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« A STRATEGIC ENVIRONMENTAL ASSESMENT OF THE SUGAR SECTOR IN MALAWI »

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FINAL REPORT



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Some of the views and opinions expressed in this report are those of the consultant team and do not necessarily reflect the views and opinions of the EU, or of the Government of Malawi or of any other stakeholder.

Abbreviations and Acronyms

ACP Africa Caribbean Pacific
AfDB Africa Development Bank

ALARP As Low As Reasonably Practicable

AMSPC Accompanying Measures for Sugar Protocol Countries

BSI Better Sugarcane Initiative

CAADP Comprehensive Africa Agricultural Development Programme

CDM Clean Development Mechanism
CISANET Civil Society Agricultural Network
CoSA Coordination of Sugar Activities
CSA Cane Supply Agreement
CU Concern Universal
DC District Commissioner

DCGL Dwangwa Cane Growers Limited
DCGT Dwangwa Cane Growers Trust

DOP Division of Proceeds

DSC Dwangwa Sugar Corporation

EBA Everything But Arms
EC European Commission

EIA Environmental Impact Assessment

EIB European Investment Bank
EMP Environmental Management Plan
ESCOM Electrical Supply Commission of Malawi

Ethco Ethanol Company Limited

EU European Union

EUDEL Delegation of the European Union to Malawi FIDP Farm Income Diversification Programme

GCH Green-Cane Harvesting
GHG Greenhouse Gas
GoM Government of Malawi

HH Households

KCGL Kasinthula Cane Growers Limited
KSCGS Kasinthula Sugar Cane Growers Scheme

LSCT Lower Shire Community Trust M & E Monitoring and Evaluation

MAFS Ministry of Agriculture and Food Security

MARDEF Malawi Rural Development Fund
MASS Multi-Annual Support Strategy
MDG Millennium Development Goal
MEGS Malawi Economic Growth Strategy

MGCWCS Ministry of Gender, Child Welfare and Community Services

MGDS Malawi Growth and Development Strategy
MIP Multi-Annual Indicative Programme

MLGRD Ministry of Local Government and Rural Development

MOF/NAO Ministry of Finance/National Authorising Office

MOH Ministry of Health MOL Ministry of Lands

NAPA National Adaptation Programmes of Action

NAS National Adaptation Strategy
NGO Non-governmental organisations
NIP National Implementation Plan

OPC Office of the President and the Cabinet

POP Persistent Organic Pollutant
SAM Sugar Accompanying Measures
SCBP Sugar Capacity Building Project
SEA Strategic Environmental Assessment

SSA Smallholder Sugar Authority
SSC Sugar Steering Committee
SVCGT Shire Valley Cane Growers Trust

UNAIDS Joint United Nation Programme on HIV/AIDS

WHO World Health Organisation

UNFCCC UN Framework Convention on Climate Change

Executive Summary

- (a) The European Union (EU) requires a Strategic Environmental Assessment (SEA) to be carried out to describe, identify and assess the likely significant effects on the environment of implementing the Sugar Accompanying Measures (SAM). It is intended that the SEA conclusions and recommendations will be applicable to the sector as a whole, and to the future 2011-2013 Multi-Annual Support Strategy (MAAS) and Multi-Annual Indicative Programme (MIP).
- (b) Malawi, as part of the African, Caribbean and Pacific group of countries (ACP) has benefited from preferential access into the European Union (EU) market under the EU's Sugar Protocol agreement. This benefit is being significantly reduced under the proposed reforms of the EU's sugar market that began in 2006. The European Commission (EC) proposed a scheme to help Sugar Protocol countries that depended on the EU market, to adapt to the new situation.
- (c) In Malawi, sugar cane is the second most important crop in terms of foreign exchange generation after tobacco. The poverty-focus and importance of the sugar sector is also identified in the Malawi Growth and Development Strategy (MGDS) which is structured to achieve poverty reduction and sustainable economic growth. The sugar industry places great emphasis on outgrower development, given its contribution to poverty alleviation and employment generation in Malawi.
- (d) Sugar is currently produced in two areas. The largest producer is Nchalo Sugar Estates, part of Illovo Sugar (Malawi) Ltd in the Lower Shire Valley in the South of Malawi Chikhwawa District. The second producer is Dwangwa Sugar Corporation, also part of Illovo Sugar (Malawi) Ltd in Nkhotakota District.
- (e) The Dwangwa Sugar Cane Growers Scheme is an irrigated smallholder scheme supplying cane for processing at the Illovo owned mill at Dwangwa in the Nkhotakota District of Malawi. The Kasinthula Sugar Cane Growers Scheme is located in Chikhwawa District of the Lower Shire Valley. Each scheme is under a Trust and supported by a Company (at Dwangwa: Dwangwa Cane Growers Trust and Dwangwa Cane Growers Limited and at Kasinthula: Shire Valley Cane Growers Trust and Kasinthula Cane Growers Limited).
- (f) The National Adaptation Strategy (NAS) was elaborated in 2006 and envisages the increase in sugar production between 2006 and 2009/10 (short to medium term strategy) through optimising the factory capacity and increasing the production of sugar cane. It is projected, within the NAS, that the additional sugar production will be produced by outgrowers¹ on existing and new irrigation schemes. The NAS relies heavily on these measures in order to guarantee the sustainability of the existing smallholder irrigation schemes and that funding is found for further development of smallholder irrigation schemes. The EC's Response Strategy to the NAS is reflected in the form of the Multi-Annual Adaptation Strategy. The Strategy reflects the NAS medium and long-term .
- (g) There is no specific, primary sugar industry legislation that governs the administration and operation of the sugar industry. The Sugar Steering Committee (SSC) is examining possibilities of an industry self regulatory framework that would not only regulate but also promote business and avoid stifling or heavybureaucracy. For now, there are several items of legislation that govern business activities generally, which would include those operating within the sugar sector. Several institutions have jurisdictions within which various parts of the NAS (and EU SAM) implementation will occur
- (h) The EU SAM initiatives have been implemented with guidance from the SSC multi-stakeholder forum representing private and public sector stakeholders and development partners, including the EU Delegation. The Committee continues to undertake the role of overall steering, monitoring and coordinating the implementation of the NAS. This will continue to ensure that all stakeholders undertake their interrelated investments in a coordinated fashion ensuring the successful implementation of the NAS.
- (i) Assuming that an expanding smallholder sugar cane nexus is non-negotiable then alternatives could consider:
 - Alternative locations for sugar growing;
 - Alternative institutions servicing the smallholder community/sugar sector as a whole; and/or,
 - Alternatives technologies.

¹ Unless otherwise indicated, the terms: farmer, grower, outgrower and smallholder are used interchangeably

- (j) Assessment of alternative locations for sugar growing would require extensive mapping and classifying of land which is outside the scope of the SEA but does warrant further consideration². Regarding alternatives technologies, on the grounds of poverty reduction, the current approach would seem to be appropriate whilst recognising that this is potentially leading to absentee farming with much of the farming operation simply being out-sourced to a contractor (the cane growers' company). That, in itself is not an unacceptable approach provided that the flow of funds through the Division of Proceeds system proceeds smoothly and provided that the obvious temptation by out-source providers to increase their mark-ups does not continue to a disruptive point.
- (k) The scope of the baseline was defined during the Scoping Study and was confirmed during the Stakeholder Workshop. The following environmental issues were identified:
 - Climate change
 - Soil quality
 - Water quality and availability
 - Air quality
 - Habitat and biodiversity
 - Mill emissions, discharges and by-products
- (I) The following social and institutional issues were identified:
 - Poverty reduction
 - Insecurity of land tenure
 - Capacity of smallholder sugar cane farmers' management organisations
 - Capacity at District Level
 - Cross-cutting issues gender
 - Cross-cutting issues HIV/AIDS
- (m) The expansion of sugar cane farming, especially by smallholders who are new to the activity, implies a risk of inadequate management of agrochemical products, and also an inherent risk of increasing water pollution from non-point sources (agricultural runoff). The EIA for the Kasinthula Phase 3 Expansion recognises this and follows this up within its Environmental Management Plan. The Dwangwa environmental descriptions are less clear about this potential threat to water quality.
- (n) There is considerable guidance from Brussels on mainstreaming climate change into all forms of EU assistance. The relevance here is that the EU SAM should be cognisant of the need to consider its greenhouse gas (GHG) emissions that would not have resulted had not a given assistance programme proceeded. The EU is currently embarking on a rigorous mitigation programme within its member states to reduce GHG and so it is incumbent on Delegations worldwide to ensure that its programmes are not adding to the GHG burden. Whilst it could not be reasonably expected that current MIPs should be so cognisant, the foreseen MIP 2011-2013 should at least consider this consequence, given the general move worldwide towards green cane harvesting.
- (o) The Sugar Capacity Building Project component of the EU SAM, being undertaken by Concern Universal and its technical advisors offers the opportunity to sensitise the new schemes' smallholders in regard to the consequences of habitat destruction and biodiversity loss.
- (p) A separate EU-funded study has been commissioned to study downstream products potential and the findings from that study will be available in due course.
- (q) Inadequate access to land and land tenure insecurity are major issues in the smallholder sugar sector and a challenge for the expansion of cane production by smallholder farmers. Since farmers do not have a title to their land, they are reluctant to "transfer" land to the Trust as they are not sure what will happen in the future and worry that they may lose their land. This is reinforced by the lack of transparency and accountability of the operations of the management organisations and widespread confusion as to the roles and responsibilities of various stakeholders as well as the implications of leasing land to the Trusts.

² A ToR for a study pertaining to this was developed in 2008/9 and is with GoM. EU waiting for request from GoM for the study

- (r) Current practice, in irrigated small-scale farming, allocates plots of 2 to 3 ha and a family is restricted to operate one plot only. Only land already under cultivation and thus occupied by somebody will be converted to sugar cane production. In the case of Chikhwawa, about 70 % of all farmers have access to 1 ha or less. This implies that some households win and some households lose since the additional hectares, allocated to participating households, will have to be taken from non-participating households. Participating households with more than the required area will also lose as they are only allowed to operate one plot not exceeding 2 to 3 ha.
- (s) It is widely accepted that land allocation is the responsibility of the traditional authorities. Not all chiefs act in the interest of their constituency. As land users are not registered, the chiefs may allocate their land to others. In cases where farmers do not agree with certain development plans earmarked areas for pivot irrigation it has been observed that the chief has re-allocated the land to people who comply. There have also been cases³ of "sale" of sugar cane land/reallocation of land to outsiders who are interested in participating in cane farming (see Technical Appendix, T2).
- (t) To mitigate the insecurity of land tenure and arbitrary land allocation practices the "Descriptions of Action" of the two EU expansion projects envisages as part of project implementation a Comprehensive Farmers Awareness Programme and that detailed guidelines are followed for selection of beneficiaries and land allocation.
- (u) The current and future MIP are, and will be, addressing observed gaps through the Sugar Capacity Building Project (SCBP). The capacity assessment mentioned above has arrived at a comprehensive list of gaps to be addressed including, management organisations, farmers associations and smallholders. In order to avoid parallel structures, through the SAM activities, an effort should be made to assist the districts in carrying out their responsibilities and to build their capacity in environmental and social management.
- (v) The two projects in Kasinthula and Kasitu North encourage the participation of women in sugar cane farming and budgets and work plans make provision for activities to promote the increased participation of women especially from female-headed households. The SCBP will contribute to increase involvement of women through sensitisation and training on gender issues. So far, cultural constraints as well as the nature of work in the sugar sector have hampered wider participation of women. In addition, the projects are to conduct sensitisation and awareness campaigns on gender and HIV/AIDS prior and during implementation. However, the projects do not have an operational strategy for this and therefore responsible project staff members are not sure what they are expected to do. This also applies to district staff members who are also supposed to assist in gender mainstreaming and HIV/AIDS activities.

The following conclusions have been drawn and recommendations made regarding environmental impact

In general, the conclusions and recommendations under the National Context may be taken as key policy dialogue between the Delegation and GoM.

National Level

Conclusion 1

The sector uses substantial amounts of water and in some cases does apparently cause rivers to run dry⁴. It is generally assumed that the water in Lake Malawi will provide either directly to the north or via the Shire River to the south. It is not clear what effect global warming will have on the sector in terms of water availability in the longer term.

Recommendation 1

It is recommended to have appropriate exchanges of information between actors involved in determining climate change effects on Malawi, agricultural policy, water management policy, and sector development.

Conclusion 2

In addition to global warming and its consequent effect in terms of climate variability and change, the other potential environmental effects of relevance are:

³ Interview with Acting Commissioner for Lands

⁴ Interview with Director of Irrigation

- Soil quality
- Water quality
- Air quality
- Habitat and biodiversity
- Mill emissions, discharges and by-products

Recommendation 2

It is recommended that an EIA should be undertaken for Kasitu North and its environmental management plan fully developed and executed. The environmental management plan for Kasinthula should be fully executed.

Conclusion 3

The agency tasked with monitoring the environment of Malawi is the Department of Environmental Affairs which is in need of strengthening; technical and financial resources.

Recommendation 3

The Department of Environmental Affairs should be strengthened and resourced in line with its mandate to safeguards the nation's natural resources.

Conclusion 4

In addition, appropriate legislation (e.g. for environmental management) needs to be brought forward and necessary implementing regulations passed.

Recommendation 4

It is recommended that all environmental policies and laws yet to be finalised or legislated be brought forward and necessary implementing regulations passed.

Sector Level

Conclusion 5

Typically, the industry has good policies and standards. Also, typically, what happens is that practices do not always conform to written rules and guidelines⁵. This is the case at Nchalo Mill and may be at Dwangwa. Consequently, it is critical to monitor actual sector practice regularly and robustly.

Recommendation 5

It is recommended that there should be regular monitoring of the industry by the Department of Affairs and their findings implemented in a timely way

EU Delegation

Conclusion 6

There are several conclusions to be drawn that are of interest to the EU Delegation, directly, in terms of EU SAM execution:

- It is critical to mainstream climate change into all EU interventions
- It is critical that EU guidelines on EIA are followed and EIAs are submitted and follow the due process of law.

Recommendation 6

It is recommended that the EU Delegation should review its internal controls in order to ensure that:

- Climate change is mainstreamed into all EU interventions in Malawi, particularly for MIP 2011-2013, following guidance in the EU Integration Handbook
- EU guidelines on EIA are followed
- Project management of EU SAM interventions is more robust in order to deal with institutional opaqueness within the sector

⁵ DEA Compliance Report 2010

The following conclusions have been drawn and recommendations made regarding social and institutional impact

National Level

Conclusion 1

The governance challenges observed at the level of smallholder management will most likely not be adequately addressed by the capacity development project alone and will require additional attention

Recommendation 1

To address governance problems at the level of the smallholder management organisations more effectively, it is recommended that EU should accelerate its support to the ongoing efforts by sector stakeholders to develop an appropriate regulatory framework.

Conclusion 2

The changes perceived by the new land policy and legislation would be of utmost importance for agricultural and private sector development in Malawi in general, and the sugar sector in particular, as this would bring a solution to the current land tenure insecurity.

Recommendation 2

It is recommended that EU and the donor community should use their influence and means to accelerate the process of approval of the Land Bill.

Sector Level

Conclusion 3

The socio-economic benefits for the smallholders participating in irrigated sugar cane production under the Kasinthula and Kasitu schemes will be substantial. However, as contribution to poverty reduction is the overall objective of the two interventions, the scope of support appears to be rather limited.

Recommendation 3

It is recommended that the EU expansion projects and other SAM interventions need to widen the currently limited impact on poverty reduction by a more integrated approach in line with the concept of "integrated rural development" recognising the inter-linkages of various socioeconomic sectors and thus concurrently addressing several poverty aspects/development options such as measures to increase food security and develop the local economy in general to maximise impact. Further studies should also be conducted to determine the lowest number of hectares required for viable irrigated sugar cane production and the degree to which the number of beneficiaries could be increased in this way.

Conclusion 4

Inadequate access to land and land tenure insecurity are important issues in the smallholder sugar sector creating a number of barriers for the expansion of cane production and equitable access to benefit from the expansion projects.

Recommendation 4

It is recommended that further studies should be conducted to determine the exact magnitude of land disputes and document the process of land allocation and licensing. To avoid or mitigate the negative impacts of land tenure insecurity, it is recommended that the jointly agreed guidelines in the EU contract documents for the different projects on selection of participating smallholders and allocation of land should be strictly followed and compliance monitored. In cases of loss of land and property, it is recommended that compensation and resettlement management plans need to be formulated and implemented prior to project implementation in accordance with internationally agreed good practice⁷.

⁶ The ASWAp for Malawi has integrated rural development as one of its focus areas as a way to promote the growth and development of rural growth centres among and thereby "enhance re-distribution of wealth to all citizens" (p. 4)

http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/EXTPOLICIES/EXTOPMANUAL for World Bank social safeguard policies in particular Operational Directive 4.30 on Involuntary Resettlement, the IFC Handbook for Resettlement for Preparing a Resettlement Action Plan, 2002 and the World Bank publication "Involuntary Resettlement Sourcebook, 2004"

Conclusion 5

The capacity at all levels of the smallholder sugar sector is very poor and it is doubtful whether the gaps can be filled during the three years that the Sugar Capacity Building Project is running. With the development of a regulatory framework, the forthcoming apex organisations will become responsible for and capable of extending capacity development to smallholders and their management organisations, however their establishment may take considerable time.

Recommendation 5

There is need to reconsider the timeframe for training and capacity building and depending on the progress of developing apex organisations, it is recommended that the next MIP should either include an extension of the Sugar Capacity Building Project or other stand-alone capacity building measures.

Conclusion 6

The Trusts hold the contracts with the EU for the expansion projects but they are only obliged to report to the EU Delegation/NAO⁸ prior to the release of funds. The latest reports cover a period of more than one year. This prevents EU and other decision makers from obtaining a clear status of progress of implementation and disbursements. It also prevents the smallholder management to learn from experience and take corrective measures.

Recommendation 6

It is recommended that the smallholder management organisations report quarterly and that reports focus on achieved results against planned targets

Conclusion 7

The quality of the progress reports reviewed is very poor as they do not report on achieved results against planned targets and the informational value is low.

Recommendation 7

It is recommended that the Trusts improve quality of reporting in accordance with good project management practices and that EU should render good reporting practice as a precondition for release of funds.

Conclusion 8

Districts are unaware of the operations of the sugar sector and there is need for more transparency and cooperation.

Recommendation 8

It is recommended that District authorities and staff, and the sugar sector stakeholder should increase collaboration and coordination. A first step towards improvement of the relationship between District and the sugar sector could be to make the District Commissioner a member of the Board of Trustees. It is further recommended that the EU continues capacity development support to the two District Councils and their staff through the Sugar Capacity Building Project or other means under the 10th EDF.

EU Delegation

Conclusion 9

The SAM interventions seek to mainstream the crosscutting issues gender and HIV/AIDS but clear and operational guidelines for what to do and how to do it are yet to be provided.

Recommendation 9

It is recommended that the EU guidelines provided in the "Description of Action" for allocation of land and beneficiaries be revised to include a certain percentage of female smallholders. It is also recommended that all reports from the schemes to EU/NAO include a section on gender and report on gender activities conducted during the reporting period as well the number of female farmers in cane production and number of female farmers in associations and on the boards of trust and the management company. The agenda for meetings of the associations and boards should have a compulsory topic: cross-cutting issues to regularly discuss the state of gender activities and as well as HIV/AIDS related issues.

⁸ Though the contracting authority is able to ask for more information at any time and verbal progress reports are received at each SSC meeting

Conclusion 10

Several delays in implementation and deviations from Description of Action and other EU grant documents could have been avoided or addressed at an earlier stage with more rigorous monitoring of EU SAM interventions and timely and more frequent submission of progress reports.

Recommendation 10

It is recommended that the EU monitors more rigorously compliance with guidelines and agreements and ensures more frequent and timely reporting.

Conclusion 11

The Dwangwa Cane Growers Company has private shareholders.

Recommendation 10

It is recommended that EU reviews and ensures that current support to DCGT and DGCL and actual financial support to private investors/shareholders does not violate EU regulation.

Recommendations for Stage 4 Monitoring and Evaluation of SEA

The recommendations for Stage 4 Monitoring and Evaluation of SEA are:

- Department of Environmental Affairs to review and monitor Mill Compliance Plans and their implementation
- Department of Environmental Affairs to review and monitor EIA compliance
- Ministry of Gender, Child Welfare and Community Services to review and monitor gender sensitisation and mainstreaming
- Ministry of Local Government and Rural Development to review and monitor resourcing of District functions and their implementation

Monitoring decisions taken on the NAS and the results of its implementation

It is important to monitor the extent to which recommendations made in the SEA Study report are being met. Monitoring of cumulative effects may be appropriate for initiatives that will initiate regional-scale change in critical natural (e.g. water availability) or social assets (e.g. deepening decentralisation). Usually the Sugar Steering Committee would discuss and assign accordingly ~ the task could be undertaken by the Department of Environmental Affairs.

At some point a formal evaluation by the Sugar Steering Committee of the monitoring results should take place as part of the revision or future renewal of the NAS and the EU SAM.

1. Scope

- 1. The European Union (EU) requires a Strategic Environmental Assessment (SEA) to be carried out to describe, identify and assess the likely significant effects on the environment of implementing the Sugar Accompanying Measures (SAM). It is intended that the SEA conclusions and recommendations will be applicable to the sector as a whole, and to the future 2011-2013 Multi-Annual Support Strategy (MAAS) and Multi-Annual Indicative Programme (MIP).
- 2. It is important to recognise that an SEA does not remove the need to undertake specific environmental impact assessments (EIA) should these subsequently be needed, to ensure that the natural and social environment of Malawi is not adversely affected by any specific EU SAM initiative.

1.1 Objectives

- 3. The *global* objective of this SEA is to ensure the sustainability of the sugar sector, through its expansion and the development of downstream products. It is desired that the expansion will contribute to the alleviation of poverty, particularly within new and existing outgrower schemes. The *specific* objective is to describe, identify and assess likely significant effects on the environment of implementing SAM initiatives.
- 4. The SEA is to provide recommendations that:
 - May be used at a strategic level for the mitigation of negative impacts, and enhancements of positive benefits;
 - Have benefit for the implementation of current and future MAAS and MIP;
 - Provide relevant information to decision-makers in Malawi, the EU and other development partners to assess challenges and considerations regarding the National Adaptation Strategy (NAS), the MIP 2007-2010, and the design and implementation of the MIP 2011-2013;
 - Influence policy in the sugar sector and inform development of a regulatory framework; and,
 - Are practical and achievable.

The SAM Activities and related EU interventions (see Box below) their planned and status of their Implementation (at time of Mission) is provided overleaf (Figure 1)

EU SAM Intervention

Measures to be implemented

Review of Regulatory Framework

- Strengthen SSC as temporary industry body, to facilitate institutional/regulatory development
- Consolidate smallholders associations and establish apex organisation and test if self-regulation is feasible

Downstream Products Study

Study underway

Development of New or Expansion of Existing Smallholder Sugarcane Schemes

Call for Proposal document developed; expected launch during 4th Quarter, 2010

Kasinthula Phase 3

- Centre-pivot irrigated smallholder sugar cane scheme supplying cane to the Illovo Nchalo mill
- 400 ha and 200 smallholder households

Dwangwa Kasitu North

- Centre-pivot irrigated smallholder sugar cane scheme supplying cane to the Dwangwa Sugar Corporation mill
- 300 ha and 175 smallholder households

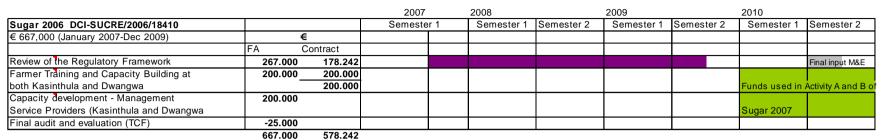
Sugar Capacity-Building Project

- General inventory of all outgrowers; review of current practices/training needs assessment
- Technical cane-growing skills training for farmers and technical food grop training for farmers
- Training in sustainable agricultural practices for farmers
- Conduct review of management capacity of outgrower management companies and trusts
- Develop business understanding programme; business/sugar-industry specific training for outgrowers
- Support to cane growers companies and to farmer trusts and associations

Dwangwa Feeder Road

Tender and Appointment of contractors; Monitoring and Evaluation; Sign-off of contract

Figure 1 SAM Activities Planned and Status of their Implementation



Additional M&E (Sugar 2006) 74.159 652.401

2009 2010 2011 2012 20 Sugar 2007 DCI-SUCRE/2007/19251 Semester 1 Semester 1 Semester 2 Semester 1 Semester 2 Semester 1 Semester 2 Semester 1 € 5,000,000 (December 2007-Dec 2014) € Contract Activity A. Capacity building for outgrowers 1.000.000 in agricultural methods - Grant following Call 16 15 for Proposal. 2.000.000 Dec Implementation Dec Activity B. Building of outgrowers 1.000.000 management capabilities - Grant following Call for Proposals Activity C. Kasinthula Phase III expansion 2.550.000 24 Direct award of a grant March 2.549.803 Dec Activity D. Dwangwa Feeder Roads - direct 350.000 Grant Grant award of grant Prep signed Implementation Communication and visibility Audits - service contract 60.000 External evaluation - service contract 40.000 TR/MTR

Additional funding from Sugar 2006

5.000.000 400.000 5.400.000 4.549.803

			2010		2011	2011	2012	2012	2013
Sugar 2008 DCI-SUCRE/2008/19787			Semeste	er 1	Semester 1	Semester 2	Semester 1	Semester 2	Semester 1
€ 4,911,000 (January 2009 -January 2017)	€								
	FA	Contract							
Expansion of existing or the creation of	Expansion of existing or the creation of 4.800.000			Guidelines	Award and contract implementation				
				prep +					
new outgrower schemes				Launch					
2. Audits	50.000								
3. Evaluation	61.000					MTR			

4.911.000

Figure 1 SAM Activities Planned and Status of their Implementation (continued)

			2011		20)12	20	013	20)14	20)15
Sugar 2011-2013	Indicative		Semeste	er 1	Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2	Semester 1	Semester 2
€ 11,586,000 (AAP 2011)		€										
Decision (tentative)			Х									
Signature FA (tentative)				Х						Х		
Contracting deadline (tentative)												
	FA	Contract										
A.To improve the environmental, social and												
economic sustainability of the sugar industry												
A1. Provision of technical support for industry	1.086.000											
development												
A2. Support to industry regulations and	1.000.000											
diversification												
A3. Support to Vitamin A sugar fortification	??											
A4. Support to outgrower sustainability and	1.000.000											
market access interventions												
B. To reduce operational costs by improving												
the feeder road networks and irrigation infrastructure												
B1. Support to infrastructure development and	2.000.000											
rehabilitation												
C. To increase the hectarage of sugar cane												
grown by outgrowers				<u> </u>	<u> </u>			<u> </u>		<u> </u>		
C1. Expansion of existing and development of	6.000.000					Preparation of	Award	Impler	nentation of cor	ntracts		
new schemes for outgrowers						Guidelines/Launch						
Contingencies, Audits and external evaluations	500.000							MTR		ETR/Fina	al Audit fo MIP 201	1-2013
	11.586.000					•					•	•

Figure as supplied by the EU Delegation ~ it should be noted that A3 Support to Vitamin A Sugar Fortification was withdrawn from the list of EU support by the conclusion of the Mission.

2. Background

- 5. Malawi, as part of the African, Caribbean and Pacific group of countries (ACP) has benefited from preferential access into the European Union (EU) market under the EU's Sugar Protocol agreement. This benefit is being significantly reduced under the proposed reforms of the EU's sugar market that began in 2006.
- 6. The reform involves a reduction of the EU sugar prices that are subsequently reflected in the price obtained by ACP Sugar Protocol countries. The European Commission (EC) proposed a scheme to help Sugar Protocol countries that depended on the EU market, to adapt to the new situation. The strategy after 2009 is to increase production further to make use of the 'Everything But Arms' (EBA) initiative that offers unlimited access to the EU market and possibly other markets by Least Developed Countries such as Malawi. This entails much larger funding requirements to increase factory capacity and cane production. It should be noted that the EBA scheme is non-contractual.
- 7. Consequently, it is anticipated that attention will be directed towards developing plans aimed at supporting industry at a macro level (to assist Malawi in larger multi-sectoral development programmes) and to support specific, sugar strategy programmes as described within the EU 10th EDF Country Strategy Programme. There is also an extra package of aid parallel to the EDF and funded from the EU's general budget called "Accompanying Measures for Sugar Protocol Countries" (AMSPC).

2.1 Sector Programme Justification and Purpose

- 8. Sugar cane is the second most important crop in terms of foreign exchange generation for the country after tobacco. It accounts for about 20 % of total national exports to the EU and 13 % is exported to regional markets⁹. It contributes 9% of total earnings and 5 - 6% to the gross domestic product¹⁰. The poverty-focus and importance of the sugar sector is also identified in the Malawi Growth and Development Strategy (MGDS) which is structured to achieve poverty reduction and sustainable economic growth. The creation of increased employment opportunities in the agricultural sector is another overall objective outlined in the MGDS. The sugar industry places great emphasis on the importance of outgrower development, given its contribution to poverty alleviation and employment generation in Malawi.
- 9. The sugar sector is the second largest employer in Malawi after the Government. The sector directly employs 14,500 people and further 2,500 employed indirectly supporting industries such as independent cane cutters, haulers and service suppliers. In addition the distribution of sugar within Malawi and for export adds further 500 direct employment gains. Taking into account the average of seven dependants per employee, the industry supports more than 120,000 people directly and supports many thousands more whose livelihood depends on the multifunctional role of sugar industry.
- 10. Since 1998, when the Illovo Sugar Group bought out the Lonrho stake in the Sugar Corporation Company of Malawi, the sugar industry in Malawi has been dominated by the majority stakeholder Illovo Sugar (Malawi) Limited, a subsidiary of the South African incorporated Illovo Sugar Group, which controls 76% of the market value of the company. The company owns production estates and factory mills/refineries at Nchalo (in the south east of Malawi) and at Dwangwa (in mid central Malawi) which account for all of the country's milling and refinery capacity and into which Illovo has invested heavily.
- 11. Distilleries are also considered as part of the sugar industry, as their prime raw material is molasses, a by-product of the sugar production process. There are two distilleries 11 currently operating in Malawi; one in Chikhwawa which has a rated output capacity of 60,000 litres of ethanol per day and another one at Dwangwa with design capacity of 55,000 tonnes of molasses annually. The two distilleries are currently operating below capacity and therefore have sufficient spare capacity to take up the additional molasses production that will result from an expansion of Nchalo and Dwangwa cane milling capacity.

⁹ Technical Appendix 2
10 Malawi: Multi-Annual Sugar-Related EC Support Strategy, 2006
11 Indian 26% IndeTrust and 89

¹¹ ETHCO – 66% Press Corporation Limited, 26% IndeTrust and 8% Illovo's Dwangwa Sugar Corporation and PressCane – 51% Press Corporation Limited and 49% Cane Products Limited.

The main by-product of the distilling process is vinasse, which can be highly polluting if not properly managed.

- 12. Several studies including the analysis undertaken in the process leading up to Malawi's National Adaptation Strategy (NAS) to the EU sugar reform, show that Malawi is one of the few Sugar Protocol countries which should remain competitive following the EU sugar reform. This is in spite of the high level of local transport and fertiliser costs which have been known to rise to be 50% of production costs¹². In this respect, there is room for building synergies with the EC-funded transport programme, Road Management Support Programme, which has long been a focal area of EC cooperation with Malawi.
- 13. There is therefore much emphasis placed on the fact that Malawi need not move out of sugar production, being able to satisfy both domestic and export markets. Furthermore, Malawi is highlighted as being "a world-class producer, with its cost of production consistently ranked among the five lowest worldwide", in spite of the above mentioned transportation costs. The existing strategies outlined in the Sugar Industry Action Plan are aimed at "offsetting the adverse effects of earnings as a result of reduced EU preferential prices" this being the main area of concern with regard to the impact of the reform of the EU sugar regime on Malawi. Sugar is currently produced in two areas. The larger producer is Nchalo Sugar Estates, part of Illovo Sugar (Malawi) Ltd in the Lower Shire Valley in the Chikhwawa District, with approximately 60% of total production. The second producer is Dwangwa Sugar Corporation, also part of Illovo Sugar (Malawi) Limited, in Nkhotakota District ~ 40% of national production.
- 14. In response to the challenges posed by the reform of the EU sugar regime, the Malawian stakeholders and Government of Malawi (GoM) produced a long-term, *Adaptation Strategy for Malawi Sugar Industry in Response to the Reform of the European Union Sugar Regime* (NAS) in 2006, outlining key objectives and actions for Malawi's sugar sector to remain competitive.
- 15. The EU used the NAS as a basis to define its support for the Malawian adaptation process to be provided under the *Accompanying Measures for Sugar Protocol* (AMSP). The EU assistance focuses on the more vulnerable groups in the sector (the smallholders) and complements other sources of finance (such as those of GoM, Illovo (Malawi) Limited, private sector entities, and other development partners, notably the African Development Bank).

2.2 Alternatives

- 16. Assuming that an expanding smallholder sugar cane sector is non-negotiable then alternatives could consider:
 - Alternative locations for sugar growing;
 - Alternative institutions servicing the smallholder community/sugar sector as a whole; and/or,
 - Alternatives technologies.

Alternative locations for sugar growing

17. To adequately address the possibilities of this, it would be necessary to map and classify the land throughout Malawi in some detail, and document this on a geographical information system. This is outside the scope of the SEA but does warrant further consideration.

Alternative institutions servicing the smallholder community/sugar sector as a whole

18. It is clear that there is considerable unease¹³ throughout the sector on the present arrangements of Trust and Company. While such an organisational model does have merits, these merits appear to be partially aspirational currently with no unequivocal signs of advantage for the smallholder. Though there is evidence that the smallholders have increased their income and improved their living conditions but the organisational model, especially the Cane Growers Company which could be considered as an unnecessary "middleman", has some weaknesses which negatively affects the benefits. The lack of reporting by the Trust in Dwangwa has been a cause for concern for a considerable time (over-charging on inputs and services, administration costs, poor technical and managerial capacity *etc*).

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¹² Technical Appendix 2

¹³ There is a natural reluctance to commit the unease to paper by those who understand what is going on however the interviews with the Sugar Farmers Association, Dwangwa Sugar Corporation, the EU Coordinator of Sugar Activities and Agricane were instructive

19. It would be rather drastic to suggest that the two expansion plans at Kasinthula and at Dwangwa should be put on hold until appropriately, transparent arrangements are introduced throughout. The current and future MIP are/will partly address this through the Sugar Capacity-Building Project and support to develop an appropriate regulatory framework and further organisational development.

Alternatives technologies

- 20. The general basis underpinning furrow irrigation for smallholders is that the farmer should be able to manage their own irrigation. In practice, in Malawi, this is not the case¹⁴ so it is argued that it is better to carry the cost of a handful of technically trained staff to manage the pivot system, rather than a larger labour force for furrow irrigation. Of course, this economic argument could hinge on the relative efficacy of accompanying capacity building measures. There is some concern expressed by stakeholders that the centre pivot system of irrigation whilst being potentially very efficient (assuming adequate supplies of water) is not appropriate technology for relatively unsophisticated smallholders. Indeed, given the requirements for precision and timing, and dependency on power supply (which is very unreliable in Malawi) and cases where smallholders less willing to adopt this form of irrigation have been encouraged to re-assess their resistance, it could be argued to be creating an element of dependency rather than sustainability.
- 21. While it is acknowledged that the maintenance and effective operation of the system could be outsourced it does rely on appropriate management of financial resources by the smallholder to accomplish that. It is also acknowledged that whilst other forms of non rain-fed irrigation such as furrow or drag-line are of a less sophisticated nature, the nominal costs of those types of irrigation are much higher than the potential yields and ultimate profit of the centre pivot system.
- 22. On the grounds of lifting out of poverty, therefore, the current approach would seem to be appropriate provided it supports a critical mass of farmers and hectares whilst recognising that this is potentially leading to absentee farming with the much of the farming operation simply being out-sourced to a contractor (the cane growers' company).
- 23. That, in itself is not an unacceptable approach provided that the flow of funds through the Division of Proceeds system proceeds smoothly and provided that the obvious temptation by out-source providers to increase their mark-ups does not continue to a disruptive point. Anecdotal information suggests that that temptation has occurred in the past¹⁵.
- 24. It is understood that the Dwangwa Cane Growers Company has private shareholders. There is a logic therefore that foresees that when the Kasitu North Expansion comes on stream the Company will be making various charges for its services which will contain an element of profit for the dividend of the shareholders. In essence, EU support will be used to provide revenue to private investors. This, empirically, would suggest a flaw in the current Trust/Company arrangements. This perhaps warrants investigation and for other irregularities, given the highly overlapping nature of the Trust and the Company managements.

2.3 Environmental Policy, Legislative and Planning Framework

- 25. A summary of the environmental policy, legislative and planning framework is provided below. A fuller treatment was provided in the Scoping Study Report.
- 26. The general authority for environmental management in Malawi is vested in the Department of Environmental Affairs (DEA) of the Ministry for Natural Resources, Energy and Environment and is delivered through the *National Environmental Policy revised* (2004). The overall policy goal is the promotion of sustainable social and economic development through the sound management of the environment and natural resources.
- 27. To achieve and promote that, there are several specific policy goals:
 - Secure for all persons, now and in the future, an environment suitable for their health and well being:
 - Promote sustainable utilisation and management of the country's natural resources and encourage, where appropriate, long term self sufficiency in food, fuel wood and other energy requirements;

¹⁴ EU Co-ordinator of Sugar Activities

¹⁵ Interviews with Sugar Farmers' Association, Dwangwa

- Facilitate the restoration, maintenance and enhancement of ecosystems and ecological processes essential for the functioning of the biosphere and prudent use of renewable resources:
- Promote the ecosystems management approach so as to ensure that sectoral mandates and responsibilities are fully and effectively channelled towards sustainable environment and natural resources management;
- Enhance public education and awareness of various environmental issues and public participation in addressing them;
- Integrate sustainable environment and natural resources management into the decentralised governance systems ensuring that the institutional framework for the management of the environment and natural resources supports environmental governance in local government authorities:
- Promote local community, non-governmental organisations (NGO) and private sector participation in environment and natural resources management
- Promote the use and application of local knowledge and norms that facilitate sustainable environment and natural resources management;
- Promote cooperation with other Governments and relevant regional and international organisations in the management and conservation of the environment;
- Develop and regularly update environmental information systems to facilitate planning and decision-making at local, national and international levels;
- Facilitate development and regular review of policies and legislation to promote sustainable management of the environment and natural resources; and,
- Facilitate development of mechanisms for management of conflicts in the environment and natural resources sector.
- 28. Given the importance of the sugar industry in the economy and the implications of the EU price reforms, in addition to the likely changes to the export markets for sugar, the implementation of the NAS is to be undertaken with full support at the highest governmental level in Malawi. This entails a multi-institutional approach. Several institutions have jurisdictions within which various parts of the NAS (and EU SAM) implementation will occur. Some of these institutions were identified in the NAS and confirmed on the basis of their direct and indirect relationship to the sugar industry or to their respective programmes that will be linked to one or more of the components of the NAS.
- 29. There are several key items of environmental legislation that provide a framework within which the NAS may develop:
 - Environmental Management Act, 1996 and its revision
 - Seed Act (and proposed Seed Regulations), 1996
 - Forestry Act, 1997
 - Local Government Act, 1998
 - Pesticides Act, 2000
 - Irrigation Act, 2001
 - Fertiliser, Farm Feeds and Remedies Act, 2003
- 30. The Environmental Management Act provides for:
 - A Technical Committee;
 - An Environmental Officer to be based in each District who sits on the District Development Committee which is responsible for all matters relating to the environment;
 - A National Environmental Action Plan to promote and facilitate the integration of strategies and measures for the protection and management of the environment into plans and programmes for the social and economic development of Malawi;
 - A District Environmental Action Plan (aligned with the National Environmental Action Plan) which identifies environmental problems in the district in question;
 - The requirement for Environmental Impact Assessment for proposed new developments and Environmental Audits (of existing facilities);
 - Other powers of protection and enforcement;
 - Various matters under waste management and other environmental requirements.
- 31. The Department of Environmental Affairs coordinated the revision of the Environment Management Act 1996. The revision exercise was completed in March 2005. The revised EMA was submitted to the

Ministry of Justice for legal opinion in March 2005. The Act has not been submitted to Parliament for approval 16.

- 32. The National Environmental Policy (revised) recognises the importance of creating an enabling policy and legal framework for cross-sector coordination, participation of non-state sectors, strengthening the enforcement machinery and decentralising natural resources and environmental management and governance. It calls for development of mechanisms for cross-sector management; facilitating active participation of local communities and other stakeholders in enforcement of legislation; and integration of environmental planning, management and institutional frameworks into the decentralised structure.
- 33. The National Environmental Policy is a key instrument and standard for environment and natural resources policies and legislation and should act as a guide for all sector activities at all levels. Whilst it is intended that this revised National Environmental Policy will be a useful instrument to all stakeholders for integrating environmental considerations into Malawi's social and economic development programmes thereby promoting sustainable development, it seems to lack the appropriate resources and budget allocations to accomplish this aspiration.
- 34. Of relevance to the SEA of the EU SAM support, is the clear obligation for EIA and environmental mitigation programmes to overcome or minimise adverse impacts of economic development. The Department of Environmental Affairs (DEA) is mandated to provide cross-sectoral coordination in environment and natural resources management through monitoring, overseeing compliance, provision of technical and information services and facilitating activities implemented by different stakeholders.

It has the responsibility to:

- Promote coordination of, and collaboration in, sound utilisation and management of the environment and natural resources with full participation of government line ministries, private sector, NGOs, communities and other relevant stakeholders at district, national, regional and international levels;
- Promote development, implementation and compliance of environment and natural resource policies, programs, legislation and other related instruments;
- Promote capacity building in environmental education, public awareness and participation in sound environment and natural resources management practices at all levels;
- Promote and ensure participatory development and implementation of environment and natural resource management planning and monitoring tools; and,
- Build a centre of excellence in environment and natural resource management.
- 35. The context for environmental impact assessment is anchored in the Environmental Management Act (1996) and the revised National Environmental Policy (2004). The Guidelines for Environmental Impact Assessment, Department of Environmental Affairs, Malawi refer. In 2001, the DEA commissioned a series of sector guidelines on EIA and Environmental Management Systems and Auditing. These provide comprehensive guidance for anyone wishing to develop a project in any of these sectors. It should be noted that an EIA has not been undertaken for the Kasitu North, which would be in breach of the current law and policy of Malawi. The feasibility studies undertaken have included environmental and social information, which would usually be found in an EIA, though these do not (as the study report disclaimer makes clear) constitute an EIA. On the other hand, the Kasinthula Phase III expansion has had an EIA conducted. It should be noted that an EIA has not been undertaken for the Kasitu North, which would be in breach of the current law and policy of Malawi. The feasibility studies undertaken have included environmental and social information, which would usually be found in an EIA, though these do not (as the study report disclaimer makes clear) constitute an EIA. On the other hand, the Kasinthula Phase III expansion has had an EIA conducted. The absence of a formal EIA for Dwangwa may make any associated environmental management plan somewhat aspirational as there will be no formal requirement for monitoring.

¹⁶ Awaiting confirmation from DEA

3. Approach and Methodology

- 36. Methodologies were used to evaluate the key environmental, social and institutional issues on the effectiveness, efficiency, and sustainability of the sugar sector, and the current and proposed EU SAM support. The intention is to assess the extent to which the EU SAM and associated initiatives address the identified key environmental, social and institutional issues.
- 37. Since this SEA was taking place some four years after preparation of the NAS, and since some of the EU SAM activities (e.g. from 2006) had begun and then stalled temporarily, the boundaries between the situation in absence of the EU SAM support to the NAS and the impacts of the NAS are blurred and cannot be distinguished. It, therefore, made no technical or scientific sense to analyse a hypothetical "no-implementation" scenario (which is the usual case in SEA).

3.1 General Approach

- 38. Matrices are used to illustrate findings, environmental, social and institutional factors, resources, positive and negative impacts, and their significance, including the expansion plans at Kasinthula and Kasitu North and how they do, or do not, anticipate likely environmental/social effects.
- 39. Positive environmental/social impacts and risks from implementing the EU SAM were identified and described and took into account the stakeholder views; significance according to duration, probability, magnitude, mitigation potential, reversibility and sensitivity of the natural and social environment. Where the EU SAM support may have an exacerbating potential on existing negative trends these were identified and discussed taking into account:
 - Stakeholder views;
 - International commitments;
 - Socio-economic consequences (on vulnerable groups *etc*);
 - Compliance with environmental regulations and standards;
 - Consistency with environmental objectives and policies; and,
 - Implications for sustainable development.
- 40. The performance indicators proposed by MIP (2007-10) and (2011-13) were assessed and recommendations made for their revision where necessary from an environmental, social and institutional perspective, using the SMART framework. Recommendations were made concerning how indicators could be applied, information sources, costs, equipment, capacity needs, noting how these could fit into M & E processes within the sugar sector and how they may link with indicators in MGDS and ASWap.
- 41. Adequacy of institutional structures and capacities of regulatory framework, financial and human resources were assessed in order to address concerns associated with EU SAM implementation and the sugar sector.
- 42. To achieve the above, various matrices were prepared for the existing sugar areas to indicate the potential impacts of implementing the EU SAM programme; positive, negative and their significance, using some or all of the following techniques:
 - Interviews with key stakeholders to analyse specific issues;
 - Interviews with key government and technical officials on policy and institutional issues, and with the private sector to explore their initiatives and motivations;
 - A Stakeholders' Workshop to validate preliminary findings and deepen their consideration; and,
 - Expert assessment based on sector knowledge and other related experience.

3.2 Geographical or Environmental Mapping Units

43. Primary and secondary information sources were reviewed to identify data relevant to the activities of sugar cane cultivation and sugar production; sugar cane fields and sugar mills, bagasse power generation, vinasse management *etc*, and the adjacent areas. During SEA studies, it is often useful to map information, to show how each environmental, social and institutional aspect varies across the spatial area with information indicating the state of the parameters at a point or points in time (providing a historical record or a snapshot). There is currently no country geographical information system that allows this, though some organisations (e.g. DSC) do have a system for mapping their direct interests.

3.3 Assumptions, Uncertainties and Constraints

- 44. The following **assumptions** were made that:
 - The NAS and EU SAM were widely understood and supported;
 - Non-sensitive information would be freely available; and,
 - Information provided by stakeholders was accurate.

The Strategy was widely understood and supported

45. In practice, the NAS and EU SAM are only widely understood by those involved during the crafting of the programmes. The most important constituency to benefit under the NAS and EU SAM ~ the cane growers ~ have had relatively little <u>direct</u> involvement during the NAS and EU SAM formulation and still express concern that indicates that they have little detailed appreciation of the benefits and, importantly, the process of the NAS and EU SAM. There have been meetings with smallholders at both schemes and others on several occasions during the last two or three years to explain the NAS and SAM. Given the numbers of smallholders it is not surprising that there are still some who have not had the benefit of these presentations. The key point is that they appear to have had little <u>direct</u> involvement during the NAS and EU SAM formulation ~ being advised post-event.

Non-sensitive information would be freely available

46. Obtaining information (even when freely offered during a conversation with a stakeholder) has proven remarkably time-consuming to finally receive. This is acute because the timeframe provided for the SEA itself is very constrained. In several cases, data have simply not been received in time (data remain outstanding from Illovo HQ, Nchalo and Dwangwa mills, DEA, DCGT, MoA and District Offices and the EU Delegation)

Information provided by stakeholders was accurate

- 47. Some information obtained from third parties could not be cross-checked in the time available for accuracy and veracity, and therefore was taken at face value, some information was similar from several independent sources and some seemed to be contradictory.
- 48. The following uncertainty to this work was:

The implementation plans will be undertaken as currently defined

- 49. From the limited experience gained during the SEA, there is reasonable doubt that the intentions will be implemented, as presently defined. This uncertainty is derived the start/stop nature of the 2006 MIP, changes to the implementation of the Kasitu North project, and the inappropriate implementation of the Kasinthula EMP. There is reasonable doubt that the intentions will be implemented, as presently defined. Consequently, SEA findings based on an intention at a given time may not hold good for future changes to the NAS and EU SAM.
- 50. The SEA Study suffered from the following **constraints**:
 - Oft-requested information came to hand during the last few days of the SEA and significant information was not provided in time before the conclusion of the SEA
 - The ToR issued did not reflect the entire task

Significant amount of information came to hand during the last few days of the Study

51. When information arrives at the end of a study it is does not allow opportunity to follow-up various aspects. The findings of this SEA need this lack of analysis of information to be taken into account when reviewing the depth of impact analysis. For instance, there was no time to explore the kinds of training given to cane growers in the past, to interview existing individual cane growers regarding their real motivation, and understanding of the SAM and so on.

The ToR issued did not reflect the entire task

52. Probably the most severe challenge to the SEA was the construction of the ToR for this assignment ~ it did not comply with the EU Integration Handbook, the assumption therefore being that there were particular conditions appertaining in the Malawi sugar sector. There are not. The timeframe allowed a scoping study to be prepared (issued separately) and the SEA Study to be completed a few days later. Consequently the depth of analysis is less than would usually be the case. Having said that the conclusions and recommendations would be unlikely to be significantly different, merely the documented analysis that leads to them.

4. Environmental Baseline Study

- 53. The scope of the baseline was defined during the Scoping Study and was confirmed during the Stakeholder Workshop. The following environmental issues were identified:
 - Climate change
 - Soil quality
 - Water quality and availability
 - Air quality
 - Habitat and biodiversity
 - Mill emissions, discharges and by-products
- 54. The following social and institutional issues were identified:
 - Poverty reduction
 - Insecurity of land tenure
 - Capacity of small-scale sugar cane farmers' management organisations
 - Capacity at District Level
 - Cross-cutting issues gender
 - Cross-cutting issues HIV/AIDS
- 55. These will now be evaluated in more depth, having taken into account stakeholder concerns expressed during bilateral interviews and at the Stakeholder Workshop, and relating to various constituencies within the sector: industry level, community level, the Sugar Steering Committee and the EU Delegation (for future programme planning).

4.1 Environmental Baseline

Climate Change

National Context

56. Southern Africa is one of the regions estimated to be most at risk from climate change. Sugar cane is a water-intensive crop, and almost 100% of its cultivation in Malawi depends on irrigation except in a few smallholder farms in Dwangwa which are rain fed. Climate change is resulting in changes in rain patterns, temperature regimes and wind speeds, and is expected to result in reduced water availability or increased flooding. In addition, increased abstractions from within the rivers may also affect water availability downstream. Sugar cane farming developments to date have not been factoring in the predicted impacts of climate change, and measures to increase water availability i.e. storage dams, are designed to be fully exploited, not as an adaptation measure to climate change.

Sugar Sector

57. Climate change may affect the performance of the sugar sector, and thus any strategy for the sugar sector should be consistent with the climate change adaptation challenges. It is widely understood that floods and droughts destroy and erode assets which are the very means for adaptation. When the flood frequency and intensity increases, farmers are left with no time to recover from previous impacts through either asset accumulation or acquiring the skills and knowledge necessary for adapting to future climate changes. Consequently, farmers in general, will be subjected to deeper cycles of poverty and vulnerability. A robust sugar sector should be capable of insulating the participating smallholder farmers from the worst of these pressures.

EU SAM

58. There is considerable guidance¹⁷ and mandate from Brussels on mainstreaming climate change into all forms of EU assistance (technical assistance, sector and general budget support and variations *etc*). Currently, the EU SAM programme (including the foreseen MIP 2011-2013) has not built on the more obvious entry points for climate change mainstreaming.

¹⁷ Issued to all Delegations during the second half of 2009

Soil Quality

National Context

59. There has been a decline in soil productive capacity stemming from soil degradation due to such factors as, acidification, fertility decline and nutrient depletion and this has been a growing concern, nationally, in limiting crop production. Most degraded soils in Malawi have low nutrient holding capacity, pH below 5.5, poor infiltration and moisture retention qualities with little organic matter, and severe nutrient depletion. Sulphur for instance, is universally deficient whereas potassium has deficiency of about 20% in many parts of the Northern and Central Regions. Integrated soil fertility management technologies such as combined use of organic and inorganic fertilisers are vital in improving and sustaining crop production. However, most smallholder farmers have not opted for these technologies and, consequently, are experiencing poor and decreasing crop yields. Recently, several deficient nutrients not commonly known to farmers (zinc, calcium and magnesium) besides nitrogen and phosphorus have been found to be limiting economic crop yields. Proper knowledge and enhanced use of integrated soil fertility management technologies are vital and likely to boost economic crop productivity in Malawi generally.

Sugar Sector

60. Organic matter maintains a porous soil structure, enhances water-holding capacity and allows air (oxygen) to penetrate for use by soil microbes that facilitate organic matter reduction to nutrients. Whilst it is true that a crop of sugar cane could remove up to 83 kg nitrogen, 37 kg phosphorus and 168 kg potassium per hectare from soil, much of this loss could be restored through the diligent application of recycled organic waste, use of farm yard manure, green manuring, and the growing of legumes in crop sequences and as inter-crops. Even if inter-cropping is not considered practical, the spaces between pivot coverage could be used to grow leguminous food crops.

EU SAM

61. The Sugar Capacity Building Project component of the EU SAM, being undertaken by Concern Universal and its technical advisors (Agricane) offers the opportunity to develop capacity in soil management through the technical modules of the training programme. In particular, there is the opportunity to embed sustainable land management practices though this will be made more difficult if the practice of absentee farming increases.

Water Quality and Availability

National Context

- 62. Pressure on water resources has been increasing during the years, mainly due to droughts and through water abstractions for water supply and irrigation schemes. Water abstraction activities and siltation have affected water levels in the Shire River which is also used by the Electricity Supply Commission of Malawi (ESCOM) for hydro power generation. ESCOM has continued to concentrate investments in hydropower generation along Shire River and the environmental problems coupled with high inflation rates have resulted in a steady increase in the amounts required to be invested.
- 63. Smallholder irrigation development has quadrupled during the past four decades in terms of land area brought under irrigation. This means that water abstraction has increased by approximately the same magnitude. Similar trends should be expected in the case of estate irrigation. Most of the land under irrigation is along river banks. The increase in irrigated land area has increased the sediment load in the rivers due to poor agricultural practices¹⁸.
- 64. There is increasing pollution in all rivers, although nitrate concentration in all rivers is still below the WHO guideline standards value. Contamination of the water resources is arising mainly from poor sanitation and improper disposal of wastes, agro-chemicals and effluent from industries, hospitals and other institutions.

Sugar Sector

65. Agricultural runoff from sugarcane production, and post-harvest, affects the water quality in the rivers. Water may potentially contain nutrients including nitrogen and phosphorus stimulating production of plants in water, reducing oxygen levels in water or, conversely reducing light levels and thus lowering production the effects of which may be felt through the food chain. Sucrose remaining in cane fields

¹⁸ Malawi State of the Environment Report

after harvest on trash and soil results in rapid depletion of oxygen if sucrose reaches waterways. Since pre-harvesting methods are being used, there is limited risk of lowered oxygen levels in water due to organic matter from cane trash. The water availability in both Lake Malawi and rivers Dwangwa and Shire is in abundance and the increased water abstraction is not expected to have any hydrological impacts on river flow, aquatic or riparian environments¹⁹. Waste discharges and sediments from soil erosion may influence turbidity of rivers and lake waters, resulting in effects described above.

EU SAM

66. The expansion of sugar cane farming, especially by smallholders who are new to the activity, implies a risk of inadequate management of agrochemical products, and also an inherent risk of increasing water pollution from non-point sources (agricultural runoff). The EIA for the Kasinthula Phase 3 Expansion recognises this and follows this up within its Environmental Management Plan. The Dwangwa environmental information is less clear about this potential threat to water quality.

Air Quality

National Context

67. Sugarcane fields have been traditionally burned just before harvest to avoid harm to the workers, by removing the sharp leaves and killing snakes and other harmful animals and insects, and also to fertilise the fields with ash. Research advances in fertilisers and natural pesticides have more or less removed the need to burn fields. In addition, there has been less cane burning worldwide due to pressure from the public and health authorities (high concentrations of polycyclic aromatic hydrocarbons are known to occur in soils located near sugarcane burning areas) and as a result of the recent development of effective harvesting machines. Of course increasing mechanisation will reduce pollution from burning fields and has higher productivity than people, but also will create unemployment for seasonal workers (e.g. cane cutters) and release emissions from the combusted fuel. In addition, non-burnt cane has higher sugar content.

Sugar Sector

68. Although some farming practices (e.g. at Illovo Estates) are shifting to green-cane harvesting (GCH) smallholder schemes will most likely continue to burn cane. Addressing cane burning must address socio-economic aspects, such as employment (job opportunities are reduced if mechanised harvesting is introduced²⁰) and health risks. GCH is more labour-intensive, and the tops and trash have an economic value²¹.

EU SAM

69. As previously mentioned there is considerable guidance from Brussels on mainstreaming climate change into all forms of EU assistance. The relevance here is that the EU SAM should be cognisant of the need to consider its greenhouse gas (GHG) emissions that would not have resulted had not a given assistance programme proceeded. The EU is currently embarking on a rigorous mitigation programme within its member states to reduce GHG and so it is incumbent on Delegations worldwide to ensure that its programmes are not adding to the GHG burden. Whilst it could not be reasonably expected that current MIPs should be so cognisant, the foreseen MIP 2011-2013 should at least consider this consequence, given the general move worldwide towards GCH.

Habitat and Biodiversity

National Context

70. The rising demands for agricultural land and biological resources have had a significant negative impact on habitat and biodiversity. Although land has been subdivided into arable, grazing, protected land etc, the human population increases have outstripped the capacity of acceptable use in the identified land categories. The country's plant diversity is affected by the expansion of the agricultural industry and encroachment in protected areas. Malawi's population depends on agriculture for its livelihood and as the population continues to grow, the loss of biodiversity is likely to continue.

Sugar Sector

71. Some of the lands where sugar cane cultivation is taking place were previously natural bush. Natural vegetation is being removed for sugar cane expansion thus disrupting natural ecosystem functions and services. Pressure is increasing on areas of high biological diversity for conversion to agriculture and

²¹ The Downstream Products Team is looking into the viability of transporting tops and trash from smallholders

¹⁹ Comment made in interview with Chief Hydrographer

²⁰ Also, fields are not currently designed and planted with mechanical harvesting in mind particularly smallholder fields

irrigated sugar in particular. Short term economic benefits are, potentially, being gained by forfeiting long term environmental benefits and services. Increased availability of water for expansion purposes will increase the threat to areas of high biological diversity.

72. Although EIAs are carried out for specific irrigated cane developments, no systematic assessment of cumulative impacts has taken place. The environmental implications of this are aggravated by the absence of effective protection of biodiversity (e.g. network of protected areas with representation of wild fruits and medicinal plants, threatened and endangered species). There is a large dependency of rural households on firewood and charcoal. The production of charcoal has however, a more direct effect on deforestation.

EU SAM

73. The Sugar Capacity Building Project component of the EU SAM offers the opportunity to sensitise the new schemes' smallholders in regard to the consequences of habitat destruction and biodiversity loss. Furthermore, it is essential to sensitise and educate the dependent and related communities too, so that fuel wood lots are appropriately managed. It has been reported that when clearing the Kasinthula Expansion Phase 3 that the environmental management plan of the EIA was not followed and that some trees (including some baobabs) were felled unnecessarily²².

Mill Emissions, Discharges and By-products

74. Whilst the operation of the mill is clearly not supported by funds under the EU SAM, since the milling operation is private sector operation and the EU does not fund, directly, the private sector, there is a clear benefit (even if rather small) of the EU SAM assistance to the Illovo milling operation. The smallholder-supplied cane (some of which is/will be EU assisted) is essential to the Illovo operation. Consequently, the MIPs should recognise the clear link between the EU assistance and the private sector operation and ensure that international best practice is adopted throughout, particularly at the smallholder/Illovo interface.

Air Emissions

Industry Context

75. Malawi has not ratified the Stockholm Convention on Persistent Organic Pollutants (POPs) and faces a requirement to meet the obligations of the Convention to manage the reduction/elimination of POPs within the overreaching framework of the Strategic Approach to International Chemicals Management adopted by the international community in 2006. To achieve this there is a need to strengthen national capacity and enhance knowledge and understanding amongst decision-makers, managers, the industry, NGOs and the public at large on POPs to develop and to formulate a National Implementation Plan.

Sugar Sector

76. One of the sources of unintended generation of POPs is the open air burning of biomass, including sugar cane burning and bagasse burning for power generation to satisfy electricity needs in the factories. It is highly probable that cane burning represents an important component of POPs emissions in Malawi.

EU SAM

77. Given the indirect link between the EU SAM assistance and the Illovo milling operation, the recent Environmental Compliance Inspection carried out by the Department of Environmental Affairs is of concern. Although this was specifically on wastewater (discharge of low quality effluent into the Shire River) it does reflect systemic failures.

Wastewater Discharges

Industry Context

78. In Malawi, the requirement to treat wastewater is underscored by the existing regulatory framework, institutional arrangements, and policy guidelines. In addition, national effluent standards exist²³.

²² An issue of project management capacity

²³ Chapter 10 Industry, Energy and Mining, and the Environment, SOER, 2002

Sugar Sector

79. Effluent water from both agricultural fields and factories are discharged²⁴. Agricultural effluents potentially contain nutrients including nitrogen and phosphorus stimulating production of plants in water, reducing oxygen levels in water. Sucrose remaining in cane fields after harvest on trash and soil results in rapid depletion of oxygen if sucrose reaches waterways. Since pre-harvesting methods are being used, there is limited risk of lowered oxygen levels in water deriving from organic matters from cane trash. Effluent water from the agricultural fields eventually ends up in the river without going through any treatment. Water is sampled by Illovo Sugar Plantation for salinity analysis and according to the water quality sample the water is particular suitable for seedlings. Decline in fish stocks in Shire River has been a severe problem for the local communities. According to the District Environmental Plan, this is mainly because of overfishing and does not relate to the depletion of oxygen level (EIA for the Expansion of Irrigated Sugarcane under Shire Valley Cane Growers Trust Lower Shire Valley). Effluents (wastewater mixed with filter mud) from sugar milling factories is discharged to treatment lagoons before being released to the cane fields as fertiliser.

EU SAM

80. Given the indirect link between the EU SAM assistance and the Illovo milling operation, the recent Environmental Compliance Inspection carried out by the Department of Environmental Affairs is of concern; discharge of wastewater exceeding statutory limits, slow implementation to address previous concerns and examples of below industry practice in terms of environmental protection.

Filter Press Mud

Industry Context

81. Filter press mud is the residue that collects in the sedimentation tank during clarification of the sugarcane extract. It has been used in the production of organic compost. Otherwise, it is usually discarded.

Sugar Sector

82. The volume of filter mud produced by the two factories is relatively modest and can be distributed over the sugar cane fields fairly simply. Filter mud is constituted by impurities separated from cane juice through flocculation (milk of lime plus flocculants) and the bagasse particles. It has very high moisture content while still raw. The impurities from cane juice consist of phosphate complexes and amino-complexes which are organic in nature. Calcium, phosphates and nitrates from amino complexes are valuable sources of nutrition for plant growth. The organic matter in raw filter mud undergoes biodegradation by specific bacteria present in mud and emits hydrogen sulphide gas which has unpleasant odour, thus affecting the air quality. After this stage of biodegradation, the biomass left may be used as organic manure for plant growth. Under tropical conditions, filter mud has been found to be a good substitute for inorganic fertiliser at 30 t/ha.

EU SAM

83. Under the current MIP (2007-2010) a study of downstream products potential is currently being undertaken and will inform accordingly.

Bagasse

Industry Context

84. Traditionally, sugar factories have been burning bagasse quite inefficiently from an energy point of view simply as a convenient method of disposal. With a much higher energy price, it has become clearer that that practice does not make economic sense. Making the factories more energy efficient results in a surplus that could replace imported electricity or be exported to the national grid.

Sugar Sector

85. Currently, Nchalo is a big buyer of electricity though aims to become self sufficient in electricity by installing more efficient equipment and a cogeneration plant. Feasibility studies for these investments have already been completed and it is thought that the investment has been approved. In a next phase, Nchalo may even become a net exporter of electricity if it is able to realise the projected expansion of sugar cane production with some 7000-8000 ha.

²⁴ Interview with General Manager, Illovo, Nchalo Sugar Estate

- 86. An uncertain factor in this latter proposal is whether or not ESCOM will be prepared to buy the electricity and at what price. This price will definitely be a lot lower than the price Illovo is currently paying to ESCOM. On the one hand, the economic incentive for Illovo to become self sufficient in energy is quite strong, though on the other, the business case for exporting electricity is less convincing.
- 87. Illovo's expansion plans are in two stages 1st stage for self sufficiency and thus freeing some 20+MW to the grid and a 2nd stage for export to ESCOM. Interestingly, Dwangwa is already self sufficient and they do not have plans to start exporting electricity despite the fact that they have a surplus of bagasse.
- 88. Nchalo practices green harvesting on some 1500 hectares in order to generate trash that can be used as an additional source of energy in the plant. It is not clear what the economics are of this undertaking. Green harvesting is 60% more expensive with, in addition, the collection and transportation costs of the trash. It may not be economically viable though this should be evaluated and take into account wider environmental and social issues.
- 89. A potentially complicating factor to understanding the bagasse environmental baseline is the proposal by GoM to construct a high-level irrigation canal into the Shire Valley, which could irrigate some 40,000 hectares of land on the basis of gravity. Illovo could benefit from this as well, substantially reducing their energy needs and bills. According to MIP 2006 p8: The Lower Shire Irrigation Canal Project is a 40,000 ha programme that is designed in two phases. The estimated budget for the first phase (17,000ha) is €175mn. This project would have a massive impact on the irrigable area and provide a good enabling environment for long-term expansion prospects. This project has been pushed beyond 2013 and depends on co-financing with others

EU SAM

90. Under the current MIP (2007-2010) a study of downstream products potential is currently being undertaken and will inform accordingly.

Boiler Ash

Industry Context

91. During the process of sugar manufacture after crushing and extracting juice from sugar cane, the bagasse left is burnt under boilers for heating the juice and power generation. The material left behind after burning of bagasse is ash, which is of some use as a way of supplying plant nutrients (which enhances cane productivity) such as sodium, magnesium, sulphur, potassium, iron, manganese, zinc and copper to the soil. When not well managed, ash could be a source of dust generation which could affect human health.

Sugar Sector

92. Boiler ash, which is in very small quantities, is normally supplied to the fields as fertilisers which could enhance cane productivity.

EU SAM

93. Under the current MIP (2007-2010) a study of downstream products potential is currently being undertaken and will inform accordingly.

Fly Ash

Industry Context

94. Fly ash from bagasse boilers is primarily un-combusted bagasse particles. Bagasse fly ash can be utilised for the production of smokeless briquettes. Bagasse fly ash is mixed in a batch-type mixer with some water and an appropriate binder and the mix is extruded. The briquettes can be used for domestic and industrial purposes. The ignition of these briquettes is easier than that of coal dust briquettes available in the market. The combustion is completely smokeless.

Sugar Sector

95. Fly ash is added to filter cake during the process of extracting sucrose from the cane. Fly ash also influences the nutrient composition of filter cake since it reduces the nitrogen, phosphorus and calcium contents but enhances potassium content. Apart from relatively high potassium content, all other nutrient contents are very low and hence the significant dilution effect when it is mixed with filter cake. Potentially, fly ash could have an impact on air quality in neighbouring environments and can be

mitigated by having an efficient boiler (for more complete combustion) and by installing particulate arrestors on the boiler duct.

EU SAM

96. Under the current MIP (2007-2010) a study of downstream products potential is currently being undertaken and will inform accordingly.

Vinasse Management

Industry Context

97. Vinasse is the main effluent arising from ethanol production. It is nutrient-rich and may be used as a fertiliser. Vinasse is mostly water, odorous, acidic and containing high concentrations of potassium, calcium, magnesium, sulphur and nitrogen. One of the main environmental concerns would be vinasse infiltration into soil and groundwater resources, salinisation and increased loading of nitrate, nitrite, ammonia, magnesium, phosphate, aluminium, iron, manganese, chloride, and organic carbon. With changes in soil pH to an acidic environment, metals (such as iron, copper, cadmium, chromium, cobalt, nickel, lead, and zinc) could be mobilised, contaminating water courses.

Sugar Sector

98. There are two ethanol plants, ETHCO in Dwangwa and PressCane in Chikhwawa. ETHCO currently produces some 130 M litres of vinasse per year and some 216 M litres if working at full capacity. Press cane has a design capacity of 60,000 litres of fuel ethanol per day.

Potential options for processing vinasse are:

- Extraction of biogas;
- Putting vinasse, unprocessed, onto the sugar cane fields; and,
- Extract biogas from the vinasse and use the energy to dry the effluent ~ thus enabling easier storage, handling and putting onto the fields.
- 99. ETHCO in Dwangwa is considering the introduction of a bio-digestor to extract biogas from vinasse and the ETHCO board has recently approved the commission of a feasibility study.

EU SAM

100 A separate EU-funded study has been commissioned to study the above in more detail and the findings from that study indicate that while distributing unprocessed vinasse onto the sugarcane fields (apparently much practiced in Brazil) has some positives (on yields, and saving costs on fertilisers) these are under experimental conditions. In practice, however, there are often problems putting vinasse onto the fields. The current view is that biogas could be extracted from vinasse by means of bio-digestion and then use part of the biogas to dry, partially, the effluent into (semi-) dry matter. This could subsequently be used in a composting process, to which other locally available composting resources could be added (including possibly filter mud).

4.2 Social and Institutional Baseline

101 The following issues constitute the social and institutional baseline:

- Poverty reduction
- Insecurity of land tenure
- Capacity of small-scale sugar cane farmers' management organisations
- Capacity at District Level
- Cross-cutting issues gender
- Cross-cutting issues HIV/AIDS

Poverty Reduction

National Context

102 Reviewing Table 1, the poverty level in Malawi is still high, although both the proportion of poor households (HH) and the proportion of ultra poor households decreased between 2004 and 2008. The two sugar producing districts are located in Central and Southern Regions where poverty levels are 40% and 51 % respectively and the ultra poor amount to 12% and 24 % respectively. In addition to poverty, food insecurity is a major problem in Malawi. According to the 2008 Welfare Monitoring Survey, the

proportion of households who only take one meal a day is 5% and of those who only take two meals a day is 57%. The proportion of households that received coupons to buy food at subsidised prices is 59%.

Table 1 Poverty Status in Rural Malawi (% of population)

	2004	2008
Proportion of poor rural HH		
Northern Region	51	35
Central Region	46	40
Southern Region	60	51
Proportion of ultra poor rural HH		
Northern Region	26	11
Central Region	16	12
Southern Region	32	24
Source: 2008 Welfare Monitoring Survey Malawi		

Sugar Sector

103 In the two sugar growing areas, Dwangwa and Nchalo/Kasinthula, apart from work on the sugar estates and subsistence production by smallholder farmers complemented by some cash crop production such as cotton and rice, the options for income-generating activities are few. Both districts are fairly isolated although they are connected with Lilongwe and Blantyre by tarmac roads. The cane production schemes in Dwangwa and Kasinthula have brought substantial economic and social progress to the participating farmers. The figures (Table 2) are taken from the EIA undertaken within the 2006 feasibility study in Kasinthula, which identified the main income sources of the area and made a comparison with cane farmers benefiting from the existing scheme. Even in its poor financial and operational status, the Kasinthula scheme provided an income to the cane small holder farmers, which is substantially higher than in other occupations.

Table 2 Cane Farmers Income Comparison

Profession	Mean monthly income (MWK)*
Sugarcane farmer with additional wage income e.g. irrigation worker	15,500
Sugarcane farmer	11,500
Cane cutter	6,600
Farmer and ox-cart hire	4,000
Security Guard (cane plantation)	3,420
Herbicide worker	2,500
Labour (ganyu)	1,500
*2006 figures, Source: SVCGT EU Grant Document Annex 1: Action D	escription for Kasinthula 3 (2008)

104 Qualitative assessments of the socio-economic improvements through discussions with smallholders in Kasinthula and Dwangwa support this. While farmers in Kasinthula experienced occasional starvation previously, after having entered cane production they have always had enough food some of which is grown on earmarked plots that are part of the scheme. They have also been able to improve their houses and replace mud walls with bricks and thatched roofs with iron sheets. Now even the female-headed households participating in the scheme are able to send their children to school. The quality of life has improved and they are enjoying life in contrast to former times when they were rice farmers. The figures for Dwangwa sugar cane smallholders are likely to be higher because they do not have to pay back vast loans. The 2008 Action Description for Kasitu North estimates that a farmer with 2.5 ha of cane has an estimated annual income of about MWK 608,000. This income can be compared to the per hectare average annual income of MWK 90,000 for all farmers in the Salima Agricultural Development Division where Kasitu North is located.

105 In addition to direct income from cane production from the mill, Kasinthula receives a Fairtrade²⁵ bonus of USD 60 per tonne sugar. Part of this is being channelled to a community development fund which is used for social services and infrastructure development in the Kasinthula villages and the surrounding areas including health services and facilities, water supply, and support to youth activities. Similarly,

²⁵ Fairtrade premium could be used for water, sanitation, literacy, health projects and reinvestment

Illovo through its social corporate responsibility programme supports the social development of the Chikhwawa communities as well as in Dwangwa.

106 In addition to the approximately 1000 cane farmers and their families who benefit directly from cane production and the various donor support programmes, employment is generated for seasonal workers as cane cutters and other manual labour and additional persons benefit from employment and income generation in the local economy as trade and service provision that have developed in the wake of increased money flows.

EU SAM

- 107 The EU projects in Dwangwa and Kasinthula support about 175 and 200 participating farmers respectively, each at a cost of about EUR 3 M. This amounts to an average per household of about EUR 15 000 or approximately MWK 2.8 M. To this, should be added the costs of the Sugar Sector Capacity Building Project which primarily aims at small-scale farmers. The Descriptions of the Action/grant documents foresee that in each scheme about 300-400 permanent and seasonal workers will also benefit indirectly. Under the MIP 2011-13, a further EUR 6 M are earmarked for expansion of the existing outgrower schemes in Kasinthula and Dwangwa or new ones which would support additional 350-400 farmers. EU contribution to alleviation of poverty, in respect of the sugar sector, is constrained by funding, so impact in turn, cannot be huge. EU is not the only development partner in the sector, AfDB has invested approximately USD13 M as a loan with concessional terms through the GoM and plans to invest a further approx USD 12-15 M. The various MIPs are not big in terms of funds as when compared with other EU interventions to contribute to alleviate poverty under the 9th EDF and 10th EDF and also food security thematic budget lines.
- 108 Overall the number of direct beneficiaries is small and the "trickle down" effect rather limited. Taking into consideration that EU's overall objective for development cooperation is poverty reduction, the effect on the wider community could be bigger. The questions arises if it is appropriate that EU development funds almost exclusively support a relatively small island of sugar cane farmers in a sea of desperately poor people with little access to land especially in Southern Region which has the largest proportion of poor households and the highest population density. Currently, the major winner seems to be Illovo whose demand for increased amounts of sugar cane will be met to some degree. A ministerial representative expressed this limited effect on the wider community as follows: "Chikhwawa had sugar production for a long time, but poverty is still rampant in the area".
- 109 Under the new EU MIP 2011 to 2013, the EU plans to support further extension of sugar cane production. In order to strengthen the poverty reduction effect of the interventions, EU should apply a more integrated approach and in addition to supporting the extensions of smallholder sugar cane production assist wider economic and social development. This would require further studies to identify feasible and viable interventions in close cooperation with the local communities and district assemblies. It also appears that that minimum number of hectares required for viable irrigation is less than the currently determined 2 to 3 ha as productivity gains and higher yields especially under pivot irrigation require less land. This would allow the inclusion of additional beneficiary farmers after a thorough assessment of the least viable number of hectares per household.

Insecurity of land tenure

National context

- 110 Land is a basic factor of production as well as an important source of livelihood for most Malawians. There are three legally recognised types of land tenure in Malawi: customary, private and public. Customary land tenure is the most widespread category. However, other sub-tenures that are commonly practised by customary landholders (renting and borrowing) are not legally recognised. Registered private land (freehold and leasehold) accounts for less than 8% of the land area. Inadequate access to land has been identified as one of the critical factors contributing to poverty in the country. The land sector impacts poverty in three main ways:
 - Inequitable access to productive resources and processes;
 - Unequal land distribution; and,
 - Land tenure insecurity.
- 111 Discrimination in access to land, based on social status, economic status and gender is a major constraint to economic growth. For example, it is easier for rich people to access land than the poor, or where influential members of clans make unilateral decisions on land, very often without prior knowledge

of other members of the groups²⁶. All land is state land and the chiefs are the custodians of those parts of state land that are called customary land. As such they decide who receives land where and how much and, in principle, they are able to evict people. However the chiefs are subordinate to the District Commissioner (DC) and ultimately it is the DC who decides on land issues together with Ministry of lands.

- 112 In 2002, a new National Land Policy was approved by parliament but up to now it could not be implemented as the accompanying legislation is still in process and the Land Bill has yet to be passed. The policy recognises that, "there is increasing evidence that, as the economy becomes more commercialized and less dependent on subsistence agriculture, access rights defined by customary rules are also becoming more private and restrictive than before. In the absence of clear and transparent policy, it is difficult for most citizens to understand the evolving rules of access and security of existing customary land rights".
- 113 If approved, the Bill would increase security of land tenure and solve some of the problems observed in the sugar smallholder sector as the GoM would allow all customary land to be registered and protected by law against arbitrary conversion to public land. The traditional supervisory role of chiefs, clan leaders, headpersons and family heads in land matters would be formalised and streamlined to allow uniform administrative procedures and transparency in all customary land transactions. The new Land Act and Bill are expected to be approved by the end of 2010, though taking into consideration the extended duration of the whole process this is not considered to be very likely.

Sugar Sector

- 114 Inadequate access to land and land tenure insecurity mentioned above are major issues in the smallholder sugar sector and a challenge for the expansion of cane production by smallholders. The land issues observed during the SEA can be divided in three groups:
 - Since farmers do not have a title to their land, they are reluctant to transfer land to the Trust as they are not sure what will happen in the future and worry that they may lose their land. This is reinforced by the lack of transparency and accountability of the operations of the management organisations and widespread confusion as to the roles and responsibilities of various stakeholders as well as the implications of leasing land to the Trusts. Rumours about land grabbing add to this reluctance. This was observed in Kasitu North where farmers, occupying the part of the earmarked land for sugar cane expansion by pivot irrigation, changed their mind and withdrew from the project. As a result, the project implementation was delayed and cannot be completed as planned by the end of 2010. There may even be need to re-design the pivot system and reduce the available hectares by about 50% of the original 670ha to avoid the disputed areas²⁷.
 - Given current practice in irrigated small-scale farming, plots of 2 to 3 ha are allocated per family and a family is restricted to operate one plot only. Only land already under cultivation and thus occupied by somebody will be converted to sugar cane production. In the case of Chikhwawa, about 70 % of all farmers have access to 1 ha or less. This implies that some households win and some households lose since the additional hectares, allocated to participating households, will have to be taken from non-participating households. Participating households with more than the required area will only be allowed to operate one plot not exceeding 2 to 3 ha.
 - It is widely accepted that land allocation is the responsibility of the traditional authorities. Not all chiefs act in the interest of their constituency. As land users are not registered, the chiefs may allocate their land to others. In cases where farmers do not agree with certain development plans - earmarked areas for pivot irrigation - it has been observed that the chief has re-allocated the land to people who comply. There have also been cases of "sale" of sugar cane land/reallocation of land to outsiders who are interested in participating in cane farming²⁸.

²⁶ See MGDS, p. 41

 $^{^{27}}$ Interview with DCGL \sim all land south of the water course is affected by land disputes amounting to about 50% of the land ²⁸ One account recalls the case of the Mkangadzinja farmer interviewed who had lost his land; originally had 8 ha, now has 0 ha; he gave his land to the Trust on the assumption that he received something back in the allocation, but because he did not agree to the pivot technology the land was reallocated to others; some of his land was sold to business men in Dwangwa; his harvest was destroyed (when pivots were installed) and he was not been paid any compensation. There are instances reported to the Team referring to delays of the original Kasinthula Phase 3 which was delayed because the local MP tried to get hold of the earmarked land and the chief was accused of corruption. "Sale" of land means actually "money under the table" which is usually done without issuing accompanying documents. The evidence is the receipt of the same information frequently from various independent persons/sources.

EU SAM

- 115 To mitigate the insecurity of land tenure and arbitrary land allocation practices the "Description of Action" of the two EU expansion projects envisage, as part of project implementation, the following measures for land allocation and selection of beneficiaries:
 - A comprehensive Farmers Awareness Programme is to be implemented in Kasitu North for small-scale farmers to help them to understand the cane-growing opportunities and conditions before they make a decision and formally commit to it. The programme is to deal with, among other aspects, land ownership/tenure and the impacts of cultural and social beliefs (e.g. marginalisation of women farmers on land allocation) but also the economics of cane production. For Kasinthula, the "Description of Action" specifies that increased sensitisation of potential farmers should be undertaken prior to their final agreement to join the scheme to ensure that they are fully aware of the roles and responsibilities that accompany membership. For this purpose the Trust secretariat is to develop suitable information, education and communication material and a checklist of responsibilities must be signed and understood by all members of the scheme. The checklist will include, but not be limited to:
 - o Lease agreements
 - o Individual responsibilities
 - Group responsibilities
 - Land development
 - o Centralised irrigation scheme
 - Payment system
 - o Loan repayment
 - o Supply chain processes
 - Food crop land entitlement/processes
 - As far as beneficiary selection is concerned, in both schemes an open and transparent selection procedure and criteria for selection is to be applied. Priority is to be given to those historically farming on the proposed land. Available plots after allocation to existing occupants will be subject to a selection procedure. A list of basic criteria has been drawn up, with additional criteria for persons wishing to be representatives on development community committees. These criteria will be used during the selection process with the exception of current land users who will automatically be part of the scheme. The criteria are:
 - o 1 plot per household
 - Minimum age 18 years
 - o Experience in cash and food crop farming
 - o Clean criminal record (severity of record to be discussed)
 - o Local inhabitant
 - These criteria should be used as guidelines for the selection committee to assist in the decision process, which will be managed by an independent selection committee incorporating external government bodies, the Trust, traditional authorities and local NGOs to help ensure a fair process and a wide range of beneficiaries.
- 116 It appears from the SEA observations as well as the latest progress reports by the two projects, that neither the awareness-raising programme nor the beneficiary selection process was implemented as intended. The work plan for Kasitu North envisages a six-month information and sensitisation period. When asked for the status of sensitisation in Dwangwa, we were advised that DCGL/T have been working in the area since 1999 and therefore sensitisation is not an issue. As regards Kasinthula, the work plan only includes a one-month information and sensitisation period as well as final selection of participating farmers. The latest progress report (Technical Interim Report, August 2010) indicates that these activities were completed during the first year. Although this is in accordance with the Action Description, the time frame of one month appears rather limited as compared to the Kasitu North, where six months of sensitisation and training were planned.
- 117 Implementation of the two projects began by the middle of 2009 though the first progress reports were only available more than one year later. The reports clearly indicate that implementation did not follow agreed guidelines and work plans. Regular monitoring of progress of implementation and compliance with work plans and targets by EU and responsible government units in MOF/NAO appears to be

insufficient which is partly due to the fact that the Special Conditions of the Grant Document only asks for narrative and financial reports in support of payment requests. It should be noted however that monthly verbal reports are provided at the SSC.

118To keep disputes on land allocation and selection of beneficiaries to a minimum in the new MIP more comprehensive measures need to be applied:

- There is a need to develop national, binding and clear guidelines for land allocation and selection of participants that go beyond EU support and apply to all smallholder expansion schemes in the sugar sector;
- As a minimum, current land users, whether participants or not, need to be registered and their land mapped. The mapping was done by the EU for Dwangwa expansion prior to the development of Kasitu North. Stakeholders and potential farmers were also made aware of potential development and were asked to register if interested in being involved. Some mapped areas were dropped as communities stated that they were not interested in cane farming.
- To safeguard social justice, for each irrigation expansion project a detailed inventory should be conducted to establish who will be affected positively and negatively by the project;
- If loss of land and other property is involved, a "compensation and resettlement management plan" in accordance with internationally agreed good practices²⁹ should be formulated and implemented (see also below box);
- EU should consider to make completed "compensation and resettlement management plans" a precondition for release of funds;
- Adequate time should be given for sensitisation, information and training activities prior to implementation to give farmers a fair chance to understand the implications of the project; and,
- EU/NAO needs to monitor project implementation and compliance with agreed principles and work plans more vigorously.

Good Practices – Involuntary Resettlement

Most donors, including EU, do not have own guidelines for handling issues of "involuntary resettlement", a term that covers a wide variety of side effects of development interventions such as loss of land/physical displacement, loss of property or loss of income. Instead they make use of the "good practices" developed by the World Bank Group that are based on the following principles:

- Involuntary resettlement should be avoided or minimised and if necessary project designs should be altered;
- Where involuntary resettlement is unavoidable, resettlement plans should be formulated and implemented with the aim to fully and fairly compensate all affected people for their losses. This also applies to people who do not have formal ownership rights but only usufruct or customary rights to land and other resources;
- Involuntary resettlement should be conceived as an opportunity for improving the livelihoods of the affected people and undertaken accordingly;
- All people affected by involuntary resettlement should be consulted and involved in resettlement planning to ensure that the mitigation of adverse effects as well as the benefits of resettlement are appropriate and sustainable

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²⁹ http://web.worldbank.org/WBSITE/EXTERNAL/PROJECTS/EXTPOLICIES/EXTOPMANUAL for World Bank social safeguard policies in particular Operational Directive 4.30 on Involuntary Resettlement, the IFC Handbook for Resettlement for Preparing a Resettlement Action Plan, 2002 and the World Bank publication "Involuntary Resettlement Sourcebook, 2004"

Capacity of small-scale sugar cane farmers' management organisations

119 Private sector based economic development is fairly new in Malawi³⁰ and therefore there is general lack of understanding of basic business principle and business management skills. The previous parastatals within agribusiness and processing still struggle to develop better functioning business models, based on market-oriented principles. Historically, cash crop production by the estates sector was favoured to the detriment of the smallholder sector that was largely limited to subsistence production, and left underdeveloped in terms of technical, managerial and commercial skills.

Sugar Sector

120 A rapid capacity assessment of the smallholder management organisations conducted in 2008 as part of the preparation of the Call for Proposals of the Sugar Capacity Building Project identified a fundamental lack of managerial skills and expertise, and established a comprehensive list of capacity gaps to be addressed at all levels. SEA Team field observations confirm this need for broad-based capacity development and below is provided a summary of the observations:

Lack of managerial expertise

- The design and technology option for Kasinthula Phase 3 had to be adjusted after the first round of tendering had revealed that funds were insufficient to implement what had been planned³¹;
- Between 2000 and 2007 the Kasinthula scheme had a management partnership with Agricane who was responsible for the management of KCGL and capacity development of key management and technical managers and staff. In the initial years, yield was above 100 t/ha but gradually declined to about 83 t/ha. This was primarily due to the fact that the Trust Board (which at that time consisted of a farmer majority) did not approve funds for cane replacement but preferred paying out dividends to the farmers. This was compounded by poor management and poor performance of management staff, expressed in the poor timing of inputs for production and activities such as planting and weeding and giving in to pressures from politicians.
- Another example is the implementation of the AfDB-supported Smallholder Outgrower Sugarcane Production Project in Dwangwa which was implemented between 2001 and 2008. Only 1115 ha of the originally planned 2000 ha were actually implemented and only after considerable delays (between 2001 and 2005 no project activities were conducted). The project was implemented by DCGT (loan and grant holder) and DCGL (operational support). Due to land tenure problems, the project had to be redesigned
- Neither the Kasinthula nor Dwangwa management operate a management information system
 that could provide easy access to relevant financial, technical and managerial data. Therefore,
 current documentation is poor and learning from experience cannot take place. Due to this, the
 information value of the progress reports to EU/NAO is limited as witnessed by the progress
 reports that have been completed in August 2010. This is being addressed by the CapacityBuilding Project.

Lack of expertise in community development, communication and participation

The poor sensitisation and awareness-raising as well as the poor process of selection of beneficiaries, discussed elsewhere, suggest that capacity in community development and communication are not very well developed. None of the management organisations has staff with this expertise. The low levels of literacy among ordinary smallholders require that a special effort is undertaken to assist in developing their understanding of the implications of contract farming arrangements and the operations of their management organisations and other sugar sector stakeholders prior to any implementation activities.

Governance and attitudes

 Some of the observed deficiencies are not really capacity problems in terms of expertise and skills but rather issues of attitudes and mindsets which are not in favour of modern business practices and do not promote transparency and accountability in business operations.

Interim Narrative Report (Progress Report), July 2010, p. 4

³⁰ Private sector based development started in 1996 when 66 parastatals were privatised. DCGL and DCGT were established in 1999 when the Smallholder Sugar Authority, a parastatal entity since 1977, was privatised. According to Malawi's Vision 2020, p. 44: "Most Malawians want to be business people but lack the education and skills needed to achieve this...."

- The above mentioned reduction in yields in Kasinthula was primarily caused by a dysfunctional Trust Board that, at the time, comprised a majority of farmers. Their primary interest was, in the short term, to maximise the short term economic benefits for the members while disregarding the long term need for reinvestment to ensure survival of the KCGL and the business as a whole. A precondition for receiving the current EU grant was to restructure the Trust and appoint a new Board of Trustees. The new board now seems to be more business-focused and professional though still requires capacity building and business understanding of the whole industry.
- In Dwangwa similar governance and attitude problems exist. Until 2003, all smallholder farmers were under the umbrella of DCGT and serviced by DCGL and the two organisations acted as interlink between the farmers and the DSC. Since then, there has been a proliferation of new companies, smallholder associations and groups, and independent cane growers. The background for this proliferation is primarily dissatisfaction with the operation of trust and company based on, among other things, the following conditions:
 - There are conflicts of interest as the Trust and company are not really separated functionally and the boards of the organisations have the same members, with a few exceptions:
 - DCGL gives preferential treatment to its own cane fields and shareholders;
 - o Farmers widely stated during the field visit that DCGL's administrative charges and charges, for inputs and services provided are too high. For example, administrative charges amount to 20 % of sugar sales received from Illovo and the fertiliser which DCGL buys at a cost price from Illovo is sold to the smallholders with a 10% surcharge (previously, this amounted to 27% but has since been negotiated down by the Dwangwa Sugar Farmer Association); and,
 - o Land was not allocated and reallocated in a transparent and just manner and both members of the Association and independent farmers blame the Trust for not having done more to support the farmers' interests. The Trust has left land allocation and selection of beneficiaries solely to the chiefs without giving them proper guidelines for the process and without proper supervision. Over time there were several cases in the different scheme expansions of land disputes and even cases of dispossession and legal cases.

The District Commissioner has recognised the seriousness of the situation and is becoming actively involved in sorting out land allocation disputes. With the assistance of district assembly extension staff, NGOs and the EU-financed National Initiative for Civic Education (NICE), the District Commissioner is seeking to raise small-scale farmer's awareness of the land tenure system and the principles of land allocation.

EU SAM

- 121 The current and future MIP are and will address the above gaps through the Sugar Capacity Building Project. The capacity assessment mentioned above has arrived at a comprehensive list of gaps to be addressed including:
 - Management organisations: All aspects of project management, human resource management, monitoring and evaluation, management information system, financial management, cane economics, understanding the Trust set-up (including subcommittees), roles and responsibilities, corporate governance and Corporate (Scheme) Social Responsibility, cross-cutting issues
 - Farmers associations: Roles and responsibilities of an association, all aspects of management,
 Information technology, participatory decision-making and governance, and cross-cutting issues
 - Smallholders: Cane crop and food crop management, business skills, understanding
 management and leadership organisations, the roles and responsibilities of the farmers
 associations, management companies, trusts, factories, understanding the impact of Fairtrade
 registration and cross-cutting issues
- 122 The project has a duration of three years though the EU should consider if three years are sufficient to fill the training gaps. Also the current capacity development through CU is not anchored in existing structures when the contract with CU ends, the training expertise may also be lost. It was anticipated that using the Training of Trainers approach CU would leave the Trusts, Companies and Associations with the ability to continue training. The evolving regulatory framework and apex organisations (see Box

below on Development of a Regulatory Framework) will also have a role to play in capacity development, for example through the establishment of a Sugar Research and Training Institute³². As establishment of such an institute may take time, possibly in the interim some transitional arrangements should be made with existing organisations such as Ministry of Agriculture and Food Security and later transferred. In addition, future call-for-proposals for new expansion areas will mandate an element of training and capacity to be built into the project.

- 123 Experience with previous management partnerships (e.g. Kasinthula scheme and Agricane) between the smallholder management organisations and similar private companies as means for capacity development has been good and may be reconsidered to reinforce the effect of training and to share experience and provide mutual support. The management organisations should professionalise their operations and e.g. conduct regular staff performance assessment and if necessary replace staff. In order to strengthen community sensitisation activities and focus on crosscutting issues, the trust/company should employ specialist staff with experience in community development, communication.
- 124 While these measures primarily would address gaps in expertise and skills they are less likely to be successful in addressing issues of poor governance and lack of good business attitudes. The sector is currently more or less operating on an *ad hoc* basis as there are no overall organisational bodies and regulatory framework to coordinate sector interests, guide sector development and regulate the actions of various actors in the sector. Discussions are ongoing as to whether such as a regulatory framework should be established and which degree of formalisation should be adopted. Apex bodies and, if necessary, an overall regulatory body would among other advantages provide the possibility to monitor operation and performance of the management organisations and take disciplinary action if necessary and in this way put into effect a culture of good governance and business orientation.

The box below summarises the recommendations for developing a regulatory framework.

Summary of Recommendations for Development of a Regulatory Framework

Step One: Increase the capacity of the Sugar Steering Committee to develop the required framework. In the interim, the Sugar Steering Committee representing all stakeholders can act as an industry body. In parallel, establish smallholder farmer associations and an apex body to increase the strength and capacity of representing the interests of the farmers. Once these associations are formed, the representative of the apex body could adopt a seat at the SCC to be involved in the further developments of a framework.

Step Two: Develop an industry body (e.g. national sugar association) that represents all stakeholders and can represent the industry as a whole at national and international level. It will give the industry the opportunity to self regulate and prove that legislation is not required or in the interest of the industry or national economy. The main issue is to create a body that is of value to all stakeholders and to develop equitable and affordable funding structure.

Step Three: In case self regulation is insufficient and Malawi is in a position that it needs formal, legislative regulation, it is recommended that the Tanzania model is used as a guideline. In this model a Sugar Board as the regulatory body operates more through stakeholder committees, and although linked to the government is fairly autonomous and allows industry an element of self regulation.

Source: EU: Review of the Regulatory Framework – Governing the Sugar Sector in Malawi, October 2009

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³² As already known from the institutional set up Tanzania

Capacity at District Level

National Context

- 125 The District Assembly is mandated to pass by-laws to govern its operation, as well as, to raise funds for carrying out its functions under the Local Government Act of 1998. Among its functions are:
 - Devising policies and decisions on local government and development;
 - Consolidating and promoting local democratic institutions and participation;
 - Promoting infrastructure and economic and social development through the formulation, approval and execution of a District Development Plan;
 - Mobilising resources for development;
 - Maintaining peace and security in conjunction with the Police and other law enforcement agencies; and,
 - Passing by-laws for good governance.
- 126 Despite the decentralisation policy launched in 1998, the Malawian political administrative system remains highly centralised and the central government has a prominent presence at the local level. The district administration is an extension of the central government and all officers are central government staff. Likewise the chairman of the district assembly is the district commissioner who belongs to the Office of the President and Cabinet. Generally the districts are under-resourced and do not have the means to carry out their responsibilities.

Sugar Sector

- 127 With the above mandate, the district assemblies through seconded central government staff should play a role in environmental and social management of the district including the sugar producing areas and facilities within their boundaries but currently they do not have the necessary institutional capacity. In Kasinthula for example the position of environmental officer has been vacant for seven years and only recently was a new one employed. The staff members from MGCWCS who were interviewed have little practical experience in the respective fields of responsibility and were not in a position to explain how they implement the government's HIV/AIDS and gender strategy in the district.
- 128 The districts perceive the sugar estates and the smallholder sugar cane producers as sub-sectors outside the realm of their responsibilities and reach. For example, the Nkhotakota socio-economic profile published in 2010 does not mention the sugar mill, estates and smallholder production at all and likewise the socio-economic profile from Chikhwawa is quiet on the sector yet they are the major source of employment and income in the districts. District assembly staff reported that in general, the sugar stakeholder sideline the districts and take decisions and actions without prior consultations.

EU SAM

129 In order to avoid parallel structures, through the SAM activities, an effort should made to assist the districts in carrying out their responsibilities and to built their capacity in environmental and social management. This will partly be done by the Sugar Capacity Building Project by ways of including district staff members in their training and community development activities. The smallholder management organisations should also liaise with district staff and involve them in the implementation and supervision of their environmental and social management plans.

Cross-cutting issues ~ gender

National context

130 Gender inequalities in accessing productive resources, development opportunities and decision making affect economic growth and development. The Gender Development Index for Malawi of 0.374 indicates that large disparities between men and women exist. Women who constitute about 51% of the population are marginalised in social and economic spheres and are unable to effectively contribute to social, economic and political development of Malawi. Education is a key factor for women empowerment. However women tend to have lower education levels than men leading to their lower participation in many areas of development. The main challenges are social/cultural factors, limited access to means of production, and limited participation in social and economic activities. The abuse of human rights or gender-based violence is tilted towards women and children and has accelerated other factors in their disfavour such as spread of HIV and AIDS. In addition, the coordination and implementation of gender-related policies is weak in Malawi. The long-term goal is to mainstream gender

in the national development process to enhance equal participation of both sexes for sustainable development.

Sugar Sector

131 The sugar sector, in addition to cash crop production in general, is a male dominated sector. Women have traditionally been responsible for subsistence production and domestic tasks whereas men have been responsible for cash production which has provided them with access to money. The most vulnerable women are those in female-headed households where they have to earn an income while at the same time carry the burden of tasks such as collection of water and fuel wood, cooking and other domestic tasks including child rearing. Their number is substantial in the sugar areas. In Kasinthula they amount to 37% of the population against a national average of 20%.

EU SAM

132 The two projects in Kasinthula and Kasitu North encourage the participation of women in sugar cane farming and budgets and work plans make provision for activities to promote the increased participation of women especially female-headed households. The Sugar Capacity Development Project will contribute to increase involvement of women through sensitisation and training on gender issues. So far, cultural constraints as well as the nature of work in the sugar sector have hampered wider participation of women.

Cross-cutting issues ~ HIV/AIDS

National context

- 133 Malawi, like many other Sub-Saharan African countries, has been severely affected by HIV and AIDS. Its impact remains devastating and the country's efforts are inadequate given the pace of the spread of HIV and AIDS. Poverty, HIV and AIDS are reciprocally influenced. The national adult HIV prevalence in the reproductive age group of 15-49 years has slightly declined from 14.4% in 2003 to 14% in 2005. The figures for Nkhotakota and Chikhwawa districts are 12% and 26% respectively.
- 134 The MGDS incorporates strategies such as the National Action Framework on AIDS and the UNAIDS three-ones principles one agreed action framework, one national AIDS coordinating authority, and one agreed country level monitoring and evaluation system. It seeks to not only halt and reverse the spread of HIV and AIDS, but also to decrease the negative impact of the epidemic on people living with AIDS and reduce the economic and social consequences for those who care for people living with HIV and AIDS. All sectors of society are supposed to contribute towards dealing with the HIV/AID pandemic.

Sugar sector

135 Illovo has an HIV/AIDS programme that is also offered to surrounding communities and thus contributes to the multi-sectoral fight against HIV/AIDS. The small-scale farmers and their management organisations are primarily concerned with technical issues and not specifically in support of social development issues.

EU SAM

- 136 The projects in Kasinthula and Kasitu North in accordance with the "Description of the Action" in the contract document are to conduct sensitisation and awareness campaigns prior and during implementation. Integrated parts of this are activities that aim at behaviour change with regard to:
 - Increasing the number of people who undergo voluntary testing and counselling;
 - Raising the awareness of how HIV/AIDS is contracted and can be prevented; and,
 - How to respond to the needs of people living with AIDS.
- 137 However, the projects do not have an operational strategy for this and therefore responsible project staff members are not sure what exactly to do. This also applies to district staff who responsible for HIV/AIDS activities. The Sugar Capacity Building Project will support training and coaching of sugar farmers and their management organisations and is currently in the process of conducting a trainings needs assessment which will shed light on contents and measures of HIV/AIDS activities. More guidance on the scope and contents of the HIV/AIDS activities is required.

Cross-cutting issues ~ Malaria and Bilharzia

National context

138 Malaria and bilharzia are widespread diseases in Malawi and the two sugar districts. In Nkhotakota, Malaria amounts to 19% of all deaths and in Chikwawa the figure 26%. With regard to bilharzia, in 2007 about 60% of the population in Kasinthula scheme were found to be infected by the disease.

Sugar sector

139 Irrigation systems are generally associated with increased levels of malaria and bilharzia and other water-borne and water-related diseases. Irrigation channels and stagnant water pools in furrows are good breeding grounds for mosquitoes. Likewise, water is used from Shire River and other water courses and Lake Malawi which are infected with bilharzia. In traditional irrigation systems, the water is transported via open channels and is therefore also used for various other purposes such as bathing and washing clothes. This direct contact carries the risk of spreading the disease.

EU SAM

140 The two projects in Kasinthula and Kasitu North both aim at expanding the irrigated area under sugar cane through pivot technology. This technology prevents direct contact with water as water will be pumped through underground pipelines and then sprinkled sparingly onto levelled fields without furrows. Therefore, the contribution of pivot irrigation to the further spread of malaria and bilharzia will be negligible. One of the activities of the sugar capacity building project will be to sensitise the population and raise awareness on how to prevent and treat a number of diseases including malaria and bilharzia.

5. Impact Identification and Evaluation

141 The significance of the overall impacts of the EU SAM interventions was determined according to the characteristics of the potential impacts (e.g. duration, probability, magnitude, mitigation potential, and the sensitivity of the environment and social receptors) according to the definitions in Table 3.

Table 3 Significance Scoring

IS THE IMPACT:	Scoring
<u>D</u> uration medium or long term?	Medium 2 – 5 years = 1 point Long Term > 5 years = 2 points
<u>L</u> ikely?	Yes =2 points Maybe = 1 point No = 0 point
<u>S</u> evere?	Major ~ needs extended resources =2 points Moderate ~ some resources = 1 point Minor ~ does not need attention = 0 point
Able to be Mitigated?	Not at all = 2 points Partially = 1 point Completely= 0 point
Affecting an Especially Sensitive receptor?	Yes = 1 point No = 0 point

5.1 Existing Situation and "No Change" Scenario

Tables 4 and 5 Existing Environmental Impacts within the Sugar Sector and Existing Social and Institutional Impacts within the Sugar Sector provide an overview of existing areas of environmental and social impact arising from key activities that currently occur within the sugar sector. The No Change Scenario is essentially the same as the Existing Situation though various aspects could be expected to deteriorate such as:

- Poor management of smallholders
- Lack of exit strategy
- Beneficiary smallholders will not experience livelihood improvements and increased incomes
- No indirect benefits such as additional income generation for local workers and local economic development
- Less gender-sensitisation among smallholders
- Less sensitisation on HIV/AIDS issues
- Capacity (technical and management) of smallholder sector remains poor and ineffective and inefficient operation smallholder sector will continue
- Governance issues not addressed
- No additional cane produced resulting in less national income from trade

142 There may be some positive impacts:

- Reduced conflict over land allocation
- Smallholders who work the land rather than become landlords
- 143 Table 6 Potential Benefits of the EU SAM interventions on Environmental Receptors provides an indication of the potential environmental benefits that may arise as a result of the EU SAM intervention. Table 7 Areas of Impact of the EU SAM on Environmental Receptors ~ assumptions made provides an indication as to the assumptions made whilst reaching the conclusions indicated in Table 7.
- 144 Finally, Table 8 *Potential Environmental Impacts of the EU SAM ~ significance* indicates the significance in terms of <u>Duration</u>, <u>Likelihood</u>, <u>Severity</u>, capability of being <u>Mitigated</u>, whether or not the impact affects an <u>Especially Sensitive receptor</u>.
- 145 Similarly, Tables 9, 10 and 11 indicate the same information for social and institutional impacts.

5.2 Environment

Table 4 Existing Environmental Impacts within the Sugar Sector

The Table provides an overview of existing areas of environmental impact arising from key activities that currently occur within the sugar sector.

Production Activity	Potential Comments Environmental Impacts			Siç	gnific	ance	e ³³
			D	L	S	M	ES
Field Production							
Field expansion	Deforestation, biodiversity	Minimal impact as land is mostly available	2	2	2	2	0
2. Field preparation	Fossil fuel contributes ~ carbon emissions	CO ₂ neutral; assumes equivalent re-growth	1	0	0	0	0
3. Planting	None unless on slopes/undulating land	Soil erosion on sloping/undulating land	1	1	1	1	0
4. Manual harvesting	None		0	0	0	0	0
5. Use of organic fertilisers	Synthetic pyrethrums/synthetic fungicides	Spot treatments	1	1	1	2	1
6. Use of inorganic fertilisers	NPK: Low rates/hectare	Eutrophication	2	1	1	1	1
7. Use of other agrochemical products	NPK: Higher rates/hectare	Eutrophication	2	1	1	1	1
8. Irrigation - Rain-fed	Uses less water		1	0	0	0	0
9. Irrigation – Furrow	High water usage		2	2	2	1	0
10. Irrigation – Centre-pivot	High water usage		2	2	2	1	0
11. Sugar cane burning	Releases CO ₂		2	2	2	2	0
12. Drainage	Flooding, potential water management	Energy sector ~ significant CO ₂ contributor	2	2	1	0	1
13. Transport of cane to factories	CO ₂ loading, release of furans and dioxin	CO ₂ neutral; assumes equivalent re-growth	2	2	1	1	0
Factories Production							
14. Disposal of water - mills and evaporators	Water quality	Known breaches of regulatory limits	2	2	2	1	1
15. Filter press mud disposal	Loss of NPK		1	1	1	1	1
16. Disposal of vinasse on roads	Flooding and poor water management	Appropriate post-harvest works to maintain	1	2	1	1	1
17. Boiler ash and fly ash disposal		Potential fertiliser	1	1	1	1	0
18. Boiler atmospheric emissions	CO ₂ loading, release of furans and dioxin	Minimal impact as land is mostly available	0	2	2	2	1
19. Burning of bagasse	CO ₂ loading, release of furans and dioxin	CO ₂ neutral; assumes equivalent re-growth	0	0	0	0	0
20. Vinasse to ethanol	Reduces emissions to air	Fuel ethanol	2	2	2	1	1
21. Co-generation	Produces energy		0	0	0	0	0

^{33 &}lt;u>D</u>uration <u>L</u>ikely <u>S</u>everity <u>M</u>itigation <u>E</u>specially <u>S</u>ensitivity

Table 5 Existing Social and Institutional Impacts within the Sugar Sector

The Table provides an overview of existing areas of social and institutional impact arising from key activities that currently occur within the sugar sector.

Social and		Potential	Significance ³⁴					
ins	nstitutional Issues Social/Institutional Impacts		D	L	s	M	ES	
1	Poverty	Poverty rampant in sugar areas; sugar cane smallholders have experienced rapid socio-economic growth	2	2	2	1	1	
2	Land tenure	Land tenure insecurity hampers expansion of irrigated sugar production				2	1	
		Expansion of irrigated sugar cane production on cultivated fields creates loss of land and relocation	2	2	2	1	1	
3	Capacity	Capacity at all levels in smallholder production too poor to run effective and efficient operations	2	2	2	1	1	
4	Gender	Marginalisation of women in sugar sector	2	2	2	1	1	
5	HIV/AIDS	Increased incidence of HIV/AIDS due to increase money flows and influx of workers	2	2	2	1	1	
6	Capacity District	District authorities not carrying out respsonsibilities with regard to sugar sector environmental/social management				1	1	

 $^{{\}underline{\underline{\it D}}}$ uration ${\underline{\underline{\it L}}}$ ikely ${\underline{\underline{\it S}}}$ everity ${\underline{\underline{\it M}}}$ itigation ${\underline{\underline{\it E}}}$ specially ${\underline{\underline{\it S}}}$ ensitivity

Table 6 Potential Benefits of the EU SAM interventions and related EU support on Environmental Receptors

This Table indicates the overall environmental benefits of the SAM interventions

EU SAM			Potential Environmental I				
Areas of Intervention	Air Quality	Water Resources	Land Quality	Biodiversity	Climate Change	Ecosystem Services	Compliance with standards
Review of Regulatory Framework	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
Kasinthula Phase 3	No benefit due to cane burning	No benefit since cane uses more water than food crop	No benefit since cane removes large amounts of soil nutrients ³⁵	No benefit since mono- culture lessens biodiversity	Potentially positive if intervention lifts smallholders out of poverty sustainably, since then they would be more resilient to climate change	No benefit since monoculture lessens micro biodiversity on which environmental services depend	EIA undertaken but Environmental Management Plan not followed through
Dwangwa Kasitu North	No benefit due to cane burning	No benefit since cane uses more water than food crop	No benefit since cane removes large amounts of soil nutrients	No benefit since mono- culture lessens biodiversity	Potentially positive if the intervention lifts smallholders out of poverty sustainably, since then they would be more resilient to climate change	No benefit since monoculture lessens micro biodiversity on which services depend	No EIA, only environmental and social descriptions No guarantee that Environmental Management Plan will be followed through
Sugar Capacity- Building Project	Neutral	Neutral	Neutral	Neutral	Potentially positive if smallholders sensitised	Neutral	Neutral
Dwangwa Feeder Road	No benefit due to potential increase of GHG emissions	No benefit if water courses compromised	No benefit if land for construction not re-instated	No benefit if trees unnecessarily felled	Neutral	No benefit if land is unnecessarily taken	Neutral if industry guidelines followed

³⁵ FAO: Rates for ratoon cane are generally higher than for plant crops and vary between 100 and 200 kg N/ha, again depending on the soil system, soil form and rooting depth.

Table 7 Potential Areas of Impact of the EU SAM and related EU support on Environmental Receptors ~ assumptions made

This Table indicates the assumptions made when considering the overall environmental benefits of the SAM interventions

EU SAM Intervention	Measures to be implemented	Assumptions made
Review of Regulatory Framework	 Strengthen SSC as temporary industry body SSC to facilitate institutional and regulatory development Consolidate smallholders associations and establish apex organisation and test if self-regulation is feasible 	 Self-regulation model is approved and supported as the way forward by all stakeholders and creates no adverse environmental impact
Kasinthula Phase 3	 Centre-pivot irrigated smallholder sugar cane scheme supplying cane to the Illovo Nchalo mill 400 ha 200 smallholder households 	There are: No further increase in scheme area No further increases in smallholder numbers No breaches of the environmental management plan cane burning remains
Dwangwa Kasitu North	 Centre-pivot irrigated smallholder sugar cane scheme supplying cane to the Dwangwa Sugar Corporation mill 300 ha 175 smallholder households 	There are: No further increase in scheme area No further increases in smallholder numbers No breaches of the environmental management plan Cane burning remains
Sugar Capacity-Building Project	 General inventory of all outgrowers Review of current practices/training needs assessment Technical cane-growing skills training for farmers Technical food crop training for farmers Training in sustainable agricultural practices for farmers Conduct review of management capacity of outgrower management companies and trusts Develop a business understanding programme Business/sugar-industry specific training for outgrowers Support to cane growers companies Support to farmer trusts and associations 	 The training modules occur as specified and are anchored on thoroughly-assessed need That the programme is able to respond to smallholders concerns during the capacity-building That ongoing Trust/Company issues do not de-motivate smallholders That smallholders are incentivised That smallholders do not become absentee farmers
Dwangwa Feeder Road	 Tender Appointment of contractors Monitoring and Evaluation Sign-off of contract 	 Route remains as current right of way with no additional destruction/encroachment and no sub-feeders facilitated Adequate precautions taken to protect watercourses No felling of trees Minimum borrow pits, no exposed soil, full reinstatement No harvesting of natural resources by construction crew Full HIV/AIDS mainstreaming

Table 8 Potential Environmental Impacts of the EU SAM and related EU support ~ significance
This Table indicates the potential significance of the overall environmental benefits of the SAM interventions

FILCAM	Macaura ta ha implamantal	IS THE IMP	ACT:			Afficially
EU SAM Intervention	Measures to be implemented	Duration?	Likely?	Severe?	Able to be mitigated?	Affecting sensitive receptor?
Review of Regulatory Framework	 Strengthen SSC as temporary industry body SSC to facilitate institutional and regulatory development Consolidate smallholders associations and establish apex organisation and test if self-regulation is feasible 	2	1	2	0	0
Kasinthula Phase 3	 Centre-pivot irrigated smallholder sugar cane scheme supplying cane to the Illovo Nchalo mill 400 ha 200 smallholder households 	2	2	2	0	0
Dwangwa Kasitu North	 Centre-pivot irrigated smallholder sugar cane scheme supplying cane to the Dwangwa Sugar Corporation mill 300 ha 175 smallholder households 	2	2	2	0	0
Sugar Capacity- Building Project	 General inventory of all outgrowers Review of current practices/training needs assessment Technical cane-growing skills training for farmers Technical food crop training for farmers Training in sustainable agricultural practices for farmers Review of management capacity of outgrower management companies and trusts Develop a business understanding programme Business/sugar-industry specific training for outgrowers Support to cane growers companies, farmer trusts and associations 	1	1	2	1	0
Dwangwa Feeder Road	 Tender Appointment of contractors Monitoring and Evaluation Sign-off of contract 	2	2	1	0	1

5.3 Social and Institutional

Table 9 Potential Benefits of the EU SAM interventions and related EU support to Social and Institutional Conditions

This Table indicates the overall social and institutional benefits of the SAM interventions

EU SAM	Social and Institutional Benefits					
Area of Intervention	Poverty	Land Tenure	Capacity of Smallholder Sector	Capacity of District	Gender	HIV/AIDS
Review of Regulatory Framework	Neutral	Positive if evolving apex organisations regulate land allocation and participant selection	Positive if evolving apex organisations effectively coordinate and regulate sugar sector/strengthen smallholder management organisations	Could contribute to increased cooperation and coordination	Evolving apex organisation have leverage to mainstream gender	Evolving apex organisation have leverage to mainstream HIV/AIDS
Kasinthula Phase 3	Positive socio-economic impact on participating smallholders and families and affected labourers	Accelerates land tenure insecurity if land allocation and participant selection is not properly regulated	Neutral	Neutral	Will be addressed if appropriate guidelines are made available	Will be addressed if appropriate guidelines are made available
Dwangwa Kasitu North	Positive socio-economic impact on participating smallholders and their families and affected labourers	Accelerates land tenure insecurity if land allocation and participant selection is not properly regulated	Neutral	Neutral	Will be addressed if appropriate guidelines are made available	Will be addressed if appropriate guidelines are made available
Sugar Capacity- Building Project	Strengthens socio- economic impact though capacity development and awareness raising	May mitigate land tenure insecurity through promotion of transparency and dissemination of information	Strengthens managerial and technical capacity and governance small holder management, interest organisations and individual smallholders	Will facilitate increase cooperation and coordination	Part of capacity development and training	Part of capacity development and training
Dwangwa Feeder Road	Increased income through increased accessibility and reduced haulage prices	May cause minor land disputes if realignments occur	Neutral	Neutral	Will be addressed if included in contracts	Will be addressed if included in contracts

Table 10 Potential Areas of Impact of the EU SAM and related EU support on Social and Institutional Conditions ~ assumptions made

This Table indicates the assumptions made when considering the overall social and institutional benefits of the SAM interventions

EU SAM Intervention	Measures to be implemented	Assumptions made
Review of Regulatory Framework	 Strengthen SSC as temporary industry body SSC to facilitate institutional and regulatory development Consolidate smallholders associations and establish apex organisation and test if self-regulation is feasible 	 Self-regulation model is approved and supported as the way forward by all stakeholders and creates no adverse environmental impact
Kasinthula Phase 3	 Centre-pivot irrigated smallholder sugar cane scheme supplying cane to the Illovo Nchalo mill 400 ha 200 smallholder households Accompanying activities 	 There is no further increase in scheme area and number of participating smallholders Land reform not conducted/new legislation not approved Awareness raising campaigns and gender and HIV//AIDS activities implemented as planned
Dwangwa Kasitu North	 Centre-pivot irrigated smallholder sugar cane scheme supplying cane to the Dwangwa Sugar Corporation mill 300 ha 175 smallholder households Accompanying activities 	 There is no further increase in scheme area There are no further increases in smallholder numbers Land reform not conducted/new legislation not approved Awareness raising campaigns and gender and HIV//AIDS activities implemented as planned
Sugar Capacity-Building Project	 General inventory of all outgrowers Review of current practices/training needs assessment Technical cane-growing skills training for farmers Technical food crop training for farmers Training in sustainable agricultural practices for farmers Conduct review of management capacity of outgrower management companies and trusts Develop a business understanding programme Business/sugar-industry specific training for outgrowers Support to cane growers companies Support to farmer trusts and associations 	 There is no further increase in scheme area and number of participating smallholders That the programme is able to respond to smallholders concerns during the capacity-building That ongoing Trust/Company issues do not de-motivate smallholders That smallholders are incentivised That smallholders do not become absentee farmers
Dwangwa Feeder Road	 Tender Appointment of contractors Monitoring and Evaluation Sign-off of contract 	 Route remains as current right of way Full HIV/AIDS and gender mainstreaming

Table 11 Potential Social and Institutional Impacts of the EU SAM and related EU support ~ significance

This Table indicates the potential significance of the overall social and institutional benefits of the SAM interventions

FILCAM		IS THE IMP	ACT:			A ()
EU SAM Intervention	Measures to be implemented	Duration?	Likely?	Severe?	Able to be mitigated?	Affecting sensitive receptor?
Review of Regulatory Framework	 Strengthen SSC as temporary industry body SSC to facilitate institutional and regulatory development Consolidate smallholders associations and establish apex organisation and test if self-regulation is feasible 	2	2	2	0	0
Kasinthula Phase 3	 Centre-pivot irrigated smallholder sugar cane scheme supplying cane to the Illovo Nchalo mill 400 ha 200 smallholder households 	2	2	2	0	0
Dwangwa Kasitu North	 Centre-pivot irrigated smallholder sugar cane scheme supplying cane to the Dwangwa Sugar Corporation mill 300 ha 175 smallholder households 	2	2	2	0	0
Sugar Capacity- Building Project	 General inventory of all outgrowers Review of current practices/training needs assessment Technical cane-growing skills training for farmers Technical food crop training for farmers Training in sustainable agricultural practices for farmers Conduct review of management capacity of outgrower management companies and trusts Develop a business understanding programme Business/sugar-industry specific training for outgrowers Support to cane growers companies Support to farmer trusts and associations 	1	1	2	1	0
Dwangwa Feeder Road	 Tender Appointment of contractors Monitoring and Evaluation Sign-off of contract 	2	2	1	0	1

6. Analysis of Alternatives

146 Section 2.2 identified three categories of alternatives

- Alternative locations for sugar growing
- Alternative institutions servicing the smallholder community/sugar sector as a whole
- Alternatives technologies
- 147 Table 12 considers whether these alternatives have any more environmental or social or institutional benefits or less environmental or social or institutional impact than the locations, institutions or technologies proposed.

Table 12 Analysis of Alternatives

Alternative	Assessment	More benefit?	Less benefit?
Alternative locations for sugar growing	Assuming existing crop land (as for the two current schemes) is being used, it is unlikely that there would be any more or less benefits or impacts than the lands currently chosen	No	No
Alternative institutions servicing the smallholder community/sugar sector as a whole	Concern that the unease throughout the sector could demotivate smallholders and thus compromise lifting smallholders, sustainably, out of poverty or promote absenteeism	No	Possibly
Alternatives technologies	The centre pivot is an efficient user of water; other less sophisticated forms are ultimately more expensive and potentially less able to raise smallholders out of poverty as quickly	No	Yes

¹⁴⁸ Based on the above, it is considered that the current locations and irrigation technology selected are satisfactory. There is sufficient doubt about the current institutional arrangements to warrant consideration of more robust (transparency and accountability) institutional systems for smallholder representation.

7. Mitigation or Optimising Measures

149 Table 13 indicates how mitigation may be applied to the anticipated negative impacts of the EU SAM support to the NAS in order to realise the desired outcomes.

7.1 Environment

Table 13 Mitigating or Optimising EU SAM and related EU support ~ Potential Environmental Impacts

Strategy Action	Hoped for outcome	Likely environmental challenge	Mitigation or Optimisation
Review of Regulatory Framework	That there is a strengthened SSC, a consolidation of smallholders associations and an established apex organisation	That the desired outcome is not universally accepted and that there is less control at smallholder level and that an improved separation of Trust and Company does not occur	Extensive, smallholder sensitisation Detailed work at Trust and Company, possibly with new management
Kasinthula Phase 3	That 400 ha are successfully cultivated by 200 smallholders lifting them out of poverty	The farmers become absentee landlords thus not realising the full benefits of the capacity building programme and unable in the longer term to respond to potential effects of climate change	A commitment needs to be understood and signed by each smallholder before receipt of land allocation that the capacity-building programme is fully utilised
Dwangwa Kasitu North	That 300 ha are successfully cultivated by 175 smallholders lifting them out of poverty	The farmers become absentee landlords thus not realising the full benefits of the capacity building programme and unable in the longer term to respond to potential effects of climate change	A commitment needs to be understood and signed by each smallholder before receipt of land allocation that the capacity-building programme is fully utilised
Sugar Capacity- Building Project	That all the programmes occur and are attended by the smallholders and that learning is achieved	The farmers become absentee landlords thus not realising the full benefits of the capacity building programme this will undermine the sustainability of the programme and the full potential of the land will not be realised	A commitment needs to be understood and signed by each smallholder before receipt of land allocation that the capacity-building programme is fully utilised
Dwangwa Feeder Road	That the existing road is rehabilitated and becomes fully operational	 That the contractors: Do not follow the existing right of way Do not follow industry best practice Cause additional destruction/encroachment Do not take adequate precautions to protect watercourses Fell trees unnecessarily Allow sub-feeders Create unofficial borrow pits and do not reinstate Allow harvesting of natural resources Do not introduce a full HIV/AIDS awareness programme 	 Adhere to EU procurement processes Ensure no conflict of interest Develop an independently reviewed Environmental Management Plan (EMP) Regular and rigorous monitoring of the EMP

7.2 Social and Institutional

Table 14 Mitigating or Optimising the EU SAM and related EU support ~ Potential Social and Institutional Impacts

This Table indicates how mitigation may be applied to the anticipated negative impacts of the EU SAM support to the NAS in order to realise the desired outcomes.

support to the I	upport to the NAS in order to realise the desired outcomes.					
Strategy Action	Hoped for outcome	Likely social/institutional challenge	Mitigation or Optimisation			
Review of Regulatory Framework	Self regulation of sector initiated Effective and efficient overall sugar sector organisations Improved governance of sugar sector through apex organisations General and financial management and public communication capacity increased	Self-regulation model not sufficiently supported by stakeholders	Positive outcome in terms of improved governance of sector management should precondition for further funding			
Kasinthula Phase 3	OO ³⁶ : To contribute to the reduction of poverty in intervention areas through the expansion of the sugar sector SO ³⁷ : To increase number of outgrowers and increased income levels	Limited poverty effect – 200 smallholders and their families and estimated 400 cane workers Secondary effect on local economy – but not yet studied	More integrated approach and support to non-cane farmers to increase food security and develop local economy with binding guidelines for selection of smallholders, allocation of land, compensation and resettlement			
	Reduction of the effects of flooding	Guided professional farming and drain age systems have the potential to minimise flooding	To ensure this, there should be a binding commitment by farmers to implement their training			
Dwangwa Kasitu North	OO: To reduce rural poverty in Malawi SO: Increased number of cane outgrower under irrigation	Limited poverty effect – 175 smallholders and their families and estimated 300 cane workers Secondary effect on local economy – but not yet studied	More integrated approach and support to non-cane farmers to increase food security and develop local economy Binding guidelines for selection of smallholders, allocation of land, compensation and resettlement			
Sugar Capacity- Building Project	OO: To contribute to supporting the effective implementation of the NAS for sugar with a poverty reduction focus SO: 1. To improve the capacity of sugar out growers in agricultural methods 2. To build sugar outgrowers' management capabilities	Increased capacity may be offset by poor governance and business spirit Institutional memory of training and capacity development may be lost	Regulatory framework and overall regulatory body for sugar sector Business to business support /partnership with well functioning "likeminded" company from other sector or abroad Institutionalisation of capacity training			
Dwangwa Feeder Road	Improved market access for smallholders and decreased transport cost	Limited value for non-sugar cane small holders	In addition to feeder roads improve rural roads and minor structures to widen socioeconomic benefits and poverty reduction			

³⁶ Overall Objective ³⁷ Specific Objective

8. Indicators and Institutional Capacities

8.1 Indicators

150 The performance indicators are taken from the logical frameworks for the proposed interventions and are tabulated below (Table 15).

Table 15 Performance Indicators ~ Environment-affecting actions

Performance Indicators	Environmental Effect
Poverty level (poor and ultra poor)	Making the poor more resilient will have benefits when faced with stresses due to climate variability/change
Level of food security	Growing food crops especially legumes may enrich soil
Increase in hectarage of sugar cane grown by DSCGS	Possibly a negative effect if this leads to absentee farmers since the land will not be regarded as a sustainable resource to be managed carefully
Increase in the number of smallholders farming sugar cane	Making the poor more resilient will have benefits when faced with stresses due to climate variability/change but not if leads to absentee farmers
Increase in the quantities and value of	
sugar processed in Dwangwa	Neutral
Increase in the out growers' incomes	Neutral
Incomes of new farmers are increased	
to average € 3,100 per annum	Neutral
Number of hectares in scheme	Potentially exacerbates the negative effect and could
increases by 680ha	enhance the benefits, as described above
Dwangwa produces 78,200 MT more	
sugar cane each year	Neutral
175 addition sugar cane farmers are	Potentially exacerbates the negative effect and could
recruited under Kasitu expansion	enhance the benefits, as described above

151 The performance indicators above have little value in recognising the environmental impacts arising from the EU SAM interventions. The following indicators are proposed to run alongside those of the logical framework.

Table 16 Proposed Indicators ~ Environment-affecting actions

EU SAM Action	Proposed Indicators	
	Improved resilience to climate variability/change	
Kasinthula Phase 3	Soil quality maintained or improved	
raominala i nace c	Water quality maintained or improved	
and	Air quality maintained or improved	
Dwangwa Kasitu North	Habitat and biodiversity maintained or improved	
	Improved Mill emissions and discharges management	
	Improved usage of Mill by-products	
Sugar Capacity-Building	Improved commitment to remain as farmers rather than landlords	
Project	Improved commitment and ability to manage their natural resources	
Dwangwa Feeder Road	Road rehabilitated following industry guidelines Fully executed Environmental Management Plan	

Table 17 Proposed Indicators ~ Social and Institutional-affecting actions

Social and Institutional-affecting actions	Proposed Indicators
Poverty	 Income of smallholders increased by 7,5 % in Kasinthula and Dwangwa respectively Qualitative indicators – conditions of houses, means of transport, number of children enrolled in school
Land issues	 Reduced number of land disputes Guidelines for land allocation and selection of participants followed and monitored Compensation paid and resettlement management formulated and implemented
Capacity development	 12% and 8% increase in cane sugar yields in Kasinthula and Dwangwa, respectively, by project completion 50% increase of out growers expressing satisfaction about services provided by the Companies by project completion
District capacity	Number of staff involved in sugar sector activities
Gender	 No of women among beneficiaries who participate in cane farming No of women who are members of smallholder management organisations
HIV/AIDS	Knowledge of HIV/AIDS and percentage of VCT undergone among smallholders

8.2 Institutional Capacities

152 The stakeholders involved should establish objectives and targets for each indicator and monitor for environmental, social or institutional impact (Table 18) and improvement. It is considered that the Department of Environmental Affairs should have responsibility for the compliance monitoring of the NAS and the affects of the EU SAM interventions on the natural resources affected by the sector

Table 18 Responsible Lead Institution ~ Environmental

Indicator	Conditions Affected	Lead Institutions Responsible
Income of smallholders increased by 7,5 % in Kasinthula and	Poverty	MAFS
Dwangwa respectively		MOF
Qualitative indicators – conditions of houses, means of transport, number of children enrolled in school		
Reduced number of land disputes	Land issues	MOL
Guidelines for land allocation and selection of participants followed		
and monitored		
Compensation paid and resettlement management formulated and		
implemented		
12% and 8% increase in cane sugar yields in Kasinthula and	Capacity	MLGRD
Dwangwa, respectively, by project completion	development	
50% increase of out growers expressing satisfaction about services		
provided by the Companies by project completion.		
Number of staff involved in sugar sector activities	District capacity	MLGRD
No of women ~ beneficiaries who participate in cane farming	Gender	MGCWCS
No of women ~ members of smallholder management organisations	Gender	MGCWCS
Knowledge of HIV/AIDS and percentage of VCT undergone among	HIV/AIDS	MOH, OPC
smallholders		

9. Conclusions and Recommendations

Environmental

153 In general, the conclusions and recommendations under the National Context may be taken as key policy dialogue between the Delegation and GoM.

National Level

Conclusion 1

154 Once the decision has been made to go from food cropping to monoculture then the sugar cane growing in Malawi is relatively benign. The sector uses substantial amounts of water and in some cases does apparently cause rivers to run dry. It is generally assumed that the water in Lake Malawi will provide either directly to the north or via the Shire River to the south. It is not clear what effect global warming will have on the sector in terms of water availability in the longer term.

Recommendation 1

155 Climate change information and work which is ongoing under for the 2nd UNFCCC National Communications and the National Adaptation Programmes of Action should be informing sector development. It is recommended to have appropriate exchanges of information between actors involved in determining climate change effects on Malawi, agricultural policy, water management policy, and sector development.

Conclusion 2

- 156 In addition to global warming and its consequent effect in terms of climate variability and change, the other potential environmental effects of relevance are:
 - Soil quality
 - Water quality
 - Air quality
 - Habitat and biodiversity
 - Mill emissions, discharges and by-products
- 157 Typically, the expansion areas take existing converted land and so the general impact (land take and conversion) has already occurred. In any industry there will be localised impacts (such as soil degradation/erosion/compaction during land clearing and levelling, noise and dust pollution from construction vehicles and machines, increased risk of traffic accidents, oil and fuel spillage) these are anticipated at Kasinthula and Dwangwa. They are unlikely to be significant.

Recommendation 2

158 Although the general impact (land take and conversion) has already occurred and subsequent impacts are likely to be localised it is critical for these to be managed in order to keep them localised and minimum. It is recommended that an EIA should be undertaken for Kasitu North and its environmental management plan fully developed and executed. The environmental management plan for Kasinthula should be fully executed.

Conclusion 3

159 The agency tasked with monitoring the environment of Malawi is the Department of Environmental Affairs which is in need of strengthening; technical and financial resources.

Recommendation 3

160 The Department of Environmental Affairs should be strengthened and resourced in line with its mandate to safeguards the nation's natural resources. If not already accomplished, it is recommended that a training needs analysis should be undertaken, a five-year rolling operation plan developed and appropriate financial resources allocated to implement the plan fully.

Conclusion 4

161 In addition, appropriate legislation (e.g. for environmental management) needs to be brought forward and necessary implementing regulations passed.

Recommendation 4

162 It is recommended that all environmental policies and laws yet to be finalised or legislated be brought forward and necessary implementing regulations passed.

Sector Level

Conclusion 5

163 Typically, the industry has good policies and standards. Also, typically, what happens is that practices do not always conform to written rules and guidelines. This is the case at Nchalo Mill and may be at Dwangwa. Consequently, it is critical to monitor actual sector practice regularly and robustly.

Recommendation 5

164 It is recommended that there should be regular monitoring of the industry by the Department of Affairs and their findings implemented in a timely way. It is recommended that an Environmental Compliance Plan should be developed in agreement with each mill and implemented by the mill within agreed timeframes.

EU Delegation

Conclusion 6

- 165 There are several conclusions to be drawn that are of interest to the EU Delegation, directly, in terms of EU SAM execution:
 - (a) It is critical to mainstream climate change into all EU interventions. The MIP 2007 2010 needs to accommodate this where possible, and the MIP 2011-2013 needs to be revised to accomplish this
 - (a) It is critical that EU guidelines on EIA are followed and EIAs are submitted and follow the due process of law. There is no EIA for the Kasitu North Expansion area which is in breach of EU own rules and also those of Malawi which requires an EIA if the expansion area exceeds 100 ha.
 - (b) It is increasingly evident that monitoring of EU SAM interventions needs to be more rigorous with timely production of progress reports *etc*.

Recommendation 6

166 It is recommended that the EU Delegation should review its internal controls in order to ensure that:

- (a) Climate change is mainstreamed into all EU interventions in Malawi, particularly for MIP 2011-2013, following guidance in the EU Integration Handbook
- (b) EU guidelines on EIA are followed
- (c) Project management of EU SAM interventions is more robust in order to deal with institutional opaqueness within the sector

Social and Institutional

National Level

Conclusion 1

167 The governance challenges observed at the level of smallholder management will most likely not be adequately addressed by the capacity development project alone and will require additional attention. A more efficient avenue – which has already been supported by previous SAM and is under consideration for support through the 10th EDF - may be the ongoing efforts by sector stakeholders to develop an appropriate regulatory framework with accompanying governing bodies to coordinate sector interests, guide sector development and regulate the actions of various sugar actors in the sector. This may also be supported by the GoM Contract Farming Strategy.

Recommendation 1

168To address governance problems at the level of the smallholder management organisations more effectively, it is recommended that EU should accelerate its support to the ongoing efforts by sector stakeholders to develop an appropriate regulatory framework. This support should build on the results of

the institutional assessment³⁸ conducted in 2009 which recommends a "self regulation" model. In the short term this would imply a) strengthening the Sugar Steering Committee as an interim industry body and its capacity to drive the process of regulatory and institutional development; and, b) consolidating smallholder associations and establishing an apex body to represent smallholder interests. In the medium term, support would be needed for the establishment of an industry body (national sugar association) that represents all stakeholders.

Conclusion 2

169The changes perceived by the new land policy and legislation would be of utmost importance for agricultural and private sector development in Malawi in general, and the sugar sector in particular, as this would bring a solution to the current land tenure insecurity. There is a need to speed up the approval process.

Recommendation 2

170 It is recommended that EU and the donor community should use their influence and means to accelerate the process of approval of the Land Bill.

Sector Level

Conclusion 3

171 The socio-economic benefits for the smallholders participating in irrigated sugar cane production under the Kasinthula and Kasitu schemes will be substantial. However, as contribution to poverty reduction is the overall objective of the two interventions, the scope of support appears to be rather limited. Only 375 smallholders and their households will benefit and employment will be generated for temporary and permanent workers of the magnitude 300-400 per scheme. There will be some benefit for the local economy which has yet to be studied. It also appears that the minimum number of hectares required for viable irrigation is less than the currently determined 2 to 3 ha as productivity gains and higher yields especially under pivot irrigation require less land. This would allow the inclusion of additional beneficiary farmers – after a thorough assessment of the least viable number of hectares per household.

Recommendation 3

172 It is recommended that the EU expansion projects and other SAM interventions need to widen the currently limited impact on poverty reduction by a more integrated approach in line with the concept of "integrated rural development" recognising the inter-linkages of various socio-economic sectors and thus concurrently addressing several poverty aspects/development options such as measures to increase food security and develop the local economy in general to maximise impact. The AsWAP for Malawi has integrated rural development as one of its focus areas as a way to promote the growth and development of rural growth centres among and thereby "enhance re-distribution of wealth to all citizens". Prior to this, it is recommended that a study should be conducted to establish and document the actual direct and indirect socio-economic impacts of the smallholder expansion projects. Further studies should also be conducted to determine the lowest number of hectares required for viable irrigated sugar cane production, the degree to which the number of beneficiaries could be increased in this way and the appropriateness of different cane production technologies.

Conclusion 4

173 Inadequate access to land and land tenure insecurity are important issues in the smallholder sugar sector creating a number of barriers for the expansion of cane production and equitable access to benefit from the expansion projects: Since farmers do not have a title to their land, they are reluctant to transfer it to the Trusts; under the current practice of making provision for 2 to 3 ha per family, some lose and some gain land; and there is arbitrary land allocation by chiefs. These processes of land allocation and licensing are currently not well documented and a more thorough knowledge is required to appropriately address weaknesses. The EU contract documents devise guidelines for the selection of participating smallholders and allocation of land to mitigate potential negative impacts of land tenure insecurity. It appears, however, that these are not being followed. Loss of land and property would be a "no go" for other donor agencies and ways need to be found to handle these situations in accordance with internationally agreed good practice.

³⁸ EU: Review of the Regulatory Framework – Governing the Sugar Sector in Malawi, October 2009

³⁹ MOAFS: Agriculture Sector Wide Approach (ASWAp) - Malawi's prioritised and harmonised Agricultural Development Agenda, I 2010.

Recommendation 4

174 It is recommended that further studies should be conducted to determine the exact magnitude of land disputes and document the process of land allocation and licensing. To avoid or mitigate the negative impacts of land tenure insecurity, it is recommended that the jointly agreed guidelines in the EU contract documents for the different projects on selection of participating smallholders and allocation of land should be strictly followed and compliance monitored. In cases of loss of land and property, it is recommended that compensation and resettlement management plans need to be formulated and implemented prior to project implementation in accordance with internationally agreed good practice.

Conclusion 5

175 The capacity at all levels of the smallholder sugar sector is very poor and it is doubtful whether the gaps can be filled during the three years that the Sugar Capacity Building Project is running. With the development of a regulatory framework, the forthcoming apex organisations will become responsible for and capable of extending capacity development to smallholders and their management organisations, however their establishment may take considerable time.

Recommendation 5

176 There is need to reconsider the timeframe for training and capacity building and depending on the progress of developing apex organisations, it is recommended that the next MIP should either include an extension of the Sugar Capacity Building Project or other stand-alone capacity building measures.

Conclusion 6

177 The Trusts hold the contracts with the EU for the expansion projects but they are only obliged to report to the EU Delegation/NAO⁴⁰ prior to the release of funds. The latest reports cover a period of more than one year. This prevents EU and other decision makers from obtaining a clear status of progress of implementation and disbursements. It also prevents the smallholder management to learn from experience and take corrective measures. There is a need for more frequent reporting.

Recommendation 6

178 To increase the value of reporting as a management tool, it is recommended that the smallholder management organisations report quarterly and that reports focus on achieved results against planned targets

Conclusion 7

179 The quality of the progress reports reviewed is very poor as they do not report on achieved results against planned targets and the informational value is low. There is a need to improve the quality of reporting in accordance with good project management practices and good reporting practices should be a precondition for releasing funds.

Recommendation 7

180 It is recommended that the Trusts improve quality of reporting in accordance with good project management practices and that EU should render good reporting practice as a precondition for release of funds.

Conclusion 8

181 Districts are unaware of the operations of the sugar sector and there is need for more transparency and cooperation.

Recommendation 8

182 It is recommended that District authorities and staff, and the sugar sector stakeholder should increase collaboration and coordination. A first step towards improvement of the relationship between District and the sugar sector could be to make the District Commissioner a member of the Board of Trustees. Similarly, senior technical district staff – engineering or agricultural - should be members of the Board of the smallholder management company. It is further recommended that the EU continues capacity development support to the two District Councils and their staff through the Sugar Capacity Building Project or other means under the 10th EDF.

⁴⁰ Though the contracting authority is able to request further information at any time

EU Delegation

Conclusion 9

183 The SAM interventions seek to mainstream the crosscutting issues gender and HIV/AIDS but clear and operational guidelines for what to do and how to do it are yet to be provided.

Recommendation 9

It is recommended that the EU guidelines provided in the "Description of Action" for allocation of land and beneficiaries be revised to include a certain percentage of female smallholders. It is also recommended that all reports from the schemes to EU/NAO include a section on gender and report on gender activities conducted during the reporting period as well the number of female farmers in cane production and number of female farmers in associations and on the boards of trust and the management company. The agenda for meetings of the associations and boards should have a compulsory topic: cross-cutting issues to regularly discuss the state of gender activities and as well as HIV/AIDS related issues.

Conclusion 10

184 A number of lapses in terms of delays in implementation and deviations from Description of Action and other EU grant documents could have been avoided or addressed at an earlier stage with more rigorous monitoring of EU SAM interventions and timely and more frequent submission of progress reports.

Recommendation 10

185 It is recommended that the EU monitors more rigorously compliance with guidelines and agreements and ensures more frequent and timely reporting. Additional reporting requirements should be included in the grant documents.

Conclusion 11

186 The Dwangwa Cane Growers Company has private shareholders. There is a logic therefore that foresees that when the Kasitu North Expansion comes on stream the Company will be making various charges for its services which will contain an element of profit for the dividend of the shareholders. In essence, EU support will be used to provide revenue to private investors. This, empirically, would suggest a flaw in the current Trust/Company arrangements. This perhaps warrants investigation and for other potential irregularities, given the highly overlapping nature of the Trust and the Company managements.

Recommendation 10

187 It is recommended that EU reviews and ensures that current support to DCGT and DGCL and actual financial support to private investors/shareholders does not violate EU regulation.

Recommendations for Stage 4 Monitoring and Evaluation of SEA

- 188 The recommendations for Stage 4 Monitoring and Evaluation of SEA are:
 - 1. Department of Environmental Affairs to review and monitor Mill Compliance Plans and their implementation
 - 2. Department of Environmental Affairs to review and monitor EIA compliance
 - 3. Ministry of Gender, Child Welfare and Community Services to review and monitor gender sensitisation and mainstreaming
 - 4. Ministry of Local Government and Rural Development to review and monitor resourcing of District functions and their implementation

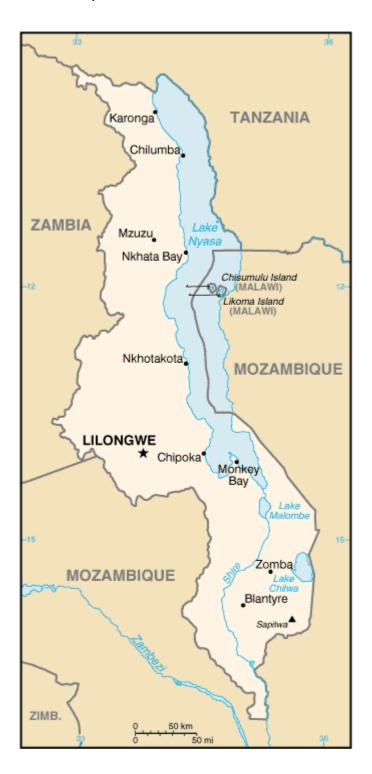
Monitoring decisions taken on the NAS and the results of its implementation

- 189 It is important to monitor the extent to which recommendations made in the SEA Study report are being met. Information tracking systems can be used to monitor and check progress of the NAS and the EU SAM. Monitoring of cumulative effects may be appropriate for initiatives that will initiate regional-scale change in critical natural (e.g. water availability) or social assets (e.g. deepening decentralisation). Usually the SSC would discuss and assign accordingly ~ the task could be undertaken by the Department of Environmental Affairs
- 190 At some point a formal evaluation by the SSC of the monitoring results should take place as part of the revision or future renewal of the NAS and the EU SAM.

10. Technical Appendices

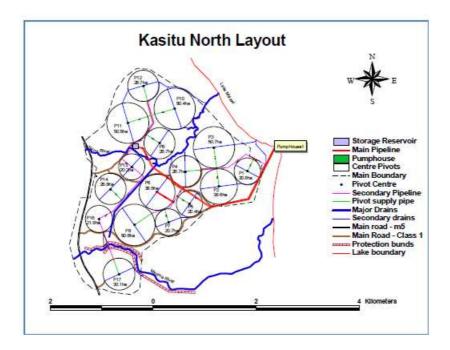
T1 Maps and Other Illustrative Information

General Map of Malawi

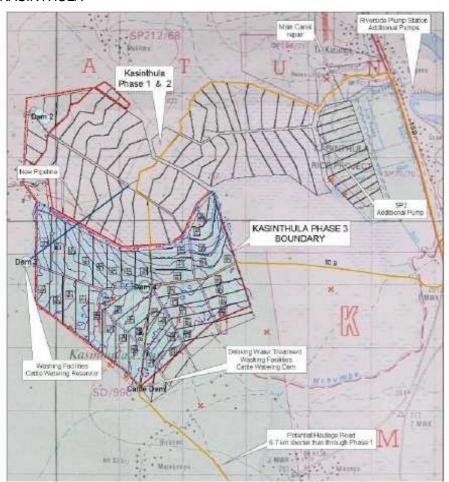


Map of Proposed Sugar Expansion Areas

DWANGWA



KASINTHULA



Map of Dwangwa Feeder Road Route

Available from the EU Delegation

T2 Other Technical Information and Data

MILL DATA TABLES ~ Illovo (Malawi) Limited

Operation Statistics for ILLOVO	2010	2009	2008	2007	2006
Hectares harvested	19717	18674	18345	17996	18130
Nchalo	13316	12398	12106	11887	11970
Dwangwa	6401	6276	6239	6109	6160
Tonnes Cane/ha (weighted average)	108	114	104	116	107
Nchalo	108	114	101	118	106
Dwangwa	109	113	110	114	110
Cane crushed (tonne)	2360821	2330152	2115075	2298964	2134520
Nchalo	1440667	1413352	1221107	1399336	1263217
Dwangwa	695104	708219	688543	694864	679815
Outgrowers (OG)	225050	208581	205425	204764	191488
% OG supply	9.53	8.95	9.71	8.91	8.97
Sucrose % (average)	14.41	14.81	14.34	14.52	14.44
Nchalo	13.88	14.88	13.96	14.12	14.06
Dwangwa	15.36	15.41	14.92	15.22	15.02
Outgrowers	14.88	15.06	14.67	14.88	14.94
Sugar produced	294952	303774	265788	288460	269526
Nchalo	178647	186991	154581	176636	161788
Dwangwa	116305	116783	111207	111824	107738
Analysis of sugar sales by destination (tons '000)	295	300	268	285	264
Domestic market	195	202	182	195	175
Export market	100	98	86	90	89
% Export	33.90	32.67	32.10	31.58	33.71

MILL DATA TABLES

Pesticides/Fungicide Management at Kasinthula

Chemical	Amount	Rate
Parabat	1600 litres	3.5 l/ha
Extreme Plies	150 kg	1.2 kg/ha
Velpar (Hexazinone)	540 litres	1.5 l/ha
MCPA	1000 litres	1.5 l/ha
MSMA	600 litres	3 l/ha
Triclon	72 litres	3 l/ha
Ametryne	1200 litres	2.5 l/ha
Round Up	700 litres	3 l/ha
Sevian	60 kg	0.05 kg/ha
Tronic	72 litres	0.6 l/ha
Buffer	105 litres	0.25 l/ha
Extreme 50WDG	83 litres	0.25 l/ha
Acetochlor	220 litres	3 l/ha
Paragon 500EC	950 litres	3.5 l/ha

MILL DATA TABLES

DWANGWA CANE GROWERS LTD PRODUCTION

	FURROW	PIVOT	RAIN-FED	AVERAGE
Farm area (ha)	713.09	204.12	155.62	1072.83
Tonnes cane	70006.91	24185.91	8301.08	102493.9
Tonnes sugar	9897.07	3432.58	1161.06	14490.71
TC/ha	98.1740173	118.488683	53.3419869	95.53601
TS/ha	13.87913167	16.8164805	7.46086621	13.507
Turnover (MWK)	2595560.96	899865.58	303037.11	3798464
Production costs (MWK)	1627876.23	549638.99	212723.88	2390239
Profit before tax (MWK)	967684.73	350226.59	90313.23	1408225
Fertiliser cost (MWK)	420075.45	114437.41	49564.02	584076.9
Haulage (MWK)	349701.96	161804.47	88931.54	600438
Transport costs per hectare	490.87	792.69	571.29	559.84
Production cost per ha (MWK)	2282.85	2692.72	1366.94	2227.98
Gross turnover per ha (MWK)	3639.88	4408.51	1947.29	3540.6
Profit per ha (MWK)	1357.03	1715.79	580.34	1312.63
Profit %	37%	39%	30%	37%
Haulage cost /tc (MWK)	5	6.69	10.71	5.86
Fertiliser cost/ha (MWK)	589.09	560.64	318.49	544.43
Haulage & fertiliser as % of total production costs	47%	50%	65%	50%

Letter from District Commissioner, Nkhotakota District to Dwangwa Cane Growers Limited concerning the issue of "land-grabbing"

Tel: 0 8600 517

01 292 348

Fax: 01 292 348

REF. No.ADM 1.



Nkhotakota District Assembly Private Bag 48 Nkhotakota MALAWI

All correspondence should be made to the District Commissioner

^{20th} May,2008

TO: THE EXECUTIVE DIRECTOR, DWANGWA CARE GROWERS LIMITED, DWANGWA,

CC: THE SENIOR CHIEF KANYENDA, NKHUNGA HEADQUARTERS, DWANGWA.

: HON. CHIMUNTHU BANDA (MP) NORTH CONSTITUENCY

: THE SECRETARY OFFICE OF THE PRESIDENT AND CABINENT

: THE SECRETARY, MINISTRY OF LANDS, HOUSING AND PHYSICAL PLANNING

: THE SECRETARY FOR LOCAL GOVERNMENT, P.O. BOX 30312, LILONGWE 2.

: EDWIN BANDA, VERITAS CHAMBERS

RACANE AND ASSOCIATES

THE OFFICER IN-CHARGE, NKHUNGA POLICE STATION, DWANGWA.

RE : LAND GRABBING

I write to order you to compensate the people whose crops you damaged at Kazilira dambo and that the land on which you have grown sugarcane without the consent of the land owners should be given back to the owners immediately.

By copy of this letter Officer In-Charge Nkhunga Police is also ordered to withdraw Policemen from Kazilira Dambo immediately.

The seriousness of the matter required your cooperation and prompt action.

Yours faithfully,

K.V. Chongwe DISTRICT COMMISSIONER

List (1) of Farmers from whom land was allegedly grabbed by the Dwangwa Cane Growers Trust

	AUNGARA - AC
\$478, 12.08:10	1 KHOT KOTA
SUGAR	CANS FIELDS LOST
PROPLE WHOSE LAX	JD WAS GRABBED BY
3 AD AWNUA CANE	
NAME	FIELD 150
1 Sizi Phiri	mx of
2 a. Ndimbres	MKOS
3 Friskani Banda	MK 07
4 G. Chili mangunga	MU 08
5 Maxwel Chimphangure	MKOS
& Patrick Chisangusale	MK10
7 Veronica Satigele	all 106
8 Blessings L.J. Kamange	MK 187
9 Culbert Vindro	mk 108
10 Greener Chidninba	MK 109
11 H.S. Chisangusala	Mk 11
2 Baris Boxes	MK 110
13 Simon Morale	WK (1)
14 Mighty Ellias	hk 112
15 Enock J. Mbewe	MK 113
16 Chinenla Mwate	MK (17
17 Stanford Nohoma	MK 118
17 Stanfford Nkhoma 18 Pary Zimba	MX 119
19 Godfrey Mkundi Banda	Mk 27
20 Emmanuel Mchoma	WK 28
	MK 20
2) Ellias Chijon 22 Kanatenda Phiri	MK 31
23 Angrea Phiri	MK 37
24 Sarry Kalimkhola	mk 2 4
25 Mera Phiri	MK 35
26 Gornigani Chinjoker	MK 36

List (2) of Farmers from whom land was allegedly grabbed by the Dwangwa Cane Growers Trust

MKANG	NSCH	AECA

27 Witness hava	MRAG
28 S. Changa	MK 52
29 Davison Kanude	MK 53
30 Richard Mywale	MK 54
31 Kamwendo Phin	MK S C
32 Mike Mwayilinga	MK C2
33 M pate M.	MK 72
34 Mayodi Banda	MK 73
35 Lucy Chisangoste	Mik 74
35 Revinia Thike	MK 75
37 Alick G. Chirwa	mk 84
38 Kachepa Phiri 39 James Zuwa	UK 85
35 James Zuwa	MK 88
40 Daniel siza thin	MK 89
41 Limbikani Phin	mk 90
42 Wisdom N. Phire	MK 91
43 Evance Chidate	MK 92
44 Rabson Chimna	MK 93
45 Lond womin Phin	MK 94
46 Naomi Sizi Phin	mk 95
47 Eldai Chimwai	MK 97
48 Bry Son Mwale	MK 98
48 Bryson Mwale	MK 99
50 Dustan Chiwers	MK 87
SI John Brown	MK 149
52 Sorothy Mwale	MK 150
53 Andrew Chisanguala	MK 151
54 Sshuncel Phini	MX 152
55 K-A. Kapalemula	MK 157
56 Esnat Mhone	MK 158

List (3) of Farmers from whom land was allegedly grabbed by the Dwangwa Cane Growers Trust

B 02	MK 188
7 Robet Wasiwasi Banda	MK 190
Jucia Banda	WK 191
59 Janet Kanwendo 50 Mabruto Banda	MK 192
of Grad Banda	MK 193
6) Kichard Katamba	mk 194
63 Freza Lilano	MK 195
64 Stewart Masiye	MK 196
65 Barnest Chikaty	MK 197
12 Charlo Mhoma	Jule 198
67 Chrispine Mwale	MK 199
15 Adias Patel	MK 7-80
he France Misale	mk201
20 bonded Kalasa	ver planting
al Edson Malinda Heller	21.
22 Marita Msango Nyamon	New plenting
12 Resting Mawale	1002
74 Hundred my amosale	
75 Benard Whone	U.
76 Frank Inhone	VI
77 William Vinthenze 78 Mrs Samuel Male	· ·
78 Mrs Samuel Minde	O.
	17
	U
81 Tawonga Chunga 82 Peter Banda	11
83 Mr. Hdembele	Ų
84 Edgar Mchoma	11
85 Winis Lunja	1
a hichard Noma	l d
myapun	74/27
or Marita MSANGO NYAMA	UTIVE 11

T3 Workshop ~ Agenda, List of Participants, Key Outcomes

AGENDA

08.30 - 09.00	Registration of Participants	NAO	
09.00 - 09.10	Opening Address	Ministry of Finance	
09.10 - 09.20	The SEA Process	Richard Pagett	
	Workshop Objectives	SEA Team Leader	
09:20 - 09:35	Description of Sector	Richard Koech (Agronomist)	
	Key Stakeholders	Claudia Heim (Socio-Economist)	
09:35 - 09:50	The NAS and the EU SAM	Richard Pagett	
09:50 - 10:10	Overview of Environmental Issues	Richard Koech/Pagett	
10:10 - 10:30	Overview of Social Issues	Claudia Heim	
10:30 – 10:50	Morning Break		
10:50 - 11:30	Discussion of Environmental Issues	Richard Koech/Pagett	
11:30 – 12:10	Discussion of Social Issues	Claudia Heim	
12:10 - 12:25	Next Steps	Richard Pagett	
12:25 – 12:30	Closing Remarks	EU	
12:30	Lunch	and depart	
Held at 08:30 – 12:30, Lilongwe Hotel, Lilongwe			

LIST OF PARTICIPANTS

NAME	FUNCTION	ORGANISATION
Horst Pilger	Head of Operations	Delegation of the European Union, Malawi
Enrica Pellicani	Head of Section	Delegation of the European Union, Malawi
Jenny Brown	Attaché, Rural Development	Delegation of the European Union, Malawi
Ilona Gruenewald	Rural Development	Delegation of the European Union, Malawi
Kate Mathias	Coordinator of EC Sugar Activities	Delegation of the European Union, Malawi
Barbara Chibambo	Agric. Food Security Sector Manager	National Authorising Office
Alessandro de Blasio	TA, Rural Dev. & Food Security	NAO/Ministry of Agriculture & Food Security
Pepani Baicali	Economist	Ministry of Agriculture & Food Security
Cindy Kacherenga	Rural Development Officer	Ministry of Agriculture & Food Security
Clement Phengiphewye	Deputy Director	Ministry of Industry and Trade
Diamond Chikham	Trade Officer	Ministry of Industry and Trade
Melody Chirwa	Principal Industrial Dev. Officer	Ministry of Industry and Trade
MsTawonga	Deputy Director	Department of Environmental Affairs
Mike Chigowo	Economist	Ministry of Lands, Housing & Urban Development
Geoffrey Mamba	Director of Irrigation Services	Ministry of Irrigation and Water Resources
Geoff Mkandawire	Commercial Manager	Illovo Sugar (Malawi) Limited
Ignatious Majamanda	Agriculture Manager	Illovo Sugar (Malawi) Limited
Richmond Makasa	Project Manager	EU Kasinthula Expansion Project, Phase III
Wilfred Chakanika	Executive Secretary	Dwangwa Sugar Cane Growers Trust
Pinit Korsieporn	FAO Representative	Food and Agriculture Organisation
Vinda Kisyombe	Agricultural Economist	African Development Bank
Wilson Kumwenda	Project Manager	Concern Universal (Blantyre)
Amos Mailosi	Coordinator for Crosscutting Issues	Concern Universal (Blantyre)
Herbert Mwalukomo	Nat. Env. Management Coordinator	Concern Universal (Blantyre)
Johannes Roseboom	Team Leader	EU Mission ~ By-Products Assessment
Cornelius Hopmans	Agronomist	EU Mission ~ By-Products Assessment
Ireneo Chipukunya	General Manager	Ethco Limited
Bouke C. Bijl	Director	Agricane
Richard Pagett	Team Leader	SEA SAM, Sugar Sector
Claudia Heim	Socio-Economist	SEA SAM, Sugar Sector
Richard Koech	Agronomist	SEA SAM, Sugar Sector

DISCUSSION POINTS

General Matters

- 1. There will be a new overall MIP table and timeline after discussions this afternoon in the SSC with updates on:
 - a. Feeder roads
 - b. Vitamin A status (likely be excluded)
 - c. Shire Valley High Level Irrigation Channel
- 2. The Capacity-Building component of EU SAM now in MIP 2007 2010 was originally from 2006 MIP
- The Dwangwa Feeder Roads component is at design stage and a ToR is being issued for Design Review of Southern Access route
- 4. Recommend further studies if available knowledge is not conclusive

Sugar Sector

- 5. Yields for Kasinthula Cane Growers Ltd corrected to be for last financial year 95 t/ha
- 6. Filter press mud and boiler ash to be looked into by By-products Team

Environmental Issues

- 7. Note the 2nd National Communications to UNFCCC and NAPA
- 8. DEA requested information on cumulative effects
- 9. Lake fluctuations and effect on Shire:
 - a. Need to check statistics for level fluctuations
 - b. Latest critical level in 1997
 - c. Important aspects especially now re. climate change
 - d. Flooding in lower Shire Valley due possibly to Illovo is an issue
 - e. Lake Malawi fluctuation -no flow into the Shire during 1997
 - f. Also, more recently due to a land slide
 - g. Catchment area protection in the SEA
 - h. Look at studies re. flows of Shire river
 - i. Barrage constructed on river Shire to regulate the flow from the Lake

10. Soil issues

- a. Sugar sector number 1 at soil loss prevention
- b. Zero tillage already in place in place soil conservation
- c. More soil loss in furrow irrigation than pivot
- d. Threat to soil in the sugar sector is much less than in other agricultural sectors
- e. Cane canopies form quickly and protect the soil
- f. Harvesting during dry season has not much impact on soil
- 11. Use of fertilisers urea used according to acidity of soil
- 12. Siltation not caused by sugar production, but upstream land use practices estates have good records
- 13. Ethanol effluent dumping in the Lake
- 14. Water and water quality
 - a. There can be nutritional value from water runoff and also some groundwater recharge
 - b. There are some water quality issues in the upland areas
 - c. Water quality-sugar estates have huge data on water quality downstream of their estates
 - d. Drainage water can be used for food crops (around Kasinthula)
- 15. Air quality cane burning
 - a. Continues because of employment effect
 - b. Cheaper

- c. Green cane attracts a higher production cost If change to green harvesting then additional cost may be offset by benefits of own power generation
- 16. Habitat/biodiversity
 - a. No loss because land already in use
 - b. Mono-cropping (MC) may be an issue
 - c. MC will be addressed by capacity building and training (CU)
 - d. Biodiversity could be enhanced in the corners and areas not irrigated by a centre pivot (though this could be used, nominally, for food crops)
- 17. Loss of trees through expansion
 - a. According to EIAs/Environmental Management Plans for Kasitu N and Kasinthula, farmers should replace them but they do not do this
 - b. Need for environmental law enforcement by district assembly
 - c. Need better sensitisation to avoid unnecessary felling of trees
 - d. Need to consider fuel wood lots
 - e. Bananas, guavas, maize etc production tremendously reduced with the coming of sugar cane
- 18. Fish species issue for Dwangwa not Shire

Institutional Issues

- 19. Sustainability of the whole thing future of EU support what happens after 2013? No exit strategy time frame too short only three years at a time no continuity or longer term perspective
- 20. EIAs should be done for all expansion projects currently a proper EIA has only been done for Kasinthula not Kasitu N (part of feasibility study)
- 21. Need for institutional and regulatory framework for sugar sector?
 - a. Industry will be regulated, ultimately, so start with self-regulation; need a general body for smallholders; use SSC to move forward; develop an Association of (Sugar) Smallholders (one at Kasinthula and one at Dwangwa) and an apex body "Sugar Association" to represent the industry
 - b. Need for small farmer organisation to articulate their issues farmers associations
 - c. Make recommendation on regulatory framework

Social Issues

- 22. On the issue of poverty reduction and that some lose and some gain
 - a. Need to consider actual original land plots prior to development rather than the nominal national average of 1 ha
 - b. 3 ha allocated to farmers found to be viable but future allocation could come down to 1.5 ha due to increased production due to irrigation efficiency
 - c. Land area could be reduced to accommodate more farmers to benefit from profits
 - d. Cost of irrigation is a key factor for what deciding location/size of expansion/number of smallholders
- 23. On the limited effect of EU support in terms of beneficiaries and development of surrounding society there are indirect beneficiaries and growth around the sugar areas; but not well documented (perhaps to be studied)
- 24. From discussion after the workshop agreement that number of beneficiaries is too small, especially after adjustments were made. 2 ha would be enough under the condition that yield is 90t/ha.
- 25. Alternatives to cane itself ~ not really (due to market security, transparent Division of Proceeds etc) though DoP not well understood and needs better sensitisation. Can grow tobacco on "sugar" land but sugar lifts out of poverty sooner
- 26. Cane proceeds not transparent
- 27. Trust-need widespread sensitisation users right if willing to join the trust

28. Land issues

- a. World Bank guidelines compensation and resettlement planning WB projects is causing difficulties (commentary in media)
- b. Need clear guidelines on land allocation (SEA to suggest some) including what works well elsewhere
- c. More sensitisation needed prior to a project
- 29. Not "experimenting" with pivots at Nchalo ~ pilot programme
- 30. Employment of staff with social/community development expertise
 - a. DCGL unable to afford technical specialist (like Illovo can)
 - b. How can DCGL attract social specialists
 - c. With overall Farmers' Associations capacity should be developed there and allow them to take over community development etc
- 31. Re. issue of poor district cooperation five malarial teams in the District (though not clear if District teams or external ones)
- 32. Effect of tree cutting for expansion project shortage of firewood which is most common form for energy for cooking and only 9% have access to the power grid. Unless mitigated through establishment of wood lots for fire wood, people may cut firewood indiscriminately and damage existing tree cover. This is also about gender in order to decrease the work burden of women.

33. HIV/AIDS

- a. Government "decree" to use 2 % of all budgets for HIV/AIDS activities or,
- b. 2% government budget for HIV/AIDS ~ not clear
- c. Concern Universal -holistic package on HIV/AIDS

34. Gender

- a. Many participants not receptive to the issue
- b. Some cultural constraints where women involvement is concerned
- c. Chiefs have been asked to identify female-headed households
- d. Gender sensitisation takes a while but is now considered to be having some sort of effect ("some even have joint bank accounts")
- e. Women should have access to resources/benefits.
- f. Women labour and men access the benefits
- 35. Need to make some suggestions to mainstream exactly ~ suggested lessons could be learned from the construction industry where there has been successful interventions on HIV/AIDS for workers and surrounding areas
- 36. Child labour an issue in cane production?
 - a. Is an issue in tobacco but cane production work can only be done by adults
 - b. May be an issue in outsourced functions Illovo monitors, but do the companies
 - c. Child labour ~ no incidence within outgrowers schemes partially due to the nature of the work and because the farmers would likely employ adult labourers for weeding; could occur if cutting is outsourced
 - d. International Labour Organisation may have found evidence in other countries (and may occur in tea in Malawi)
- 37. Fairtrade as cross cutting issue

T4 Scoping Report

Available separately

11. Administrative Appendices

Study Methodology/Work Plan/Itinerary List of Stakeholders Consulted/Engaged Documentation Consulted Curricula Vitae of the Consultants Terms of Reference for the SEA

A1 Study Methodology and Work Plan

The basic four stages in developing a Strategic Environmental Assessment (SEA) are:

- 1. Establishing the Context for the SEA
- 2. Implementing the SEA
- 3. Informing and Influencing Decision making
- 4. Monitoring and Evaluation

Stage 1: Establishing the Context for the SEA

Review the need for the SEA, and initiate preparatory tasks

• An early step in the SEA process is "screening" to decide whether an SEA is appropriate and relevant in relation to the development of a policy, plan or programme (in this case the NAS) in the area under consideration. Integral to this will be establishing the objectives of the SEA: how does it intend to improve the implementation process; what is its role?

NOTE: Assumed this was done prior to issuing the ToR for this assignment

- SEA is designed to explore and evaluate suitable alternatives. The sooner an SEA is introduced to policy formulation and plan-making, the greater the chances are to identify opportunities and influence outcomes.
- When it is decided that an SEA is appropriate, it is important to secure governmental support. The explicit focus throughout the subsequent process should be on integrating environmental considerations (alongside economic and social ones) into key decisionmaking points when options and proposed activities are being developed and evaluated.

NOTE: NAO, various ministries and departments are aware of, and involved in

Identify interested and affected stakeholders and plan their involvement

- SEA is a participatory process. It allows civil society, including the private sector and
 relevant stakeholders that will be affected by the proposed NAS, to contribute inputs to
 strategic decision making. Therefore, screening should include careful stakeholder analysis
 to identify stakeholders and prepare a communication plan to be used throughout the SEA.
- If the public is not used to being engaged, particularly at the strategic level, and if there are
 no precedents, it is critical to include an education component in the public engagement
 process. Active public engagement should take place from Stage 2 onwards to the review of
 the draft SEA report.
- A public engagement and disclosure plan could assist in identifying relevant stakeholder groups and appropriate communication methods. It is important to identify and engage those stakeholders who are the most exposed to environmental degradation.
- In general, environmental and social pressures tend to affect the poor and vulnerable sections of the population disproportionately. To ensure that all relevant knowledge is drawn on, both women and men should be included in this process.

NOTE: the above thinking is captured in the Work Plan within the constraints

Stage 2: Implementing the SEA

Determine the scope of the SEA

- A scoping process should establish the content of the SEA, the relevant criteria for assessment (e.g. goals set out in the NAS or in the SAM). These should be set out in a Scoping Report. A pragmatic view needs to be taken on how much can be achieved given the time-scale, available resources, and existing knowledge about key issues. An open and systematic process should be followed. The SEA should actively engage key stakeholders to identify significant issues associated with the proposal and the main alternatives. Based on these issues, and the objectives of the SEA, decision criteria and suitable indicators of desired outcomes should be identified. Scoping may also recommend alternatives to be considered, suitable methods for analyses of key issues and sources of relevant data.
- Scoping procedures and methods (such as matrices, overlays and so on) may be used to establish cause-effect links between different specific plans or programmes or to identify the environmental and social implications of more general policies or strategies. A detailed options review may be undertaken as part of the scoping process to clarify the environmental and social advantages and disadvantages of different potential courses of action. Scoping meetings with stakeholders should result in a stronger focus of the SEA and improvements (as needed) to the draft engagement plan.

NOTE: the above thinking is captured in the Work Plan within the constraints

Establish participatory approaches to bring in relevant stakeholders (as part of the Scoping process)

- As noted above, effective and sustained public engagement is vital for effective SEA. By its
 very nature, NAS decisions are embedded in the political domain and involve political
 dynamics including the engagement of the stakeholders who are likely to be most affected
 or who are most vulnerable. Understanding the power relations between different
 stakeholders, and how they interact with each other and the environment, are essential for
 good analysis and process management.
- One of the challenges is to ensure that public engagement is meaningful and not just a case
 of providing detailed, rigorous and comprehensive information. The engagement process
 must provide an opportunity to influence decisions. Stakeholders groups identified as most
 affected by the NAS or SAM may be politically and or socially marginalised and have little or
 no prior experience in providing input to decision-making.
- Public consultations processes will have to identify the best means to ensure that they can
 participate effectively and their viewpoints are given proper consideration. This may involve,
 in particular, reaching stakeholders who may not have access to the internet, lack access to
 public libraries, speak a different language, are illiterate, have cultural differences or other
 characteristics that need to be taken into consideration when planning for their engagement.
- Depending on the nature of the country's political institutions and processes, there will be a
 need to integrate any SEA process with the public engagement process as a whole, or to
 adopt other approaches where needed. Also, public engagement needs to be sustained,
 structured, and co-ordinated with the phases of formulating and implementing the NAS –
 emphasising equally the positive contributions and harmful effects.

NOTE: the above thinking is captured in the Work Plan

Collect baseline information

- SEA needs to be based on a thorough understanding of the potentially affected environment
 and social systems. This must involve more than a mere inventory, e.g. listing flora, fauna,
 landscape and urban environments. Particular attention should be paid to important
 ecological systems and services, their resilience and vulnerability, and significance for
 human well-being. Existing environmental protection measures and/or objectives set out in
 international, national or regional legislative instruments should also be reviewed.
- The baseline data should reflect the objectives and indicators identified in the Scoping Report. (For spatial plans, the baseline may usefully include the stock of natural assets including sensitive areas, critical habitats, and valued ecosystem components). For sector

plans, the baseline will depend on the main type of environmental impacts anticipated, and appropriate indicators may be selected (e.g. emissions-based air quality indicators for energy and transport strategies). In all cases, the counterfactual (or no-change scenario) should be specified in terms of the chosen indicators.

NOTE: the above thinking is captured in the Work Plan within the constraints

Analyse the potential effects of the proposals and any alternatives

- Identifying the potential direct and indirect or unintended effects of policy proposals and decision-making processes, as well as options for, and alternatives to the NAS is naturally more difficult than in the case of specific projects. The range of options or variables under consideration is often harder to define with certainty because the transmission channels through which effects may be experienced may be very complex, involving many aspects which are difficult to predict and analyse. This makes the indirect effects of paramount importance in the assessment. Certain measures may help to frame this issue, for example, the use of best versus worse case scenarios. Cumulative effects present particular challenges.
- There is no single best method for impact analysis. Approaches are usually selected that are appropriate to the issues at stake. The identification and evaluation of suitable options may be assisted by future "scenario building" and "back-casting methodologies".
- Establishing the linkages with key economic and social policy goals requires a wide analytical framework, elements of which may already exist. For example, there is already an examination of the key environmental problems and risks within the Fiji CEP, including an assessment of the underlying causes of environmental stresses. This may be enhanced by other analyses relevant to the scale or scope of the NAS in order to assess the potential linkages between the environmental effects of the NAS and other key policy goals (e.g. in many poor countries, policies indirectly leading to rural environmental stress can impact negatively on poverty levels).
- Assessment of the priority of such linkages and issues will reflect the perceived value of the
 environmental issues to the country. Such assessment may draw on a number of tools or
 processes e.g. comparative risk assessment, economic assessment of environmental
 damage, and survey-based and participatory assessments). They may be used to find
 objective measures of how important an environmental or social issue is, and thus how it
 should be factored into the policy formulation process alongside other issues.
 NOTE: the above thinking is captured in the Work Plan within the constraints

Identify measures to enhance opportunities and mitigate adverse impacts

- It is important to focus on realising the positive opportunities of the planned activities and minimising any negative risks. Opportunities should generally enhance achievement of the MDGs and other development challenges. The aim is to develop "win-win" situations where multiple, mutually reinforcing gains may strengthen the economic base, provide equitable conditions for all, and protect and enhance the natural resource base. Where this is impossible, the trade-offs must be clearly documented to guide decision makers.
- A mitigation hierarchy should be followed for identified negative impacts: first avoid; second reduce; and third offset adverse impacts using appropriate measures. Caution should be exercised if the analysis indicates a potential for major, irreversible, negative impacts on the natural or social environment. Often this may suggest selecting less risky alternatives. For less-threatening situations, standard mitigation measures can be used to minimise an adverse impact to "as low as reasonably practicable" (ALARP).
- Once mitigation has been taken into account, the significance of residual adverse impacts may be evaluated. This is an important measure of the environmental acceptability of the proposal and is usually carried out against selected environmental objectives and criteria.
- Examples of policy reforms with clear environmental implications include privatisation, energy policy, land reform, trade incentives, water supply and pricing.
- NOTE: the above thinking is captured in the Work Plan within the constraints

Draft report on the findings of the SEA

Once the technical analysis is completed, the results and rationale for conclusions need to be reported. It must be presented in an understandable format and appropriate language(s). This will often require short summaries and graphic presentations rather than a long report. A concise non-technical summary should be included. This will be of particular use in explaining the findings to civil society, which needs to be well informed in order to submit comments.

NOTE: the above will be reflected in the draft SEA Study Report

Provide an independent evaluation/review (quality control check) on the SEA

Designing an SEA to include the steps and practices outlined in Stages 1-3 will provide a basic level of process quality. However, specific measures of quality control assurance might be warranted, e.g. to ensure the credibility of the assessment in the eyes of all stakeholders. These measures will depend on the nature, context, needs and timeframe of the specific strategic initiative.

Options to consider include:

- An independent review of SEA by experts or academics
- Internal audits by the Department of the Environment; or steering committees consisting of representatives of key stakeholders
- An independent expert commission

NOTE: the above will need to be established by the Sugar Steering Committee

Public engagement in reviewing the draft SEA report

While public engagement should have been included at all appropriate stages, the draft SEA report is a key stage and should be publicly available for a period of time agreed during the scoping stage. If meetings are held for public comment, smaller, focused meetings may be preferable to ensure adequate time for comment, rather than larger meetings where few people have the opportunity to speak. There is a variety of ways to gather opinion from the more vulnerable groups and ensure that they can meaningfully participate, e.g. surveys, interviews and meetings. Financial support, transport and food may need to be provided so the most marginalised may participate. An understanding of the political economy of the decision-making process, and the various responses from the stakeholder analysis, should suggest how to ensure effective consultation and influence on decisions.

NOTE: the above will need to be established by the Sugar Steering Committee

Prepare final SEA Study Report

Typically, this will include sections on:

- Key impacts for each alternative
- Stakeholder concerns including areas of agreement and disagreement, and recommendations for keeping stakeholders informed about implementation
- Enhancement and mitigation measures proposed
- · Rationale for suggesting preferred options and accepting any significant trade-offs
- · Proposed plan for implementation (including monitoring)
- Benefits that are anticipated and any outstanding issues that need to be resolved
- Guidance to focus and streamline any required subsequent SEA process for subsidiary, more specific undertakings such as local plans, more specific programmes and EIA for particular projects

NOTE: the above will be captured in the contents page of the SEA Study Report

Stage 3: Informing and Influencing Decision Making

Making recommendations to decision makers

- Presentation of the draft and final reports are important to influence key decisions.
- A clear, understandable and concise Briefing Note or Issues Paper may help to
 ensure that decision makers are fully aware of key environmental issues linked to
 the NAS and SAM. From the outset, through steering committees, other structures
 and public engagement mechanisms, decision makers and stakeholders have
 opportunities to shape the outcome of the SEA, e.g. identification of issues, choice
 of indicators, scope of work, and selection and evaluation of proposed development
 options and alternatives.
- It is often a learning process for authorities and civil society to work together on an SEA.
- Decision makers need to know the options open to them, what the likely effects of choices are, and what the consequences would be if they failed to reach a decision. This information should be clearly set out in the advice given by the SEA.

NOTE: the above will be reflected in the draft SEA Study Report

Stage 4: Monitoring and Evaluation

Monitoring decisions taken on the NAS and SAM and the results of its implementation

It is important to monitor the extent to which recommendations made in the SEA report are being met. Information tracking systems can be used to monitor and check progress of the NAS and SAM. Monitoring of cumulative effects may be appropriate for initiatives that will initiate regional-scale change in critical natural and social assets. Methods and indicators for this purpose need to be developed on a case-by case basis.

NOTE: the above will be reflected in the draft SEA Study Report for implementation by DEA

Evaluation of monitoring results and feed back in NAS renewal

At some point a formal evaluation of the monitoring results should take place as part of the revision or renewal of the NAS

NOTE: the above will be reflected in the draft SEA Report for implementation by DEA

WORK PLAN

Dates	WORK PLAN Activities	CH/R	Days Allocate K	
July	Review of documents and initial development of draft Work Plan		1	
August				
1 Su	Expert (s) travel to Malawi (overnight)			
2 M	Expert (s) arrives Malawi; Briefing in EU Delegation, initial planning		1	
3 T	Meetings: NAO, Technical Secretariat, receipt of documents and data, SEA scoping		1	
4 W	Meetings: Min Industry & Trade, NAO, EUDEL preliminary review of Work Plan, Min Agriculture, Min Nat Resources, Energy & Env, receipt of documents, scoping, planning of field visits		1	
5 TH	Meetings: Min Economic Planning, Min Transport, Min Local Government, Ministry for Women, Nutrition Department, Office of the President and Cabinet, receipt of documents/data, scoping, planning of field visits		1	
6 F	Meetings: EUDEL: Inception Report with Work Plan receipt of documents; Department of Environmental Affairs		1	
7 SA	Review of documents received, evaluation of information,	6	1	7
8 SU	Fly to Blantyre (see Itinerary for detailed activities)			
9 M	Meetings in Limbe, Blantyre and Kasinthula; receipt of documents		1	
10 T	Nchalo: stakeholder discussions, estate/mill visit, receipt of documents/data	1		
11W	Fly to Lilongwe and drive to Dwangwa; meetings: stakeholder discussions, estate/mill visit, receipt of documents/data	1		
12Th	Dwangwa: stakeholder discussions, receipt of documents/data	1		
13 F	Dwangwa a.m. stakeholder discussions, receipt of documents/data, return Lilongwe	11 1 12		12
14 Sat	Review of documents received, evaluation of information		1	
15 Sun				
16 M	Stakeholder discussions, receipt of documents and data, drafting of Findings		1	
17 T	Stakeholder discussions, receipt of documents and data, drafting of Findings		1	
18 W	Stakeholder discussions, receipt of documents and data, drafting of Findings		1	
19 Th	Preparation of Findings and Recommendations		1	
20 F	Preparation of Findings and Recommendations and submittal		1	
21/22 SS	SEA Study reporting and preparation for Workshop	19	2	20
23 M	Sugar Steering Committee/Stakeholder Workshop, SEA Study reporting		1	
24 T	SEA Study reporting		1	
25 W	SEA Study reporting	22	1	23
26 Th	Report completion and submittal of informal version (Transtec/Safege will submit official Report) Team Leader departs		1	24
Sept	Receipt of any further comments on Report, finalise Report, submit by 15 September		2	26
	Total Days	(22*2	+26	= 70

FIELD ITINERARY

Date	Time	Activity				
BLANTYR	RE, KASIN	NTHULA, NCHALO				
Sun (8 Aug)	07:00	Fly to Blantyre arriving 07:50				
	07:30	Drive to Limbe				
Mon	08:00	Illovo (Malawi) Limited				
(9 Aug)	10:00	Concern Universal				
		Drive to Kasinthula				
	13:30	Project Manager Phase III				
		Acting Trust Manager				
		Acting General Manager				
	18:00	Drive to Nchalo for evening				
	08:30	Estate/Factory Managers/representatives with environmental/social responsibilities				
Tues	PM	Return to Chikhwawa				
(10 Aug)	14:00	District Commissioner Offices for Chikhwawa District (representatives for Lands,				
		Environment, Community Development, Gender and Public Works (roads)				
		Return to Blantyre for evening				
	20:00	Meet with Downstream Products Team				
DWANGV	VA , NKH	ОТАКОТА				
Wed	06:00	Fly to Lilongwe				
(11 Aug)		Drive to Dwangwa				
, , ,	14:00	Dwangwa Cane Growers Trust				
	15:00	Dwangwa Sugar Corporation and splinter groups				
Thurs	09:00	Dwangwa Sugar Corporation				
(12 Aug)	14:00	Ethanol Company Limited				
	15:30	Dwangwa Cane Growers Company Limited				
	08:00	Sugar Famers Association				
Fri	11:00	District Commissioner for Nkhotakota District				
(13 Aug)	PM	Return to Lilongwe				

A2 List of Stakeholders Consulted/Engaged

NAME	FUNCTION	ORGANISATION
EC Delegation		
Jenny Brown	Attaché	Delegation of the European Union, Malawi
Kate Mathias	Coordinator of EC Sugar Activities	EUDEL, Malawi
Government of Malawi	•	
Madalo Nyambose	Head	National Authorising Office
Charles Lumanga	Senior Manager, Economic & Good Governance Sector	National Authorising Office
Barbara Chibambo	Agriculture, Food Security Sector Manager	National Authorising Office
Dr Andrew Daudi	Principal Secretary	Ministry of Agriculture & Food Security
Gray Nyandule-Phiri	Controller, Agriculture Investment Programmes	Ministry of Agriculture & Food Security
Neil Orchardson	M & E Advisor, Technical Secretariat	Ministry of Agriculture & Food Security
Cindy Kacherenga	Rural Development Officer	Ministry of Agriculture & Food Security
Gladys Zimba		Ministry of Agriculture & Food Security
Nebert Nyirenda	Principal Secretary	Ministry of Industry and Trade
Melody Chirwa	Secretary, Sugar Steering Committee	Ministry of Industry and Trade
Mr Mwadiwa	Principal Secretary	Ministry of Natural Resources, Energy and Environment
Yona Kamphale	Director of Economic Planning	Ministry of Development
Idrissa Mwale	Chief Economist	Ministry of Transport
Dr Mary Shawa	Principal Secretary for Nutrition, HIV & AIDS	Department of Nutrition & HIV/AIDS (Office of the President and Cabinet)
Patrick H. Kabambe	Principal Secretary	Ministry of Local Government and Rural Development
Cyrus Jeke	Assistant Director Planning	Ministry of Gender, Child Welfare and Community Services
Ms Mtupanyama	Director	Department of Environmental Affairs
Ms Victoria Kachimera	Legal Officer	Department of Environmental Affairs
Ms Jywo Sibale	EIA Officer	Department of Environmental Affairs
Mr Phiri	Nutritionist	Department of Nutrition & HIV/AIDS (Office of the President and Cabinet)
Felix Mangani	Acting Commissioner for Lands	Ministry of Lands, Housing and Urban Development
Geoffrey Mamba	Director of Irrigation	Ministry of Irrigation and Water Resources
Mr Jana	Irrigation Officer	Ministry of Irrigation and Water Resources
Mr Kaluwa	Chief Hydrologist	Water Resource Department
Local Government		
ML Sapuwa	Acting Lands Officer	Ministry of Lands, District Office, Kasinthula
Peter Magombo	Environmental Officer	Ministry of Energy and Environment, District Office, Kasinthula
Gerald Chiona	Gender Officer	Ministry of Gender, Child Welfare & Community Services, District Office, Kasinthula
Isaiah Funsoni	Social Welfare Officer	Ministry of Gender, Child Welfare & Community Services, District Office, Kasinthula
PG Dulani	Public Works Officer	Ministry of Transport and Public Works, District Office, Kasinthula
Charles Thombozi	District Commissioner	District Commissioner Office; Nkhotakota District

NAME	FUNCTION	ORGANISATION	
Sugar Sector			
Geoff Mkandawire	Commercial Manager	Illovo Sugar (Malawi) Limited	
Gerry Garson	Company Secretary/Finance Manager	Illovo Sugar (Malawi) Limited	
Richmond Makasa	Project Manager	EU Kasinthula Expansion Project, Phase III	
Humphrey Savieri	Acting Trust Administrator	Shire Valley Cane Growers Trust	
Watson Ligomba	Acting General Manager	Kasinthula Cane Growers Limited	
21 growers	Various Chairmen, Treasurers, Secretaries, Members	Kasinthula Cane Farmer Association	
Eddie Williams	General Manager	Illovo, Nchalo Sugar Estate	
Andy Stewart	Agricultural Manager	Dwangwa Sugar Corporation (Illovo Sugar [Malawi] Limited)	
Carsten Christensen	Extension Services Manager	Dwangwa Sugar Corporation (Illovo Sugar [Malawi] Limited)	
Ed Halse	Field Manager	Dwangwa Sugar Corporation (Illovo Sugar [Malawi] Limited)	
Evans Masamba	Production Agronomist	Dwangwa Sugar Corporation (Illovo Sugar [Malawi] Limited)	
Mathias Phiri	Irrigation Engineer	Dwangwa Sugar Corporation (Illovo Sugar [Malawi] Limited)	
Wilfred Chakanika	Executive Secretary	Dwangwa Sugar Cane Growers Trust	
Luckson Ngalu	Project Manager (of all projects)	Dwangwa Sugar Cane Growers Trust	
Aaron Kisembe	Managing Director	Dwangwa Sugar Cane Grower Limited	
Daniel Kayira	Agricultural Manager	Dwangwa Sugar Cane Grower Limited	
Blessing Phiri	Grower	Mkangadzinja Cane Growers Limited	
Geoffrey Kamtengeni	Grower	Mkangadzinja Cane Growers Limited	
Sigi Phiri	Grower	Mkangadzinja Cane Growers Limited	
Charles Chipala	Grower	Tipate Cane Growers Ltd/Tipate Cane Grower Scheme	
Salazani Lester	Chairman	Dwangwa Sugar Farmers Association	
Thompson Manda	Treasurer	Dwangwa Sugar Farmers Association	
Claudia Matsimbe	Treasurer, Development Committee	Dwangwa Sugar Farmers Association	
Grecian Sosten	Member, Development Committee	Dwangwa Sugar Farmers Association	
Richard Mnthanje	Board Member	Dwangwa Sugar Farmers Association	
Sebastian Mudelemani	Board Member	Dwangwa Sugar Farmers Association	
Patricia Kanyende	Office Assistant & Interpreter	Dwangwa Sugar Farmers Association	
Mary Lazarus	Grower	Dwangwa Sugar Farmers Association	
Gift Canje	Grower	Dwangwa Sugar Farmers Association	
Donors			
Vinda Kisyombe	Agricultural Economist	African Development Bank	
Non-Governmental Organisations			
Wilson Kumwenda	Project Manager	Concern Universal (Blantyre)	
Amos Mailosi	Coordinator for Crosscutting Issues	Concern Universal (Blantyre)	
Herbert Mwalukomo	National Environmental Management Coordinator	Concern Universal (Blantyre)	
Innocent Chikhadwe	Coordinator	Concern Universal (Dwangwa)	
Luciano Msungu	M & E Expert	Concern Universal (Blantyre)	

A STRATEGIC ENVIRONMENTAL ASSESSMENT OF THE EU SAM IN MALAWI

SEA Study

NAME	FUNCTION	ORGANISATION	
Misozi Kamwendo	Field staff	Concern Universal (Dwangwa)	
Connex Chilangwe	Field staff	Concern Universal (Dwangwa)	
Manyatwako Malopa	Field staff	Concern Universal (Dwangwa)	
Private Sector			
Lusubilo Chakaniza	Process Engineer	Ethco Limited	
Jim Henderson	Agricultural Specialist	Opportunity Bank	
Bouke C. Bijl	Director	Agricane	

A3 Documents Consulted

YEAR	AUTHOR (s)	TITLE
	EU	
2006	EU	Design Nate: Expansion of Instructed Congress a under China Valley Cong Creware Trust Lawren China Valley Malayri
		Design Note: Expansion of Irrigated Sugarcane under Shire Valley Cane Growers Trust, Lower Shire Valley, Malawi
2006	EU EU	EIA: Expansion of Irrigated Sugarcane under Shire Valley Cane Growers Trust, Lower Shire Valley, Malawi Final Report
2006	EU	Economic, Institutional and Financial Assessment of the Expansion of Irrigated Sugarcane under Shire Valley Cane Growers Trust, Lower Shire Valley, Malawi – Final Report
2006	EU	Main Report and Findings: Expansion of Irrigated Sugarcane under Shire Valley Cane Growers Trust Lower Shire Valley, Malawi,
		Final Report
2006	EU	Country Environmental Profile Malawi – Draft Report
2006	EU	Malawi Multi-Annual Sugar-Related EC Support Strategy to Malawi NAS
2007	EU	EU Contract Documents for "The Expansion of Irrigated Sugarcane under the under the Shire Valley Cane Growers Trust –
		Kasinthula Phase III"
		Annex 1: Description of the Action
		Annex 2: Logical Framework
		Annex 3: Budget
		General Conditions
		Special Conditions
		Kasinthula Phase III Expansion Project, Action Amendment Proposal, funded by the European Community 2010
2008	EU	Final Report, Mapping, Topographical Study and Soil Sampling for the Expansion of Irrigated Sugar Cane Under Dwangwa Cane
		Growers Trust Nkhotakota, Malawi
2008	EU	EU Contract Documents for "The Expansion of Irrigated Sugarcane under Dwangwa Cane Growers Trust – Kasitu North"
		Annex 1: Description of the Action
		Annex 2: Logical Framework
		Annex 3: Budget
		General Conditions
		Special Conditions
2009	EU	Programming Guidelines: Accompanying Measures for Sugar Protocol Countries (AMSP) 2011-20123
2009	EU	Feasibility Study: Expansion of Irrigated Sugar Cane Under Dwangwa Cane Growers Trust, Nkhotakota, Malawi, Draft Final
0000	=::	Report, Phase 2
2009	EU	Feasibility Study: Expansion of Irrigated Sugar Cane Under Dwangwa Cane Growers Trust, Nkhotakota, Malawi, Draft Final Report, Phase 1
2009	EU	Kasitu North Proposed Centre Pivot Irrigation scheme and incorporating a sprinkler irrigation system for "corner areas" – part of
2000		Dwangwa Feasibility Study
2009	EU	Review of the Regulatory Framework Governing the Sugar Sector in Malawi - prepared by Kate Mathias
2009	EU	Guidelines on the Integration of Environment and Climate Change in Development Cooperation

	AUTHOR (s)	TITLE		
	EU	Malawi Multiannual Indicative Programme (MIP) for the Accompanying Measures for Sugar In Malawi (2011-2013)		
	EU	Strategic Environmental Assessment Study for the National Adaptation Strategy (NAS) in Swaziland, Scoping Report		
	EU	EA Study for the National Adaptation Strategy (NAS) in Swaziland, Stakeholder Workshop Proceedings		
	EU	trategic Environmental Assessment (SEA) of the Sugar Sector in Zambia, Study Report		
2010	EU	asinthula Phase III Expansion Project, Action Amendment Proposal, funded by the European Community		
2010	EU	Malawi Multiannual Indicative Programme (MIP) for The Accompanying Measures For Sugar In Malawi (2011-2013) – updated		
????	EU	Country Strategy Paper 2008-2013		
	GoM			
		Various statistics on export and commodities		
??	??	Malawi Social Welfare Survey		
??	??	National Agricultural Policy Framework		
??	??	National Forestry Program		
??	GoM	Land Act		
??	GoM	Water Resources Act		
1996	GoM/MoNR	National Forest Policy of Malawi		
1996	GoM	No titleAct to make provision for protection and management of the environment and the conservation and sustainable utilisation of natural resources and for matters connected herewith and incidental thereto		
1997	GoM/MoMNR&EA	Forestry Act		
1998	GoM/MCI	Integrated Trade and Industry Policy		
1998	GOM/SADC	Revised Protocol on Shared Watercourses		
2000	GoM/MAI	National Irrigation Policy and Development Strategy		
2000	GoM	Fisheries Conservation And Management Regulations		
2001	GoM/MoMNR&EA	National Fisheries and Aquaculture Policy		
2002	GoM	Trade Diagnostic Study		
2002	GoM	Malawi National Land Policy		
2002	GoM	Malawi National Land Policy (Abridged Policy Themes)		
2003	GOM/DEA	State of the Environment, Consolidated National Report		
2003	GOM/DEA	State of the Environment Report, Chikhwawa District		
2003	GOM/DEA	State of the Environment Report, Nkhotakota District		
2004		Malawi Environmental Policy Brief - Point of departure for a discussion of poverty and environmentally sustainable development		
2004	GoM/MoNRE&E	National Environmental Policy		
2004	GoM/MoMNR&EA	Malawi National Strategy For Sustainable Development		
2005	GoM	Malawi Growth and Development Strategy		
2005	GoM/MAF	Food and Nutrition Policy		
2005	GoM/MA	New Agricultural Policy - A Strategic Agenda for Addressing Economic Development and Food Security in Malawi		
2005	GoM/MIWD	National Water Policy		

\/E	ALITHOD ()			
YEAR	AUTHOR (s)	TITLE		
2005	GoM	Development of the Shire-Zambezi Waterway Project - Concept Paper: to Heads of State and Governments NEPAD		
2005	GoM/MoT&PSD	The Impact of the EU Sugar Reforms on Malawi by R. Record et al		
2006	GoM	Adaptation Strategy for Malawi Sugar Industry in Response to the Reform of the EU Sugar Regime		
2006	GoM/MoMNR&EA	National Adaptation Programmes of Action under The United Nations Framework Convention on Climate Change (UNFCCC)		
2006	GoM/Chikhwawa	Chikhwawa District Socio-economic Profile		
	District Assembly			
2007	GOM	Biosafety Act		
2007	GoM/ National	Malawi in Figures		
	Statistical Office			
2008	GoM/ National	Population And Housing Census 2008, Preliminary Report		
	Statistical Office			
2008	GoM	Malawi Integrated Water Resources Management and Water Efficiency (IWRM/WE) Plan 2008-2012 with funding from Global		
		Water Partnership and CIDA		
2008	GOM	Development of a National Biomass Energy Strategy (BEST) Malawi; Country Malawi Project Partner Ministry of Mines and the		
		Department of Energy Affairs (DoE) Malawi, Project Manager Ray Holland, Term January 2008 – August 2008		
2009	GoM	The Malawi Growth and Development Strategy - Annual Review		
2009	GOM/MAFS	The National Contract Farming Strategy For Malawi: Promoting organised viable farming – Final Draft, July 2009		
2009	GoM/MAF	The National Contract Farming Strategy For Malawi: Promoting organised viable farming		
2010	GoM/MAF	The Agriculture Sector Wide Approach (ASWAp)		
2010	GoM/MAF	Guide to Agricultural Production and Natural Resources Management		
2010	GoM	Government of Malawi Green Belt Initiative		
2010	GoM/ National	Monthly Statistical Bulletin - February 2010		
	Statistical Office			
2010	GoM/Kkhotakota	Nkhotakota District Socio-economic Profile (only paper copy)		
	District			
2010	GoM/DEA	Environmental Compliance Inspection Report - 8 July 2010		
	Donors			
??	ADB	Appraisal Report for Smallholder Outgrower Sugarcane Production Project		
??	ADB	Completion Report for Smallholder Outgrower Sugarcane Production Project		
??	ADB	Appraisal Report for the new Smallholder Irrigation Project		
??	ADB	Agricultural Infrastructure Support Project		
2005	Unicef	Technical Study into the Possibility of Fortifying Sugar at Illovo Factories In Malawi, Phillip Makhumula, Food Fortification Advisor		
		with MOST/USAID Micronutrient Program		
2007	UNDP	Country Programme Action Plan for 2008 to 2011		
		Agreed By The Government Of Malawi And The United Nations Development Programme		
2008	WB/MAF	Contract Farming in Malawi, Draft Report, by Kadale Consultants - Jason Agar/Peter Chiligo		
2008	AfDB	Thirty Years of Fruitful Cooperation		

YEAR	AUTHOR (s)	TITLE		
	NGOs			
2006	ActionAid	Climate change and Smallholder Farmers in Malawi: Understanding poor people's experiences in climate change adaptation		
2009	Oxfam	The winds of change: climate change, poverty and the environment in Malawi		
2009	Concern Universal	Annex A: Application Form (= Revised TOR for Sugar Sector Capacity Building Programme)		
2010	Concern Universal	Semi-annual Progress Report for Sugar Sector Capacity Building Programme August/September 2010		
2010	Concern Universal	Questionnaire for Sugar Out-growers Household Income Survey		
	Private Sector and			
	Other			
1998	SVCGT	Trust Deed for the Registered Trustees of the Shire Valley Cane Growers Trust (SVCGT)		
1999	DCGT	Trust Deed for the Dwangwa Cane Grower Trust (DCGT)		
	Agricane	Various documents on Kasinthula Phase 1, 2, and 3; Kaombe Trust Farm; cooperation with Concern		
2000	J. Gómez and O.	Effects of Vinasse on Sugarcane (Saccharum Officinarum) Productivity		
	Rodríguez			
2002	University of Durham	The Malawi Sugar Sector Value Chain		
2004	Illovo Sugar (Malawi) Ltd	The Sugar Market Outlook		
2007	University of Malawi/	Introduction To Environmental Law In Malawi – By Gracian Zibelu Banda and Thoko James Ngwira, Faculty of Law		
2000	Chancellor College Geoff Mkandawire	Drief Depart on the Ctudy Visit to Zembia on Vitamia A		
2008	Geoff Mkandawire	Brief Report on the Study Visit to Zambia on Vitamin A		
2008	???	Report on the Study Visit to Guatemala on Vitamin A Preparing Fortified Sugars at Illovo Sugar Plant, Limbe. Fortification Team: Unicef (Phillip Makhumula) – Team Leader; Illovo		
2008	111	Sugar Company (Mr Casper Pretorius & Willy Simukonda); Malawi Bureau of Standards (Mr Daniel Mwalwayo); Chancellor College		
		Chemistry Laboratory (Dr Samson Sajidu & Maurice Monjerezi)		
2008	CARD, Bunda	Irrigation Development in Malawi - Determining the major factors that have led to slow development of Irrigation, Final Report,		
	College	September – by Kenneth Wiyo and Jean Mthethiwa		
2010	Illovo Sugar (Malawi)	Annual Report 2010		
	Ltd	·		
??	Illovo/Nchalo Sugar	Molasses and Alcohol Production Figures		
	Mill			
2010	DCGT	Kasitu Interim Report (Progress Report) covering the period July 22, 2009 - May 15, 2010		
2010	SVCGT	Kasinthula III Interim Narrative Report (Progress Report) covering the period 24th March 2009 to 27th July 2010		
2010	DCGT	Trust Deed for the Dwangwa Cane Grower Trust (DCGT) – proposed or agreed?		
2006	Grolink / Agro Eco	Out-grower System through contract farming, Zambia - Edwin N. Abwino and Haike Rieks, August 2006		
2006	German Develop-	Outgrowers – a key to the development of rural areas in Sub-Saharan Africa and to poverty reduction - Report of the DEG / DIE		
	ment Institute	Workshop, August 18, 2006 edited by Michael Brüntrup		

A4 Curricula Vitae of the Consultants

Family name: Pagett
 First names: Richard

3. Date of birth: 26 February 1953

4. Nationality: British

5. Education:

Institution [Date from - Date to]	Degree(s) or Diploma(s) obtained:		
University of London 1975 – 1978	Ph.D. [Ecology, Chemistry and Physiology]		
University of London 1972 – 1975	BSc (Hons) Zoology, Upper Second		

6. Language Skills: Indicate competence on a scale of 1 to 5 (1 - excellent; 5 - basic)

Language	Reading	Speaking	Writing
English (mother tongue)	1	1	1
French	3	4	4
Russian	4	4	4
Arabic	5	4	5

7. Membership of Professional Bodies:

Institute of Environmental Management and Assessment: *Registered Assessor;* Environmental Auditors Registration Association: *Registered Environmental Auditor*; Chartered Institution of Water and Environmental Management: *Chartered Scientist (CSci); Chartered Environmentalist (CEnv)* Energy Institute: *Member;* Institute of Biology: Chartered Biologist (CBiol) European Professional Biologist Association: *Eur ProBiol;* Society for the Environment: *Approved Auditor;* Science Council: *Approved Auditor*

8. Other Skills:

Computer Literacy: Office Suite (Word, Excel, PowerPoint, Publisher, Access, Front Page) HTML
Technical Courses: University of Bradford (1988): Flow and Water Quality Modelling

WS Atkins (1993): Internal Quality Auditing
Det Norske Veritas (1997): Certification of EMS

9. Present position: Independent

10. Years within firm: 30: Corporate (15) Independent (15)

11. Key Qualifications

- BSc and PhD in topics related to environmental management, natural resources, and sustainable
 development with more than 30 years of practical experience in management of environmental
 issues, including institutional aspects, socio-economic aspects, international environmental policies and
 management, EIA/SEA techniques (including for sugar sector) many related issues in more than 90
 countries (including many ACP countries; many in Africa and some in Southern Africa including:
 Botswana, Namibia, Tanzania and Mauritius
- Provided three-year, due diligence pre and post implementation of an SEA for the paper and pulp sector (Uruguay) a one-year, SEA for the tourism sector (Egypt) and an SEA for roads (Burkina Faso)
- Was Team Leader/Environment for two SEAs for the Sugar Industry: Belize in 2009; Fiji (2010)
- Have a good understanding of the sugar industry, the EU sugar reform process and the Accompanying Measures for Sugar Protocol
- Very familiar with sub-Saharan African agriculture and issues of market access
- Expertise in impacts (negative/positive) related to bagasse, ethanol, vinasse and other aspects specifically within a sugar sector context
- Deep experience of EIA, ESIA, ESHIA and associated environmental management plans, with monitoring to various standards (World Bank/IFC Performance Standards, Equator Principles) etc for 20+ years
- Have been involved in all stages of EC PCM including, project fiche development, drafting of ToRs, project formulation, financing proposals, monitoring and mid-term and post- project evaluation, Country Environmental Profiles, Country Strategy Papers, and Regional Environmental Profiles including specific experience of 7th 10th EDF; various modalities (general/sector and project budget support)

12. Regional Experience:

Country	Date from - Date to	Country	Date from - Date to
Algeria	Sep 05	Mauritania	Dec 08
Benin	Jun 07	Mauritius	Nov 91, Mar- Apr 99
Botswana	Apr - May 92	Morocco	Oct 05
Burkina Faso	Jun-Jul 07, Jan-Feb, May, Jul, Sep, Nov 08, Jan, Feb, Jun 09, Nov 09, May 10	Namibia	Oct 08
Ethiopia	Mar 07	Tanzania	Jun 04
Ghana	Mar 05, Sep 05, Jun 06	Uganda	Jun 04, Oct 05, Apr 10
Kenya	Jul 04, Mar 07	Nimaria	Oct – Dec 00, Jan-May 01, May, Jul, Nov, Dec 02, Feb, Apr-Aug, Oct 03, Apr, Oct 04, Apr, Nov-Dec
Liberia	Jun 08	Nigeria	05, Jan – Apr, Sep-Oct, Nov–Dec 06, Jan, Feb, Jul,
Libya	Dec 90, May 91, Dec 03		Aug Sep 07, Apr - May, Jun-Aug 08, Jul -Sep 09,
Mali	Jun 07		Oct 09, Apr – May 10

1. Family name: Heim

2. First names: Claudia Gabriele

3. Date of birth: 19564. Nationality: Danish

5. Education:

Institution	Degree(s) or Diploma(s) obtained:
[Date from - Date to]	
Roskilde University, Denmark, 1985-1992	MSc (Cand. Scient. Soc.) in International Development Studies and Public Administration
University of Konstanz, Germany, 1976-1979	BSc (Zwischenprüfung) in Sociology and Psychology

6. Language skills: Indicate competence on a scale of 1 to 5 (1 - excellent; 5 - basic)

Language	Reading	Speaking	Writing
German	Mother tongue		
Danish	1	1	1
English	1	1	1

7. Membership of professional bodies:

Danish Association for International Cooperation (MS)
Danish Association for Economists and Lawyers (djøf)
Society for Third World Issues/Danish Engineers' Association (IDA)

8. Other skills: (Computer literacy, etc.): Microsoft Office (incl. PowerPoint, Publisher), MS Project

9. Present position: Freelance consultant10. Years within the firm: own company

11. Key qualifications: (Relevant to the project)

Ms. Claudia Heim has extensive professional experience in a wide range of fields and sectors gained on short and long term assignments in Africa (including Malawi and other SA countries) and Asia through participation in multi-disciplinary teams as well as holding team leader positions. She is experienced in conducting Environmental and Social Impact Assessments (ESIAS), social safeguard compliance assessments and resettlement planning as integral parts of preparation and feasibility studies of infrastructure projects (harbour construction, rehabilitation of trunk and feeder roads and river flow augmentation and stabilisation). In line with international best practices for ESIAs, her preferred tools for data collection and analysis have been qualitative, comprising participatory rural appraisal and stakeholder consultation workshops. Likewise, analysing the effects of planned infrastructure interventions - and developing appropriate mitigations measures - on vulnerable groups, gender equality, and HIV/AIDS have been compulsory parts of all assessments. Ms Heim has also extensively worked with these and other crosscutting issues in the water and sanitation sector.

12. Specific experience in non-EU member countries/relevant African region:

Country	Date from - Date to	Country	Date from - Date to
Ethiopia	2004, 2003	Sudan	2006/7
Malawi	2002, 2001	Tanzania	2005, 2004, 1996-2000
Uganda	2005, 2004, 2002, 2001, 2000	Zambia	2007-2009, 2004

Agronomist

Family name: Koech
 First names: Richard

Kipsang

3. Date of birth: 29/09/19624. Passport holder of: Kenya

5. Residence: Kenya

6. Education:

Institution	Degree(s) or Diploma(s) obtained:	
[Date from - Date to]		
University of Nairobi (1983 - 1986)	BSc (Hons) Agricultural Engineering	

7. Language skills: Indicate competence on a scale of 1 to 5 (1 - excellent; 5 - basic)

Language	Reading	Speaking	Writing
English	1	1	1
Kiswahili	1	1	1

- 8. Membership of professional bodies: N/A
- 9. Other skills: Knowledge of use of standard computer software (Word, Excel; PowerPoint, etc.); excellent negotiation and analytical skills
- 10. Present position: Agriculture/Rural Development Consultant
- 11. Years within the firm: N/A
- 12. Key qualifications:
 - Bachelor degree in agricultural engineering with more than 15 years of professional experience in agricultural development and food security programmes including in Southern Africa;
 - Experience in the design, operation, maintenance and management of smallholder irrigation schemes in the Eastern and Southern African region;
 - More than 15 years of experience in the field of agriculture primary production, agricultural marketing, rural infrastructure and irrigation issues in Eastern and Southern Africa;
 - Experience in conducting **feasibility studies** including of institutional and cost-benefit analysis;
 - Experience in participatory programme evaluation including project cycle management;
 - Familiar with agricultural production and livelihood systems;
 - Fluency in both spoken and written English;
 - Experience in successfully **mainstreaming cross-cutting issues** such as environment, climate change, income generating activities, gender and HIV / AIDS.

13. Specific experience in the region:

Country	Date from - Date to
Malawi	2008-2010
Swaziland	2008;2009
Kenya	1987-2009
Mozambique Tanzania Zambia Zimbabwe	2009

A5 Terms of Reference for the SEA

LOT N° 6: SPECIFIC TERMS OF REFERENCE

A STRATEGIC ENVIRONMENTAL ASSESSMENT OF THE SUGAR SECTOR IN MALAWI

1. Background

1.1 Country background

Malawi has a population of approximately 13.1⁴¹ million of which 52.4 percent live below the poverty line⁴². It ranks 160 out of 182 counties on the 2009 Human Development Index with a GNI per capita of US\$ 288 in 2009⁴³. Malawi covers an area of 118 500 km² and is one of the most densely populated countries in sub-Saharan Africa with an average land holding of 0.8 of a hectare per household.

Agriculture is not only the backbone of Malawi's economy but also an essential part of its social fabric, estimated to employ 87% of the population and accounting for about 36% of GDP⁴⁴; 90% of foreign exchange earnings, of which tobacco accounts for 65%. Recent statistics demonstrate that Malawi's agricultural exports are limited to a small number of export commodities, of these main selected export commodities tobacco accounts for 82% of the value, sugar 8%, tea 5.1%, cotton 3%, nuts 1.5% and pulses, rice, coffee and skins and hides accounting for the remaining amounts⁴⁵. Generally agricultural productivity is low, primarily due to dependence on rain-fed agriculture, declining soil fertility, and a lack of inputs. The majority of smallholders practice subsistence agriculture rather than considering farming as a business. The status quo is exacerbated by weak links to markets and limited access to extension services, land and credit.

However, large maize surpluses in recent years, due to favourable climatic conditions and the GoM/development partners input subsidy scheme have helped raise real GDP by 8.9% in 2008⁴⁶. Despite the encouraging macro economic situation poverty in Malawi continues to be endemic, particularly in rural areas, and food security is far from assured. Livelihoods are brittle with few coping mechanisms or assets to mitigate the impacts of any exogenous shocks. The situation is further compounded by malnutrition, and high HIV/AIDS and malaria infection rates. Furthermore, Malawi's environment continues to be degraded. Given that more than 89% of households depend on income derived, wholly or in part, from the exploitation of the natural resource base – be it through farming, fishing or other activities – this degradation implies negative consequences on future household incomes unless it is addressed. Land degradation, deforestation, and depletion of fishery resources are key problems with significant negative effects for the incomes and livelihoods of the poorest households.

Women in rural areas often bear the heaviest burden from degraded environments or loss of resources, having the major responsibility for agricultural work, collecting firewood and water. Rapid deforestation poses a severe threat to the livelihoods of the poor in Malawi. The growing demand for wood fuel from an increasing population is one of several important causes of deforestation, firewood and charcoal provides 93% of all energy needs⁴⁷ with household consumption estimated to be 7.5 million tons annually, a figure which exceeds sustainable supply by over 3.7 million tons per annum⁴⁸. Over a 20-year period (1972-1992) Malawi's forest resources were reduced by more than half (57%) of their size, with an estimated annual deforestation rate of 2,8 % a figure which remains constant today and is three times greater than the Pan- African

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^{41 13,066,320} Source :2008 Population and Housing Census, National Statistics Office, Malawi

⁴² Source: MGDS, 2005.

Source : Enterprise Survey

Source: World Bank, 2008

Source: Kadale Consultants/World Bank, 2009

Source: World Bank, 2008

⁴⁷ Source: UNDP, 2002, FAO 2004.

⁴⁸ Source: UNDP, 2002

average⁴⁹. The situation is gravest in Malawi's southern region, which is the most densely populated. Malawi's energy balance is heavily biased towards wood fuel (93%) with petroleum, electricity, coal and other biomass accounting for only 3.5%, 2.3%, 1% and 0.2% respectively Only 2% of the population utilise electricity for cooking, a further 11% use charcoal and the remainder use firewood⁵⁰. Even in urban areas only 11% use electricity for cooking. Although the number of households using electricity as a main source of lighting has increased from 6% in 2005 to 9% in 2008, the percentage remains extremely low with only 3% of the rural population and 40% of the urban population using electricity for lighting⁵¹. The Government of Malawi recognises, through its National Environmental Policy (NEP), the need to increase the supply of sustainable energy sources.

Malawi has a rich natural capital resource base which with improved resource management and sustainable programmes implemented through the introduction of appropriate technology, there is potential for considerable sustainable growth to the economy. However, the current degradation of crucial renewable resources, does not only have vast negative effects on poverty, but also have profound negative implications for economic growth and development. Rural development and increased agricultural productivity lie at the heart of Malawi's strategy for sustainable development. Parallel leading to an urgent need to develop the resource availability and economic livelihoods of the smallholder and subsistence farmer as well as the peri-urban and urban SME and MSME to sustain the growing population. Agricultural performance has however been poor with almost no growth, affecting both smallholders and large- and medium sized estates. Compounded by erratic rainfall, occasional droughts and floods, environmental factors play a key role in the performance of the agricultural sector. Land degradation, and soil erosion in particular, poses one of the most serious threats to sustained food production. Fertilisers and other inputs cannot fully compensate yield losses caused by soil erosion and are in many cases beyond the economic means of most of the rural population.

1.1. Background to sugar sector in Malawi

Although Malawi is considered a world class producer of sugar, having low cost production, excellent cane growing conditions and abundant water resources, the sector has a number of challenges which need to be overcome if the sector is to realise its full potential. The challenges include high transportation costs, limited land available for cane growing, low yields and poor management on the part of smallholder growers, shortages of foreign exchange and electricity, the high cost of electricity, and costly imported agricultural inputs including fertilisers, chemicals and lime. The Malawi Growth and Development Strategy (MGDS) highlights sugar as one of three core sub sectors in terms of revenue, GDP, employment and foreign exchange earnings and looks to maximise the performance of the sugar sector in the short to medium term. The MGDS recognises sugar's importance not only in terms of agricultural production, but also in agro processing, and identifies sugar as a means of reducing Malawi's dependency on tobacco. The Government of Malawi also recognises the important role that the sugar industry can play in increasing the capacity of the energy sector to meet demand for electricity and reduce dependency on unsustainable and environmentally damaging fuel sources. More recent statistics indicate that the sugar contribution to the GDP is 8%, which in 2009 equated to approximately €160.5 nillion, of which the contribution to foreign exchange earnings was valued at in excess of €38 million, making sugar the second largest earner of foreign exchange as well as being the second largest employer in the country, after Government. .

The Malawi agricultural sector is characterised by a few commercial estates and a large small holder sector which is engaged in subsistence and cash crop production. The MGDS perceives low productivity to be a result of reliance on rain fed agriculture, a lack of skilled personnel and an ineffective extensions service. In turn, low productivity is compounded by poor or missing markets,

⁴⁹ Source: FAO, 2004

Source: NSO, 2008 Malawi Social Welfare Survey

Source: NSO, 2008 Malawi Social Welfare Survey

⁵² Source: GoM, 2002

a problem overcome by the sugar sector. In response, the MGDS looks to increase the availability of inputs and extension to the small holders in order to increase productivity and create linkages between smallholders and large export oriented processors. The Government of Malawi recognises the potential use of the downstream by-products from the process of sugar manufacture as a potential route to developing sustainable replacement products for the high cost imported agricultural inputs.

The sugar industry produces a number of valuable downstream products for example molasses, ethanol and vinasse, which currently are not utilised to their full capacity and offer a number of opportunities for further economic and environmental benefit to all stakeholders within the industry and to the nation at large.

Owing particularly to the widening of preferential export markets in the EU under the EBA scheme and in the region under COMESA and SADC trade arrangements, Illovo Sugar Malawi, the main player in the industry, is currently considering and discussing with various stakeholders, including the Government, the possibility of expanding its investment in the country. If the potential of expanded production were realised, it could contribute significantly to the achievement of Government objectives regarding the Greenbelt Initiative, transforming the country into an exportled economy (as sugar exports would more than double), increasing power generation, and enhancing rural development.

1.2. Changes in the EU Sugar Regime and resulting mitigating measures

Following a decision to align the production and marketing of sugar with the rules of the multilateral trading system of the WTO, the EU in June 2005 announced substantial reforms to the sugar regime of the Common Agricultural Policy. The reforms currently underway are having considerable impacts on sugar producing countries, particularly the ACP members of the Sugar Protocol, which includes Malawi. The reforms, including the phasing out of subsidies and the accelerated elimination of quotas and import tariffs for Least Developed Countries, will bring about challenges and opportunities.

In response to the changes in the former sugar regime announced by the European Commission in June 2005, Malawi developed a National Adaptation Strategy (NAS) to maximise the opportunities available through the changes. The overarching objectives of the NAS are twofold:

- 1) To increase cane production and factory output (quantitative objective)
- 2) To increase production through efficiency gains in both the field and factory operations (qualitative objective).

In turn the EU has developed a Multi Annual Support Strategy for Malawi covering 2006-2013 in order to support, where appropriate and possible, the measures outlined in the NAS so that Malawi could capitalise on its comparative advantage of low-cost sugar production. To date an amount of 10.578M€ has been allocated to Malawi from the EU Sugar Budget Line for the period 2006-2010 to support achieving the objectives set out in the NAS and EU support strategy. A Multi Annual Support Strategy (MIP) for Malawi for period 2011-2013 is currently being programmed.

1.3. Development of the sugar industry

The sugar industry in Malawi is about to embark on a significant expansion programme to increase sugar production and diversify into energy production and utilisation of the downstream products. The expansion in the Northern Central region, at Dwangwa Sugar Corporation (DSC), due in 2014 - 2015 will predominantly be supported with cane produced by smallholders at Dwangwa Cane Growers Trust (DCGT). DCGT have been assisted financially by the EU and AfDB to expand their irrigated smallholder sugar schemes and to maintain their feeder road network. The major expansion of the industry will occur at the Nchalo estate (SUCOMA) in the Southern region, this expansion will be supported through a number of new developments and cane land expansions including smallholder, estate and community farm developments. The EU has also supported the expansion of the Shire Valley Cane Growers Trust irrigated smallholder scheme supplying to the

Nchalo mill. The EU has made available a fund for the development of new or expansion of existing smallholder sugar cane schemes to support the growth of this important national industry. The EU is also supporting capacity building of the smallholders and their management organisations to maximise the development and income generating opportunities available to the rural communities surrounding the factories and estates.

Many of the activities to be undertaken through the Sugar Accompanying Measures (SAM) Multi Annual Support Strategy for Malawi have the potential to affect the environment, in a negative or positive manner. A number of the initiatives have the opportunity to address the environmental sustainability of the industry and assist in the sustainability of the development of the agriculture sector and the nation at large. An SEA is specifically planned to evaluate possible positive and negative environmental impacts of the activities undertaken through the SAM programme and foresee control measures to optimise the positive and minimise or mitigate the negative.

The SEA conclusions and recommendations will also be fully applicable at the sector level and for the future 2011-2013 MIP for Sugar Protocol Countries.

2. Description of the Assignment

2.1. Global objective

The global objective of this assignment is to ensure environmental sustainability of the sector's development through the expansion of the sugar industry and the development of downstream products. In turn this will contribute to the alleviation of poverty amongst, in particular, new and existing out-growers and to the economic growth of the nation.

2.2. Specific Objectives

The objective of this SEA is to describe, identify and assess the likely significant effects that the SAM initiatives may have on the environment. It will also assess the degree to which the initiatives address the major environmental sustainability challenges in the sector. The SEA will provide recommendations at a strategic level on how potential negative effects can be minimised and how positive effects can be optimised. Findings and recommendations will be taken into consideration for the implementation current and future MIPs. The SEA will provide decision-makers in Malawi, the EU and other Development Partners (DPs) with relevant information to assess the environmental challenges and considerations with regards to the NAS, the implementation of the MIP 2007-2010 as well as the design and implementation of the MIP 2011-2013. It is anticipated that the findings of the SEA will also influence policy development in the sugar sector and the formation of a regulatory framework. This information should help to ensure that environmental concerns are appropriately integrated in all sector decision-making, implementation and monitoring processes. The final recommendations must be practical and achievable.

2.3. Request for services including methodology:

On the basis of a secondary information analysis, as well as stakeholder consultations, the consultants must identify the key environmental issues in the sugar sector, as well as key potential environmental impacts of SAM implementation. These aspects should be addressed in detail in the SEA study. Specific aspects to be explored include: water management (water availability and water use efficiency), water pollution from use of agrochemical products, soil conservation/erosion, alternative land uses, waste water discharges, atmospheric pollution (stack emissions and cane burning), management of vinasse from ethanol production; biodiversity, clean energy production technologies (bagasse based electricity co-generation, ethanol production, fuel gel production), and expected effects of climate change. The two irrigated smallholder sugar expansion projects funded through the current MIP each included detailed EIAs for their activities. The current MIP will also undertake a study of the downstream products potential and bio-fuel potential of the industry at the

same time as this study, which will provide data and support for this section. The two teams will be expected to work closely together. The SEA study will include:

- 2.3.1. Overview of the sector programme and its institutional and legislative framework: The consultants must provide a general description of the SAM in relation to its institutional and legislative framework including the institutions responsible for the implementation of the SAM initiatives, for the management of its environmental impacts and for the SEA process. The description must include a general description of the relevant environmental and sectoral policy, legislation and institutions. As the sugar sector, in the context of this SEA, covers field operations, sugar cane processing, energy production, ethanol production and the production of other downstream products; the review of institutional and legal framework should address these sub-sectors. The specific policy-making and planning decisions and processes that should/could be influenced by the SEA must be identified. An overview must also be given of the wider policy framework related to the sector programme in order to identify other planning or policy documents which will need to be explored in the study. The National Energy Policy (NEP) is of particular relevance as well as any regulatory documentation that may be developed to support its implementation. It is recommended that the consultants also examines recent sugar sector EIAs to familiarise themselves with current field issues. The current MIP has undertaken a 'Regulatory Framework review' which will assist in this description.
- 2.3.2 Description of key stakeholders and their concerns: The involvement of stakeholders in the SEA process is a key success factor. The consultants should identify key stakeholders (key groups and institutions, environmental agencies, NGOs, representatives of the public, private sector), including those groups potentially affected by the likely environmental impacts of implementing the current and future MIPs. Particular emphasis should be given to all the actors along the sugar value chain. Based on a review of stakeholder discussions historically undertaken and on a stakeholder analysis, they should propose a gender-balanced list of stakeholders to be engaged. The consultants should arrange an initial introductory discussion forum to enable them to identify key stakeholders' concerns and values with respect to the SAM. The ongoing stakeholder engagement strategy to be employed has to be agreed with the EU and the Sugar Steering Committee before being implemented in order to avoid unnecessary conflicts or raise expectations. The strategy should provide stakeholders an opportunity to influence decisions. NB. The Sugar Steering Committee consists of NAO, Ministry of Agriculture and Food Security, Ministry of Industry and Trade, Dwangwa Cane Growers Trust, Shire Valley Cane Growers Trust, Illovo, Ethanol companies, African Development Bank, Sugar Coordinator and EU Delegation.
- 2.3.3 Development of an environmental baseline study: The environmental baseline must provide a general description of the state of the environment and a more detailed description of the key issues identified through the stakeholder discussion forum and secondary information analysis. The consultants will give particular attention to the existing sugarcane cultivation areas as well as to the new potential areas. The information and data needed to complete the environmental baseline (including associated pressures and trends) can predominantly be found within existing documentation through the EU Delegation and industry sources. A description and appraisal must be made of the current state of the environment in relation to the sugar sector, focusing on those key environmental and social components identified by the secondary information analysis and stakeholder dialogue (but giving also a general account of other non-key factors). The pressures acting on the key environmental aspects must be identified as well as the trends, and a projection must be made of the state of the environment for the key issues on the short-, medium- and longterm in the assumption of a 'business as usual' implementation methodology scenario. External factors must be taken into account, including the influence of other sectoral policies, the potential effects of climate change and the introduction of market driven industry sustainability initiatives such as the Better Sugarcane Initiative. The geographical (or mapping) units to be addressed should

be described, if relevant. The existing farming arrangements for both estate and smallholder including land ownership, labour provision, access to water, farm inputs and markets should also be appraised with a view towards redressing inconsistencies and inequalities and promoting a move towards a more environmentally friendly and sustainable production practice.

2.3.4 Identification and evaluation of environmental impacts, opportunities and constraints:

The effects of the current state of the environment (especially with regards to the key environmental issues identified) on the effectiveness, efficiency and sustainability of the sugar sector and the current and proposed MIP initiatives must be described. An analysis must be made of the degree to which the MIPs and associated initiatives address these issues, i.e. foreseeing and addressing negative environmental aspects that affect the sector and making optimal use of opportunities offered by the environment to enhance sector performance. A matrix approach is suggested to illustrate the findings, indicating the environmental factors and resources; the positive and negative impacts and degrees of significance; and the programme assessment variables. The analysis should consider the expansion plans of the industry and review the environmental implications of the plans to correlate the anticipated impact to the human and ecosystem health.

The potential environmental impacts and risks from implementing the MIPs must be identified and described, taking into account the views and concerns of stakeholders. Their significance should be determined according to their characteristics (e.g. duration, probability, magnitude, mitigability, reversibility) and the sensitivity of the environment. Attention must be given to the effects that SAM may have on exacerbating existing negative trends, as well as other potential impacts. Those significant impacts should be assessed in detail taking into account; the views and concerns of stakeholders; the consistency with international environmental commitments; the socio-economic consequences (especially on vulnerable groups and ethnic minorities); compliance with environmental regulations and standards; consistency with environmental objectives and policies; and their implications for sustainable development objectives. It is suggested that a matrix is used to illustrate the findings, showing which SAM components have an effect on which environmental aspects, and the significance of such impacts.

2.3.5 Analysis of performance indicators: The performance indicators proposed by the MIP 2007-2010 and proposed MIP 2011-2013 should be assessed and recommendations for their revision should be made where necessary from an environmental perspective, i.e. their usefulness to identify the environmental effects (positive and negative) of sector programme implementation. Also existing (environmental or not) indicators should be analysed to ensure that they do not for promote negative environmental impacts. **Proposals** should be made development/improvement of the SAM performance indicators and monitoring system. The set of indicators will be based on the baseline and be Specific, Measurable, Affordable, Realistic and Timely. It may include: "pressure" indicators⁵³; "state" indicators, for sectors with a direct and major link with key environmental resources (e.g. river natural resources, soil for agriculture, forest resources for forestry)⁵⁴; indicators of other specific issues, such as key institutional weaknesses identified by the SEA⁵⁵. Consultants should give an indication of how recommended indicators may be applied, including information/data needed to apply the indicators, the sources where it may be obtained, and an indication of possible costs; and other resources needed to apply the indicator (e.g. specific equipment or technical capacities). This should feed into/link with the M&E system of the sugar sector. Consultants should also be aware of, and link where possible, their indicators with the Malawi Growth and Development Strategy and the ASWAp results framework.

⁵³ For example: pesticide use in a given area; hectares of forest cleared.

 $^{^{\}rm 54}$ For example: % of groundwater samples meeting quality standards

⁵⁵ For example: number of annual environmental inspections carried out by local authorities in industrial facilities.

- **2.3.6** Assessment of the capacities to address environmental challenges: The consultants will assess the adequacy of institutional structures and capacities, of the regulatory framework, financial and human resources to address the key environmental concerns associated to SAM implementation and the sugar sector.
- **2.3.7 Risks, assumptions and other limitations to the SEA:** The Consultant will identify the risks and other limitations, and assumptions that have influenced the orientation and/or effectiveness of the SEA study.
- **2.3.8 Conclusions and recommendations:** This chapter will summarise the key environmental issues for the sector, including policy, institutional and regulatory constraints, challenges and main recommendations. Recommendations should be prioritised and clearly addressed to the responsible stakeholders. The recommendations should include industry and community level recommendations and recommendations to the Sugar Steering committee and EU delegation for future program planning purposes. The limitations of the SEA and its assumptions should be presented. The recommendations should take into account the views presented by the stakeholders and explain how these were integrated. In the case of concerns that were not integrated in the final recommendations, the reasons should be given. The findings of the SEA will be presented in a workshop to all relevant stakeholders. The recommendations are to be pragmatic and achievable.

2.4. **Required outputs:**

The outputs of this assignment are expected to be:

- 2.4.1. A full detailed SEA including all areas discussed in point 2.3; (95% of the output)
- 2.4.2. A stakeholder workshop towards the end of the assignment after submission of the draft report to present findings and recommendations and receive stakeholder feedback for incorporation into the final report. (5% of the output)

3. Experts Profile

The requested services are for a three person team. The team should ideally be made up of the following:

- Team Leader Environmental Expert
- Agronomist
- Socio-economist

The experts must be from EU 27 (contributing to 9th EDF) or ACP countries.

3.1. Profile required

Qualifications and skills:

Team Leader – Environmental Expert

- Master's degree or equivalent in environment or natural resource management or any other relevant field;
- Extensive and relevant postgraduate experience (at least 10 years), including experience in conducting SEAs and/or similar environmental assessment assignments in the past 5 years;
- Demonstrated experience as a team leader;
- Conversant with the EU project cycle management and aid delivery methodologies including sector support programmes;
- Demonstrated experience with the financial and monitoring implications of environmental sector policies and regulations.
- Experience of private sector agricultural development
- Experience in Southern Africa.

Agronomist

- Relevant academic qualification in agricultural economics, rural development or a related field of study;
- Relevant recent experience (at least 10 years) with the sugar industry and its agronomic, processing and labour characteristics and requirements;
- Practical recent experience in Environmental Impact Assessment.
- Knowledge of and recent experience in the Malawian Sugar Industry.

Socio-economist

- Relevant academic qualification in socio-economic or related field of study;
- Demonstrated experience (at least 10 years) in participatory rural appraisal and stakeholder consultation, including organisation of workshops;
- Experience in the last 5 years in HIV/AIDS and gender;
- Experience in migration and resettlement issues is an advantage;
- Relevant experience with environmental stakeholder consultations is an advantage.

General and specific professional experience

Each expert shall have:

- At least 10 years of relevant experience in their relevant domains;
- Previous practical experience of undertaking SEAs;
- Experience in the country and sector concerned is an asset, as well as knowledge of EU procedures;
- Experience within Southern Africa.

An investigation into the potential of the Malawi Sugar Industry By-Products will be undertaken during the same period and the experts are expected to work closely together to ensure synergies and a global knowledge and understanding of the sector.

This contract will be **a global price** contract so the proposed team composition is a suggestion and an alternative team composition may be proposed and additional skills support can be inserted into the team to provide maximum team effectiveness.

3.2 Working language(s)

Fluency in English is compulsory (writing, speaking and reading). Spoken Chichewa would be an advantage.

4. Location and duration

4.1 Starting period

Starting period: 2 August 2010. The assignment shall run for approximately 45 calendar days.

4.2 Location(s)

The team shall be based in Lilongwe with field visits to Blantyre and the sugar producing areas in Chikhwawa and Nkhotakota as deemed necessary.

Reporting

The language of all studies and reports shall be English and the team shall submit the following reports:

An inception report of about 5 pages expressing the consultants' understanding of the
assignment that will guide the operationalisation of the assignment, within five days of
commencement of the project;

- Draft final reports submitted to NAO and EU Delegation prior to the debriefing stakeholder workshop 1 week before the end of the country assignment;
- A final report (three hard and bound copies and an electronic version of the report) completed after the workshop and submitted before completion of country assignment, including an executive summary, of not more than 15 pages.

In the event that request for revision is made by the NAO or the EU Delegation, the Consultant (team leader) will have to organise the incorporation of the comments and re-submit the Final Report within 15 calendar days.

The progress of the study will be followed by Officers designated by the EU Delegation and by the NAO to act as a contact person for the study team.

The designated Officers will have the following functions:

- Organise briefing and debriefing sessions;
- Discuss terms of reference of the proposed work;
- Provide the consultants with initial bibliographic material and information on the project and/or direct them to responsible officers having such information;
- Act as the link and interface between the consultant, the EU Delegation and the NAO;
- Advise on the quality of work done by the consultants, including adherence to work schedule.

The experts will be expected to spend time on site to co-ordinate collection of data and information and can be supported by support staff at headquarters for office work if deemed necessary. The costs of the support staff should fall within the allocated days for the technical experts in the team.

Suggested format sector SEA report

Maximum length of the main report (without appendices): 100 pages.

- 1. Executive summary
- 2. Background
 - 2.1 Sector programme justification and purpose
 - 2.2 Changes in the EU Sugar regime and resulting mitigating measures
- 3. Approach and methodology
 - 3.1 General approach
 - 3.2 Environmental policy, legislative and planning framework
 - 3.3 Assumptions, uncertainties and constraints
- 4. Impact identification and evaluation
- 5. Environmental Baseline Study
- 6. Analysis of alternatives
- 7. Mitigation or optimising measures
- 8. Indicators and institutional capacities
- 9. Conclusions and recommendations for sector programme enhancement
- 10. Technical appendices
 - Maps and other illustrative information not incorporated into the main report
 - Other technical information and data, as required
 - List of stakeholders consulted/engaged
 - Records of stakeholders' participation workshop

11. Other appendices

- Study methodology/work plan (2–4 pages)
- Consultants' itinerary (1–2 pages)
- List of documentation consulted (1–2 pages)
- Terms of Reference for the SEA