

4.1. Method of implementation

Partially decentralised management through the signature of a financing agreement with the Kingdom of Swaziland.

The MoPW&T will take full responsibility for the road maintenance. The Consultants that are developing the design of the proposed infrastructures, as part of their contract, will provide assistance with the tendering process and will also be contracted to act as the supervisor's agent on behalf of the Contracting Authority and the MoPW&T.

4.2. Procurement and grant award procedures

All contracts implementing the action must be awarded and implemented in accordance with the procedures and standard documents laid down and published by the Commission for the implementation of external operations, in force at the time of the launch of the procedure in question.

Participation in the award of contracts for the present action shall be open to all natural and legal persons covered by the EU Budget - Development Cooperation Instrument (DCI). Further extensions of this participation to other natural or legal persons by the concerned authorising officer shall be subject to the conditions provided for in Articles 31(7) and (8) DCI.

4.3. Budget and calendar

	Description	Contract Type	Total EUR
1	Works supervision	Service	425,000
2	Upgrading of Mananga Sihhoye road including contingencies and Cross cutting issues (implementation of the Comprehensive Mitigation Plan)	Works	10,562,000
3	Audit/evaluation	Services	180,000
4	Visibility	Services/Supply	20,000
5	Additional contingencies		870,000
	Total		12,057,000

The budget breakdown is based on cost estimates provided by the consultant engineers in the draft final detailed design report. The report provided cost comparison between different standards to give a better understanding of the added benefit of a strengthened pavement/structure versus the capital cost of construction and to allow comparison of different options considering the available budget. The major causeways have been designed for a Return Period of 1:20 years, as recommended in the Road and Bridge Design Standard of MPW&T; and the cost for the rehabilitation of one causeway and the replacement of other two is included.

The consultant engineers have carried out cost comparison of similar projects in Swaziland and in the southern Africa and proposed the cost of €571.000 per km in line with the average cost of road upgrading with similar technical specifications. However, due to previous experiences with similar infrastructure projects in the region, the significant exchange rate fluctuation and considering going market prices additional margin has been included in the budget for works.

The total duration of the implementation period of the project is 48 months as from the signature of the Financing Agreement.

4.4. Performance monitoring

The MoPW&T will be responsible for project monitoring at the level of activities (works). At the level of results and purpose, the MEPD and the NAS stakeholders monitor the action in line with the Logical Framework. The EuropeAid Standard Indicators (SI) have been taken into account in the design of the monitoring system, in particular those concerned with the cost of freight transport (falls by 15% by 2013); the volume of freight transported; the number of road users (by 4% per annum); and the length of paved road constructed (14km).

4.5. Evaluation and audit

Provision is made for a final external evaluation as well as a financial and technical audit. The basis for project monitoring and evaluation will be the Logical Framework and the set of key performance indicators outlined in it.

4.6. Communication and visibility

A visibility and communication strategy in accordance with the EU Visibility Guidelines has already been prepared for the EU Sugar Accompanying Measures. Actions will include frequent coverage of project activities by the press and other media, formal project launch and handover ceremonies, signboards on site bearing the EU logo, permanent commemorative plaques at the sites, etc. Additional visibility measures will be the responsibility of the works contractor.