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**ESSENTIAL ACTIONS TO MEET QUALITY REQUIREMENTS
OF HIDES, SKINS AND SEMI-PROCESSED LEATHER
FROM AFRICA**

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Summary and Recommendations

Background and Objectives of the Study

Livestock products – meat, milk, eggs, wool, hides and skins – on average account for 28% of agricultural gross domestic product (GDP) of sub-Saharan African countries, with wide variation between countries. Hides and skins account for a significant portion of the value of livestock output and for some countries it is an important source of foreign exchange earning. However, it is generally observed that the full potential of hides and skins as a product is not realised in most countries because of several reasons, the most important being low quality of the product produced with consequent poor demand in both domestic manufacturing industries and in the export market.

In order to have a better understanding of the problems of hides and skins production, marketing and trade in Africa, the Common Fund for Commodities (CFC) sponsored this study to undertake case studies in selected countries to make a rapid assessment of the factors contributing to poor quality of hides and skins produced and suggest possible actions for improving quality to meet the needs of domestic and export markets. The needs of the importing countries will be determined by a similar study in selected countries. The specific objectives of this study are:

- 1) To identify issues of animal husbandry including herd and disease management, feed quality and availability, which affect quality of hides and skins.
- 2) To identify issues related to slaughtering and flaying techniques, practices and facilities (organized slaughter houses vs scattered slaughtering), which cause damage to hides and skins.
- 3) To identify issues related to techniques and procedures used at various stages in the processing chain from slaughtering to finished products that affect quality.
- 4) To identify issues related to organization of slaughterhouses and butcheries, regulations and policies for management of slaughterhouses and butcheries that affect quality.
- 5) To identify issues related to pricing system of hides and skins that affect quality.
- 6) To identify issues related to marketing and investment infrastructure and environment that affect quality of output.
- 7) To identify issues related to skills and training that may be related to quality.
- 8) Based on the identified issues on various aspects, make appropriate recommendations to alleviate them to meet the needs of the importers.

The case studies have been conducted in Tanzania, Zimbabwe, the Sudan and Senegal. These countries were chosen on the basis of recommendation of the CFC to represent different regions of Africa and different sizes of livestock populations, different economic structure and organization of the hides and skins sector. It is expected that these case studies will provide a general understanding of the nature of the problems, some actions that may be taken in the short-run and also a basis for a more detailed study involving a larger number of countries for identification of more specific problems and solutions.

In conducting the case studies, secondary information were collected through literature search and visiting the selected countries to discuss with key informants, stakeholders, and government officials (slaughter houses, tanneries, leather industry managers and workers;

rural and urban domestic traders in hides in skins; exporters in hides and skins; chamber of commerce representatives; farmers, finance and investment offices; education and training institutions imparting leather technology training; government officials responsible for control and inspection of meat, and hides and skins production, etc).

Factors Influencing Quality

African shares of world hides and skins production are much lower than its share of different species of livestock populations mainly because of low off-take rates, low yields and non-collection of a significant proportion of hides and skins. African hides and skins carry a poor image in the world market because of various constraints found at different stages of the production chain – animal husbandry and disease management, slaughtering facilities and practices, post-slaughter preservation and handling, and tanning and processing techniques and facilities.

Issues related to animal husbandry and disease management

Among the four case study countries, most of the animals in Tanzania, the Sudan and Senegal are local breeds raised in pastoral systems by nomadic and semi-nomadic herders and a small proportion are raised by small-holder crop-livestock mixed farmers. Only in Zimbabwe, there is a large commercial sector raising exotic and high grade cattle alongside a communal smallholder sector raising local cattle and small ruminants. Consequently, except in the commercial sector in Zimbabwe the quality of hides and skins on the live animal is generally poor due to poor nutrition, not culling animals until old age, damages on hides and skins caused by scratches and horn rakes, branding and tick bites and other diseases.

Among these the problems of nutrition, disease management and culling age have to be solved through long-term livestock development strategies for each country. Such strategies should include not only provision of better nutrition and health for improving productivity and quality of products but also promotion of awareness about the benefits of culling animals at optimum age. Branding, a major cause of damage and poor quality of hides, is commonly practiced for providing ethnic identity and protecting animals from theft. It may be possible to minimise damage due to branding through promotional extension education to make people aware of the effects of branding especially on the valuable parts of the hide and persuade them to either avoid branding or put brands on less valuable parts of the hide. Along with this, price incentive for better quality hides may also encourage farmers to use branding without causing serious damage to the hide.

Issues related to slaughtering facilities and practices

Outside the commercial sector in Zimbabwe, majority of the animals are not slaughtered in organised slaughterhouses or abattoirs either because such facilities are absent or inadequate or existing facilities are not managed properly. Common problems observed include limited height of the abattoir, lack of hoists and running water, lack of proper flaying knives and hide pullers, and lack of or inadequate waste disposal outlets. There is poor enforcement of existing legislation on the meat industry governing minimum requirements for slaughterhouses and slaughter slabs. In some places, fees charged to butchers are apparently high compared to the facilities and services provided which serve as a disincentive for using such facilities. So, a variety of flaying techniques and practices are used by unskilled and inexperienced people causing different kinds of damages on the hides and skins.

In every country, slaughtering has a skewed pattern with peak slaughtering occurring at religious or cultural festival times. Most such slaughter, especially of small stock, take place in homesteads. In most cases, adequate commercial channels have not been established to purchase raw hides produced in large quantities at a time, hence there may be inadequate recovery of hides and skins produced at peak slaughtering times. Surges in supply during different festival times and degradation of quality within a short period in the absence of adequate preservation techniques and facilities means the butchers generally obtain low prices and this influences the efforts they put in taking care of quality of raw hides and skins during and after slaughter. In countries like Sudan where removal of small stock skins is done by blowing and pulling, the quality of raw skins is generally high immediately after slaughter but poor preservation practices lead to lower grades.

Several interventions in this area may help improve quality of hides and skins production, e.g., better management and utilisation of existing slaughterhouses and abattoirs, creation of new facilities in cities and smaller towns, provision of training in slaughtering and flaying skills and in grading and standards to a wide range of people in the profession in both urban and rural areas, price incentives by buyers (tanners, traders) for better grade hides and skins. Education and training on management of hides and skins at different stages of the processing chain and extension of such skill throughout the chain may alleviate this problem. An important aspect of this training programme should be to establish linkages among people at different parts of the chain through training of trainers. A CFC funded project being implemented by ESALIA on grading and standards in selected countries in East and Southern Africa is an example of how this can be implemented. Similar project can be implemented in other countries with expanded agenda and scope.

Issues related to hides and skins processing and manufacturing

The causes of post-slaughter damages that reduce quality also lie with a wide range of people from hide collectors and traders to tanners and leather manufacturers. Hides and skins are processed into leather and subsequently manufactured into different finished leather products such as shoes, handbags etc. Tanning is the process of converting raw hides and skins into leather. There are two forms of leather processing: modern leather processing in tanneries and traditional tanning using vegetable tannins in pits along the major rivers. Traditional tanning is practiced mainly in Sudan and Senegal among the countries studied and involves processing skins into leather for artisanal products, e.g., praying and floor mats. The volumes of raw hides and skins used for this purpose are low and of less economic significance. However, modern leather processing has different facets related to its economic significance in terms of foreign exchange earnings and creation of employment opportunities. The issues related to hides & skins processing and manufacturing are:

Lack of backward and forward linkages in the African leather sector. In most African countries the leather industry has been established as an export based industry of semi-processed raw hides and skins without long term strategy linking it to the development of finished leather manufacture or manufacture of leather products. The development of this sector has been initiated from the production side because of the availability of raw hides and skins. Consequently, the different parts of production chain, where they exist, are not integrated.

Access to appropriate technology. The African leather sector suffers from lack of requisite technical skills and access to advanced technology. This situation is the result of the

concentration of leather processing at the initial stage of wet-blue leather and exports of raw materials. Most tanneries were initially started with imported reconditioned equipment and there has been rarely any investment in new equipment and technologies. As a result the sector's performance is constrained by the technology used and this is reflected in lower quality, low productivity and higher cost per unit output.

Environmental issues. The leather industry has been identified closely with generation of air, liquid, and solid waste pollution. This has created a negative public image and therefore tanneries are expected to invest in effluent treatment plants as well as in other forms of waste disposal. In advanced countries, in order to meet the regulations set for pollution control, the industry is forced to invest heavily in pollution abatement.

The issues of industry structure, technology and environmental pollution control are highly inter-related. So the solution to these problems has to be sought within the general development priorities and strategies of the individual countries. Whether limited resources of a country deserve to be invested in this sector has to be guided by the economic potential of this sector relative to other sectors.

Issues related to investment and macro-economic policy

There is considerable variation amongst African countries on existing investment and macro-economic policies. Most African countries rely on agriculture as the mainstay of the economy and investment and macro-economic policies are based primarily on livestock or plant resources. Hides and skins are a renewable resource and while there is no specific investment promotion for the leather industry sector on its own in the countries studied, the sector has been generally identified as a priority sector for industrial development. In the case of Sudan and Tanzania macro-economic policy has been put in place to promote processing of leather in the country by levying duty of 15% and 2% respectively on exports of raw hides. This is the trend taken by other African countries with some countries like Ethiopia banning exports of raw hides and skins. The choice of export ban or levy on raw hides export may be determined by several factors, e.g. the size and structure of the hides and leather industry, the pace of liberalisation in the economy. The nature of resulting benefits of export levy may also depend partly on how the processing sector responds and performs and if the value added products are taxed in the importing countries. For example, export tax on raw hides may protect inefficient processors and restrict the market to the level of what can be sold processed. Export of processed product may be further restricted if importing countries tax these imports making them less competitive. The key issues related to investment and macro-economic policy are:

Management of the leather industry. Many African Governments established tanning industries under public sector management and participated in the leather trade through establishment of parastatal bodies. Most of these industries and bodies ran inefficiently and at losses. In recent years, within the framework of economic liberalisation and globalisation, such industries and bodies have been privatised. However, because of the structural weaknesses of the economies, privatisation *per se* has yet to produce results. Supporting public policies on finance and credit, taxes and duties, investment and trade will be required to help the private sector play its role.

Impact of trade liberalisation. Trade liberalisation has been introduced in many African countries without instituting appropriate legislative, legal and regulatory framework, which would safeguard domestic industry from unfair competition. The leather sector has been

adversely affected in many cases through export of high quality raw materials rather than processing for value addition on the one hand and import of cheap footwear and second hand leather products on the other. On the positive side there has been more effective market competition in most countries as well as reduced government regulation in the economies, and it is hoped that in the long run comparative advantage will guide investment and trade.

Financial considerations. Market liberalisation has resulted in gradual easing of foreign exchange restrictions, which has influenced the direction of trade in hides & skins as a foreign exchange earner. This development has created awareness of the importance of hides and skins as a commodity amongst hides and skins traders. There is therefore a competitive environment evolving as traders try to export better grade and quality products to compete in the world market to earn foreign exchange. If these efforts are channelled back through the chain up to the farmers, the quality of hides and skins may improve as a result of positive efforts at all levels in the chain. At the same time in order to stay in business, there is a greater need to have access to cheap capital for investment in tanneries and leather products factories.

Issues related to skill and manpower

Available manpower in the industry for pre- to post-slaughter activities is highly inadequate as well as of poor quality. This is also a reason for the production of poor quality hides and skins. Recommendation 1 below will help improve the skills of existing manpower. However, for sustained long-term growth in the sector, there is need to train new skilled staff for various stages of the chain. Most of the countries have established at one time or another a training facility for leather related manpower, some focusing a few simple skill areas while others taking an integrated approach covering the various stages of the industry. However, only in some countries with large livestock population and integrated hides and skins industry, e.g. Ethiopia and Zimbabwe, the available training facilities are functioning well due to the economy of scale, in most other countries available facilities are heavily underused or not used at all. Diseconomy of small scale is part of the problem but also absence of appropriate management is a major reason for poor performance. The COMESA run regional training institute (Leather and Leather Products Institute) based in Addis Ababa, Ethiopia could fill this gap by providing assistance and support to national institutes but that has yet to materialise because of the absence of a strategic plan and programme.

Recommendations for Further Action and Research

A comprehensive summary of the constraints and recommended solutions in a general form is given in Table 1.1. However, actual manifestation or nature of a particular constraint may vary from country to country, so the specific nature of the solution may also vary to some extent. Some more specific recommendations are made below for immediate action and research, which are expected to make impact in the short to medium term.

- 1) Technical assistance for enhancement of knowledge and skills for producing better quality hides and skins

The poor quality of African hides and skins are not merely a perception of the world market, it is a real problem. While long-term efforts will be needed to improve quality through actions at all stages of the production and processing chain, some short run actions may help improve quality of current supply. Post and pre-slaughter defects are the most important reasons affecting quality, so promotion of better preservation and processing techniques, and

better flaying, pulling and fleshing practices will produce immediate results. A pilot project run by the ESALIA in selected countries on aspects of these techniques, e.g., training on grading supported by grading handbook, on better flaying supported by supply of better tools, and issue of certificate of quality to slaughter houses based on an index of performance have shown encouraging results. Such efforts need to be extended to other techniques and practices and supported at a larger scale covering more countries in the region. In West Africa, no organisation similar to ESALIA exists, so there is a need to encourage and support the formation of such an organisation to perform similar tasks. The situation in North Africa should also be assessed and appropriate measures taken. Both national governments and international donors should support such investment through technical assistance projects after carefully assessing potential long-run benefits and costs.

2) Global and national level analysis of the structure and performance of the hides and skins marketing systems

It is generally known that the international market pays for better quality reflected in better grades of hides of skins. Though average quality of African hides and skins may be poor, certain amount of better quality products are produced in each country. But there is little evidence that better world market prices are transmitted through the chain up to the livestock producers or even people who are directly engaged in handling hides and skins. Unless people benefit from better quality production or better handling and grading, they can't be expected to put efforts to those functions. The structure and functional mechanism of the international and national marketing systems for hides and skins is apparently the bottleneck. Detail analysis of the hides and skins marketing structure and performance, both at national and international levels, is required to identify where the bottlenecks lie for sharing the benefits of better prices for better grades and encourage further improvement in quality. Such analysis needs to be done within the framework of globalisation and economic liberalisation policies of national governments, looking at how the process has influenced the structure and performance of the hides and skins production and marketing sectors. Also the current and potential role of regional organisations such as COMESA and ECOWAS in harmonising various macro-economic policies, e.g., tax, tariff, subsidy and trade policies that affect the hides and skins sector, should be examined. Based on the findings, pilot project(s) to test and assess alternative ways of overcoming bottlenecks in the industry and inter-country differences in policies should be developed.

3) Assess the impact of some endemic diseases and develop preventive measures

Among many animal husbandry factors that affect quality, prevalence some endemic diseases lead to production of very poor quality hides and skins and cause significant economic losses. Sheep ked in Ethiopia is a good example. There is a need to undertake detail epidemiological and economic analysis of such important diseases in specific countries, and test and develop appropriate prevention method(s).

4) Commercialisation of livestock production for increased hides and skins production

Hides and skins production in the continent is low in relation to the livestock population because of low off-take rates among producers, especially among pastoralists. Low rate of collection of hides and skins, especially from backward rural areas is also a problem in some countries. These problems are not only of a technical nature, socio-cultural and economic factors also play major roles in determining people's behaviour. Therefore, designing strategies to promote more market orientation among livestock producers and to provide

incentive for market orientation of the hides and skins production should be based on thorough analysis of the technical, economic and socio-cultural characteristics of the livestock producers in different countries and regions. Such analysis and potential solutions should also be based on active participation of stakeholders – farmers, traders, butchers, municipalities, tanners and leather manufacturers.

5) Develop skilled manpower for the industry

The problems of inadequate supply and poor quality of manpower for the industry need to be addressed in order to assure sustained growth in the sector. Recommendation 1 above will improve the skill of existing manpower but steps need to be taken to train manpower for the future. It is highly unlikely that national training institutes, where they exist, will be able to function effectively due to diseconomy of small scale (national absorptive capacity of trained manpower is small) and the need for heavy public investment to run these facilities. A potential solution may be to strengthen the COMESA run regional Leather and Leather Products Institute (LLPI). Based in Addis Ababa, Ethiopia, this was established to promote productivity, competitiveness, trade and regional integration in the leather sub-sector through the provision of human resource development, research and training, consultancy and extension, information collection and dissemination. National leather institutes in the COMESA member countries are supposed to be constituent units of LLPI and LLPI is supposed to provide necessary back up services. However, so far this has remained an unfulfilled goal. It may be emphasised that there is no need to create physical facilities at LLPI headquarters to perform its regional functions rather LLPI may develop a strategic plan and programme and utilise the facilities of the national institutes to organise and deliver its services. By using the national facilities on a rotational basis, LLPI will also help the national institutes to remain active and functional while participating in a regional programme. Technical assistance may be provided to develop and implement a pilot programme before embarking on a larger scale. In West Africa, the situation may be even worse as some countries do not have national institutes nor is there any regional institute. However, the Nigerian leather institute in Zaria is apparently not running well though it has significant physical facilities. The possibility of revamping this institute for severing the needs of the region through the ECOWAS may be actively considered and assessed.

6) Assess the impact of breeds and nutrition on quality of hides and skins

A large variety of breeds of different species of animals are raised in Africa. There are significant variations in performance of these breeds raised under different environment, feeding and management regimes. The quantity and quality of meat, milk and hides/skins may vary because of intrinsic characteristics of a breed and differences in nutrition and management regimes used. Researchers usually assess the impact of nutrition and management interventions on animal performance and characterise breeds considering meat and/or milk output (quantity and quality) as indicators of performance. The quantity, quality and value of hides and skins are ignored as an indicator even though it is a joint product with meat and milk. In many circumstances, the value of hide or skin may constitute a significant portion of the total value of the animal. Therefore, there is a need to include the quantity, quality and value of the hide or skin in characterising breeds and in assessing the total impact of nutrition and management interventions. There is no need to design new experiments for such data, rather animal nutrition and management experiments and breed characterisation studies should routinely collect data on hides and skins along with meat and milk. Such information will be useful for extension agents to encourage people to take care of the hide or skin as a valuable joint product.

Table 1.1 Summary of constraints and recommended actions to solve them

	Issues	Main problems	Recommended actions
Animal Husbandry related issues	1. Unreliable pasture availability	<ul style="list-style-type: none"> • Poor nutrition • Use of poor branding methods • Scratches on animal skins and hides e.g. from horn rakes 	<ul style="list-style-type: none"> • Promote commercialisation of livestock rearing. • Develop and promote programmes on livestock feeds and upgrading of pasture quality. • Create awareness on the importance and value of hides and skins amongst pastoral communities. • Improve veterinary extension service • Create and promote efficient livestock and livestock products trading channels.
	2. Lack of efficient veterinary disease control and extension services	<ul style="list-style-type: none"> • High calf mortality • Heavy infestation by ticks and other ecto-parasites. 	
	3. Absence of organised marketing system for livestock and livestock products.	<ul style="list-style-type: none"> • Undervaluing and unfair compensation to farmers by middlemen • Lack of commercial purpose for rearing Livestock; rearing done as a sign of wealth and selling only in cases of emergencies. 	
Slaughter facilities and practices related issues	4. Poor enforcement of existing legislation on the meat industry governing minimum requirements for slaughterhouses and slaughter slabs.	<ul style="list-style-type: none"> • Rubbed grain, bad pattern and flay cuts, scores or gouge • High levels of reject and defect in hides and skins. • Lack of designated collection points leading to high expenses for collection of hides and skins. 	<ul style="list-style-type: none"> • Promote centralised slaughtering by enforcing existing legislation especially in urban centres where kill is high. • Municipalities and Councils should charge fees commensurate with service rendered. • Improve and upgrade slaughter facilities and tools including installation of hide pullers whenever possible. • Launch awareness campaign and training of butchers, flayers, traders as well as hides and skins extension workers on flaying and preservation techniques.
	5. Lack of adequate slaughter facilities in designated slaughterhouses where the height of abattoir may be a limitation; lack of hoists; lack of proper flaying knives and adequate hide pullers.		
	6. Perceived high fee charged to butchers when they slaughter in abattoirs		
	7. Inadequate infrastructure where slaughterhouses are located and in homesteads; for instance lack of piped water		

Processing of hides and skins, and manufacturing technology	8. Lack of backward and forward linkages in the African Leather sector.	<ul style="list-style-type: none"> • There is no compensation for high quality by the parties up the chain thus no incentive by the butcher at the lower level to produce high quality hides & skins. • Lack of a common grading or accreditation system. • Weak and uncompetitive leather processing industry in many countries. 	<ul style="list-style-type: none"> • Initiate programmes promoting purchase of hides and skins according to quality. • Introduce common grading standards such as the CFC/ESALIA standard for raw hides and skins. • Promote utilization of leather processing capacity.
	9. Access to appropriate technology	<ul style="list-style-type: none"> • During handling and preservation of hides of skins; grain cracks, bacterial damage and framing defects are a major problem. • During storage, packaging and transportation; scratches and tearing, wetting, contamination, infestation are major problems. 	<ul style="list-style-type: none"> • Introduce better handling and preservation techniques through training.
	10. Environmental issues	<ul style="list-style-type: none"> • Water pollution due to dumping of waste into rivers. • Air pollution; mainly from hydrogen sulphide gas, ammonia, and the bad odour emanating mainly from tanneries. • Poor management of solid waste from tanneries. 	<ul style="list-style-type: none"> • Promote cleaner production methods in leather processing.

Macro economic policy environment	11. Privatisation of the leather industry	<ul style="list-style-type: none"> • In general most enterprises where government has not divested are inefficient due to slow decision-making process. 	<ul style="list-style-type: none"> • Government should complete divestiture in those enterprises which remain partially or wholly Government owned
	12. Impact of trade liberalisation	<ul style="list-style-type: none"> • High costs of operations due to non conducive trade environment, e.g. unfair competition from cheap Asian imports • Exports of raw hides and skins leading to lack of raw materials for the local tanneries and leather companies. • Low value addition due to high costs of processing. • Low capacity utilisation and closures of companies. 	<ul style="list-style-type: none"> • Studies should be carried out to assess the impact of trade liberalisation. • Measures should be introduced to create a level playing field in leather trade. • Promote higher utilization of existing tanning capacities by discouraging exports of raw materials through enactment of tariff barriers.
	13. Financial considerations	<ul style="list-style-type: none"> • High cost of capital • Unavailability of credit • Rigid requirements on collateral and environmental compliance by lending institutions. 	<ul style="list-style-type: none"> • Promote foreign investment and joint ventures in order to attract cheaper capital
Manpower and skills	<p>14. Few training institutions for the Leather sector.</p> <p>15. Poorly equipped and outdated technology in the existing training institutions.</p> <p>16. Lack of employees' skills upgrading and poor compensation for high skills by companies.</p> <p>17. Low investment in research and development by companies</p>	<ul style="list-style-type: none"> • Employees' inefficiency; low productivity and low quality. • Shortage of trained manpower • High levels of obsolescence and redundancy. 	<ul style="list-style-type: none"> • Upgrade/rehabilitate existing training institutions. • Initiate relevant capacity building in technical skills in hides and skins as well as leather technology

1. Background and Objectives of the Study

Livestock products – meat, milk, eggs, wool, hides and skins – on average account for 28% of agricultural GDP of sub-Saharan African countries, with wide variation between countries (ILRI, 2000). Hides and skins account for a significant portion of the value of livestock output and for some countries it is an important source of foreign exchange earning. However, it is generally observed that the full potential of hides and skins as a product is not realised in most countries because of several reasons, the most important being low quality of the product produced with consequent poor demand in both domestic manufacturing industries and in the export market.

Traditionally, hides and skins have always been important in Africa's rural setting as the leather made was used for several basic needs including clothing. The traditional requirements have changed over time and are now limited to minimal consumption of raw materials by artisans specialising in making of vegetable tanned leather products such as mats. Most of the raw hides and skins produced in Africa are exported either in raw form or as semi-processed leather and constitute an important source of foreign exchange. Meat being the primary product, the importance of hides and skins on a live animal has never been fully appreciated, although this situation is improving such as in Senegal and the Sudan. The quality of raw hides and skins is therefore not fully considered as an important issue by farmers and efforts are not directed at safeguarding its quality during the animal's lifetime, during slaughter as well as in the handling and preservation of the raw materials. As a result Sub-Saharan African countries do not realize the full benefit from these important renewable livestock resources.

Livestock rearing in Africa is done under very diverse conditions varying from open Savannah grasslands, organised commercial farms, zero and semi-zero grazing. The quality of products obtained from livestock reared in these varying environments is directly influenced by these conditions. In the case of hides & skins the quality and yield of leather obtained from such animals is dependent on these factors. The hides and skins produced in Africa generally carry a poor image in the global markets because of various constraints found through out the production chain starting with animal husbandry conditions, lack of slaughter facilities, inappropriate flaying, and poor handling and preservation of these raw materials.

The Common Fund for Commodities (CFC) usually provides funds for commodity development, especially to developing countries, for export promotion and poverty alleviation. Hides and skins is a CFC designated commodity, which is handled by the FAO Committee on Commodity Problems through the Sub-Group on Hides and Skins under the Intergovernmental Group on Meat (FAO, 2001). However, assistance for commodity development needs to be based on objective assessment of the nature of the problems and possible solutions. In order to alleviate the problems with respect of hides and skins production, marketing and trade in Africa, the purpose of this study is to undertake case studies in selected countries to make a rapid assessment of the factors contributing to poor quality of hides and skins produced and suggest possible actions for improving quality to meet the needs of domestic and export markets. The needs of the importing countries will be determined by a similar study in selected countries. The specific objectives of this study are:

1. To identify issues of animal husbandry including herd and disease management, feed quality and availability, which affect quality of hides and skins.
2. To identify issues related to slaughtering and flaying techniques, practices and facilities (organized slaughter houses vs scattered slaughtering), which cause damage to hides and skins.
3. To identify issues related to techniques and procedures used at various stages in the processing chain from slaughtering to finished products that affect quality.
4. To identify issues related to organization of slaughterhouses and butcheries, regulations and policies for management of slaughterhouses and butcheries that affect quality.
5. To identify issues related to pricing system of hides and skins that affect quality.
6. To identify issues related to marketing and investment infrastructure and environment that affect quality of output.
7. To identify issues related to skills and training that may be related to quality.
8. Based on the identified issues on various aspects, make appropriate recommendations to alleviate them to meet the needs of the importers.

The case studies have been conducted in Tanzania, Zimbabwe, the Sudan and Senegal. These countries were chosen on the basis of recommendation of the CFC to represent different regions of Africa and different size and economic structure. For example, in 2000, Tanzania, Zimbabwe, the Sudan and Senegal had human population of 34, 12, 29.6 and 10 million respectively; they had per capita gross domestic product of US\$ 280, 480, 320 and 500, respectively, of which 45, 11, 39 and 18% respectively were derived from the agriculture sector (World Bank, 2002). The size of livestock population and organization of the hides and skins sector also differ between these countries, which will be discussed in more detail later. It is expected that these case studies will provide a general understanding of the nature of the problems, some actions that may be taken in the short-run and also a basis for a more detailed study involving a larger number of countries for identification of more specific problems and solutions.

In conducting the case studies, secondary information were collected through literature search and visiting the selected countries to discuss with key informants, stakeholders and government officials (slaughter houses, tanneries, leather industry managers and workers; rural and urban domestic traders in hides in skins; exporters in hides and skins; chamber of commerce representatives; farmers, finance and investment offices; education and training institutions imparting leather technology training; government officials responsible for control and inspection of meat, and hides and skins production).

The report is organised as follows. In section 2, a brief description of production and trade of hides and skins in Africa in the global context is presented. In section 3, hides and skins production and trade in the case study countries is discussed. In section 4, factors influencing quality of hides and skin production in the case study countries are discussed. In section 5, current structure and operational status of the hides and skins processing industry and related issues is presented. In section 6, investment environment and macroeconomic policies affecting the hides and skins sector are discussed. In section 7, recent initiatives for improving the hides and skins sector and further actions needed are recommended.

2. Hides and Skins Production and Trade in Africa in the Global Context

A study of global trends in the leather and leather products industry during 1970-90 indicated that the industry had enjoyed healthy rates of growth though the benefits were unequally dispersed among the various markets, between stages of production and across countries. With respect to raw hides and skins production, the study speculated that due to stagnant or slow growth in the demand for meat in the developed world, supply of high quality hides and skins from the developed world would decline but meat production and demand in the developing world would increase, so world supply of hides and skins would increase. However, average quality of hides in the world market would decline due to increased supply from the developing world making it difficult and perhaps costly for the tanning and leather manufacturing industries to produce leather and leather goods. The study also predicted a major transformation in the industry: markets for leather and leather products would become more international; tanners would establish factories nearer to sources of raw material while manufacturers more near to consumers; environmental regulations in the developed countries would further encourage relocation of processing industries in the developing countries with good quality raw materials and skilled manpower; competition between manufacturers of leather products would intensify, and rivals relying on substitute materials would encroach on the industry's major markets (Ballance et al., 1993).

Another recent study showed that during the last three decades, aggregate meat consumption in the developing world was higher than that in the developed world and it has been projected that in the future, demand for meat will grow more rapidly in the developing countries due to rapid population and income growth and urbanization while consumption in the developed countries will stagnate or will grow very slowly as the current level of consumption is already very high. It has been projected that consumption of meat in sub-Saharan Africa will increase from about 5 million tones in 1993 to 12 million tones in 2020 due to rapidly increasing population and urban growth and a modest increase in per capita income. Most of this demand growth is expected to be met from domestic production – higher population as well as higher off-take rates (Delgado et al., 1999). Therefore, this is likely to increase the developing world's share of hides and skins production as well.

The status of hides and skins production and trade in Africa may be assessed against this background. Africa accounts for about 16, 2, 30 and 22% of world cattle, buffalo, goat and sheep populations, respectively (Table 2.1). During 1995-2001, African populations of these species of animals increased at faster rates compared to the world population increases. In the case of sheep, world population has actually declined while African population has increase by 2.25% annually. However, African shares of world meat output of these species of animals are about 7, 8, 23 and 15% respectively, which are very low compared to the shares of the respective populations. The main reasons for this are that African animals are low productive and the off-take rates are also very low. Although animals are kept for milk and meat, for draft power and manure for crop production, as forms of wealth and saving, and for many social functions, sales are not regular nor do they occur at optimal age to make efficient use of feed resources. Instead, animals are generally sold at times of need for cash and in times of crop failure or other forms of emergency or natural disasters.

African shares of world hides and skins production are also low compared to the shares of animal populations (Table 2.1). Africa shares only about 8, 3, 18 and 10% of world cattle hides, buffalo hides, goat skins and sheepskins production respectively. The main reasons for lower shares of hides and skins in relation to the animal populations are low off-take rates, lower yield (African animals being smaller in size hides/skins yields are lower) and non-

collection of significant number of hides and skins, especially from animals slaughtered in rural areas. Slaughtering in organized slaughterhouses and mechanized abattoirs is still negligible in most African countries. Also, live animal export, especially of sheep and goats, from the Horn of Africa region to the Middle East is of considerable importance, and hides and skins of these animals are perhaps not in the Africa account.

Table 2.1. African share of world population of cattle, buffalo, goats and sheep, and production of fresh hides and skins (1995-2001 average)

	Cattle		Buffalo		Goats		Sheep	
	World	Africa	World	Africa	World	Africa	World	Africa
<i>Population</i>								
Million head	1336.3	219.5	162.1	3.2	703.1	209.8	1060.2	237.6
% share of Africa	-	16.4	-	2.0	-	29.8	-	22.4
Annual growth rate (%)	0.25	2.26	0.59	2.75	1.54	1.69	-0.32	2.25
<i>Meat production</i>								
Qty, 000mt	55,518	3,716	2,968	256	3,523	820	7,327	1,097
% share of Africa	-	6.7	-	8.6	-	23.3	-	15.0
Annual growth rate (%)	0.79	3.11	2.00	9.05	3.07	1.96	1.01	3.09
<i>Fresh hides/skins production</i>								
Quantity, 000mt	7151	556	789	23	792	142	1657	174
% share of Africa	-	7.8	-	2.9	-	17.9	-	10.5
Annual growth rate (%)	1.40	2.34	1.31	4.62	3.03	1.74	-1.40	1.82

Source: FAOSTAT, 2002

During 1995-2001, beef, lamb and buffalo meat production in Africa increased at higher rates than the overall global production growth rates, and similar was the case for growth rates in hides and skins production (Table 2.1). Overall, global hides and skins production increased at 1.32% annually while in Africa the growth rate was 2.22%. This is in line with the predictions mentioned earlier.

About 35-40% of global production of hides and skins are currently internationally traded; the remainder are processed domestically for various uses and export as leather products. During 1994-1999, Africa accounted for about 4.5% of annual global exports of hides and skins and African exports grew annually at the rate of 0.23% compared to a global export growth of -0.25% (FAOSTAT, 2002). The leather industry has gone through a sluggish period following the collapse of the newly emerging East Asian economies and the Russian economy as these were major producers and consumers of leather products, especially shoes which utilise about 60% of finished leather. Also, the global leather industry is increasingly

demanding high quality hides and skins, so countries capable of producing high quality hides and skins or capable of consistently improving quality remained active in the export market even in the sluggish period. The poor quality of African hides and skins, and the lack of capabilities to catch up with the increasing demand for better quality in the export market has forced African export of the products to remain low. However, the recent economic recovery in the East Asian countries and the rapid growth in China have helped to revitalize the global market and there has been supply shortfalls in several years (Table 2.2).

Table 2.2: World leather supply-demand balances, selected years

Year	Total supply (million sqft)	Total demand (million sqft)	Balance (million sqft)
1989	15,121	15,143	-22
1990	15,929	15,621	208
1992	16,760	16,789	-29
1994	17,838	17,981	-143
1996	18,997	18,972	24
2000	21,591	21,700	-109

Source: Lendell Mills Commodities Studies, quoted in (Kiruthu et al., 2000)

In the past, most countries especially in the developed world used most of the hides and skins domestically as raw materials for the leather industry. During the last two decades, three major changes have occurred in the industry that has changed its structure and operational mechanism, which had a negative effect on the African leather industry.

First, the leather industry produces a huge amount of wastes that creates environmental pollution. A global estimate indicates 32% of the wastes in the industry are generated by the leather manufacture, especially wet blue processing stage, and another 59% by the footwear manufacturing sector (Table 3). Of these the wastes generated by the leather manufacture stages are environmentally more damaging. Therefore in recent years environmental considerations are receiving increased attention from both the market and government authorities in the development of the leather industry (Ballance et al., 1993). Responding to these considerations require substantial investment in effluent treatment plants. Enforcement of these requirements are much more strict in the developed countries, so the investors there have partly responded to this problem by relocating industries in selected developing countries where environmental regulations are not very strict and there is skilled manpower to produce high quality products but costs are lower. Moreover, market liberalisation in these countries encouraged foreign investment directly or through joint ventures. This strategy has helped them to externalise the environmental problem, at least temporarily, while allowing them to produce quality products at a competitive cost. The working of this strategy is partly demonstrated by the fact that China alone produces 39% of the leather industry wastes and other Asian countries produce another 23% while west Europe produces only 14% (Table 2.3). However, Africa did not benefit much yet from this industry relocation strategy of the west mainly because of the low quality raw materials produced and lack of skills to enable footwear and leather goods manufacturers to produce good quality products.

Table 2.3: Wastes generated by the leather industry

Source of wastes	World total Qty 000 tons/yr	% share by country/region		
		China	Other Asia	West Europe
Leather manufacture	806	13	25	23
Footwear manufacture	1479	47	22	10
Leather goods manufacture	115	85	11	3
Leather garments manufacture	51	55	16	10
Leather gloves manufacture	34	82	11	5
Total	2485	39	23	14

Source: CTC, 2000

Second, in the past many countries exercised restrictive policies, e.g., export ban on raw and wet blue hides, export incentive for manufactured products, import restrictions on finished products like shoes, to make maximum use of raw materials domestically through value added processing and meet domestic demand for leather products. Also in many countries the leather processing and manufacturing enterprises have been under public sector ownership, and most ran inefficiently producing low quality products and made losses. The globalisation process since the 1980s gradually changed that situation. Market liberalization and privatization policies are being implemented so that there are few restrictions on exports of raw materials and imports of finished products. Therefore, raw materials, especially of better quality, are being increasingly exported rather than being utilized in the domestic industries (Table 2.4). Better prices in the world market for raw hides compared to that offered by the local industry are another attraction for export. This explains the slightly higher African export growth of hides and skins compared to the world export growth rate, as mentioned earlier, although the share of total export still remains very low.

Table 2.4: African share of world exports of hides and skins (1994-2000 average)

	World export		Share of Africa (%)	
	Qty, 000mt	Value, US\$000	Qty	Value
Total hides and skins*	2765	6566	3.1	3.3
Wet-salted cattle hides	1810	3146	1.6	1.3
Dry-salted cattle hides	86	122	10.5	15.6
Dry-salted sheepskins	45	234	24.4	33.8
Dry-salted goatskins	22	39	20.0	43.6
Wet-salted goatskins	4	9	45.0	44.4
Sheepskins with wool	252	467	4.8	4.9

* Includes small quantities of other types of hides/skins not included in the table so sum of components may not add to total

Source: FAOSTAT, 2002

However, a comparison of the African share of export value compared to her share of export volume for different types of hides and skins indicate that in spite of better prices for raw

hides in the world market, Africa is losing by exporting raw hides. For example, share of wet-salted cattle hides export value is lower than its share of export volume while for some other export categories, export value share is higher than export volume share. This is perhaps an indication that Africa would be better off by exporting processed products.

Third, producing better quality products throughout the entire chain of the industry at competitive cost require updated technology and skills. Therefore, there is a need for investment in new technologies regularly. Also all components in the production chain plus supply of chemicals, spare parts etc should be effectively interlinked for running an efficient industry (Balance et al., 1993). In most African countries, this has not happened. Most countries use 15-20 years old or even older technologies and different parts of the industry chain function in a disjointed manner without consistent policy support. This has also contributed to more export of better quality raw materials on the one hand and low capacity utilisation of domestic industries on the other. There is also serious shortage of skilled manpower in the industry as skilled training is not updated and upgraded, and demand for existing skilled manpower is dwindling due to low capacity utilization in the existing industries and lack of new investment in the industry.

3. Hides and Skins Production and Trade in the Case Study Countries

3.1 Tanzania

Tanzania has the third largest livestock population in Africa after Ethiopia and the Sudan. Tanzania accounts for 6.5% of Africa's cattle population, 4.7% of goats and 1.7% of sheep populations. During 1995-2001, the country had, on average, 14.2 million cattle, 9.8 million goats and 4.1 million sheep. Cattle, goats and sheep populations grew annually at the rate of 0.62, 1.17 and 0.51 percent respectively (Table 3.1).

In the absence of accurate statistics on off-take rates and rates of collection of hides and skins, accurate estimate of hides and skins production is rather difficult. However, FAO estimates suggest that from the large livestock population, Tanzania produces a sizeable amount of raw hides and skins (Table 3.1). Its share of cattle hide production in Africa is apparently higher than its share of cattle population indicating that off-take rate of cattle is perhaps higher in Tanzania than in some other countries. But share of goatskin production is lower than the share of goat population suggesting that off-take rate and/or collection rate of goatskin is lower than in some other countries. Per thousand cattle population, Tanzania produces about 3 tonnes of cattle hides, and per thousand goats and sheep, the country produces about 0.5 and 0.7 tonnes of skins respectively. These rates are much higher than the rates of hides and skins production in Zimbabwe and the Sudan and similar to those in Senegal (see below). Theoretically this indicates that off-take rates, especially for cattle, in Tanzania are much higher than in Zimbabwe and the Sudan or that the Tanzanian cattle population is understated in the FAO statistics. Discussion with stakeholders in Tanzania indicate the latter explanation is perhaps more plausible.

Table 3.1: Livestock population and hides and skins production in Tanzania
(1995-2001 average)

	Livestock population			Raw hides/skins production			
	000 head	Annual growth rate %	% of Africa	Tonnes	Annual growth rate %	% of Africa	Tonnes/1000 population
Cattle	14,215	0.62	6.5	43,200	0.69	7.8	3.03
Goats	9,850	1.17	4.7	5,171	0.43	3.6	0.52
Sheep	4,102	0.51	1.7	2,876	0.94	1.6	0.70

Source: FAOSTAT, 2002

Until the mid 1990s, domestic tanneries and leather industries established by the government used to process hides and skins for local market as well as for export. After privatization of these industries in the mid 1990s, most are now non-functional, and most of the hides and skins are now exported raw or in wet-salted form thereby losing the opportunity to earn additional income from value added processing. Official exports during 1995-2000 decreased gradually (Table 3.2). Also the export quantities seem low compared to the quantities of raw hides and skins production. One explanation given by knowledgeable quarters is that a significant proportion of the raw hides export passes unofficially through Kenya, and a significant number of cattle are also exported on hoof to Kenya so that the hides from those animals are also not accounted for in Tanzania. An estimated \$2 million worth of unofficial export occurs annually compared to the official export of about \$5 million.

The hides and leather sector in the country is in a poor state and the problems and constraints span from livestock production to slaughter facilities and practices to tanning and processing and laws, regulations and policies related to livestock production practices, slaughter house management, industrial investment, exports and imports. Some of these constraints are discussed in detail later.

Table 3.2: Hides and skins export (volume and value), Tanzania, 1995-2000

Items	Mean qty mt	Annual growth rate %	Mean value US\$000	Annual growth rate %
Hides wet-salted ^a	2868	-1.73	2,240	-17.32
Hides dry-salted	390	5.84	365	-2.08
Goatskin wet-salted	473	0.0	691	0.0
Goatskin dry salted	-			
Sheepskin wet-salted	19	0.0	29	0.0
Sheepskin dry-salted	-			
Sheepskin with wool	38	-13.15	32	-16.85
Total hides and skins ^b	5,592	18.67	5,203	13.19

a. During field visits and discussions with stakeholders indicate that most hides were air dried rather than wet-salted though in recent years, wet-salting has increased to some extent. There is therefore a need to verify FAO production and trade statistics on this aspect.

b. Includes small quantities of other items not mentioned in the table

Source: FAOSTAT, 2002

3.2 Zimbabwe

In the 1970s, there were about 10 million cattle in Zimbabwe including one million high grade breeding stock in the commercial farms. Commercial farms were the main source of cattle hides due to 20-30% off-take compared to 2-5% off-take rate in the communal and smallholder sector with a larger population. Today it is rather difficult to get accurate statistics on livestock population and production as estimates vary between sources (Table 3.3 and 3.4). Of the 5-6 million cattle, about 100,000 are breeding stock in the commercial sector and about 4.3 million are in the communal and smallholder sector. Goats and sheep are traditionally raised by smallholders.

Reduced stock in the commercial sector has led to reduced supply of hides from this sector even though off-take rates remain high, about 25%. On the other hand, larger share of stock in the communal and smallholder sector did not lead to an increase in the supply of hides and skins as off-take rate remained very low, as indicated by the overall low rates of hides and skins production per 1000 population. Like elsewhere in Africa and other subsistence oriented economies, farmers in the communal and smallholder sector keep livestock as a form of wealth and saving, for draft power, manure and milk and for other social functions, and they sell animals only in times of need for cash rather than at optimum age to make efficient use of feed resources. Consequently, the supply of hides and skins has been shrinking to some extent.

Table 3.3: Livestock population and hides and skins production in Zimbabwe
(1995-2001 average)

	Population			Raw hides/skins production			
	,000 head	Annual growth rate %	% of Africa	Tonnes	Annual growth rate %	% of Africa	Tonnes/1000 population
Cattle	5,341	2.49	2.4	7,928	4.59	1.4	1.49
Goats	2,733	1.11	1.3	1,976	2.09	1.4	0.72
Sheep	520	1.05	0.22	70	0.91	0.04	0.13

Source: FAOSTAT, 2002

Table 3.4: Livestock population in Zimbabwe, 2000 and 2001 (000 head)

Data source	Cattle		Goats		Sheep	
	2000	2001	2000	2001	2000	2001
FAO estimate	5,500	5,550	2,790	2,800	530	535
Zimbabwe census	6,186	6,432	3,804	3,779	691	635
Zimbabwe LAIFEZ	na	5,500	na	3,400	na	500

Note: LAIFEZ – Leather and Allied Industries Federation of Zimbabwe

Na not available

In the past, there was no organized network for rural hides and skins collection as the supply from the commercial sector was deemed adequate. As a result, few skins were collected, as negligible price was a disincentive for people to sell skins. Instead they were primarily used in rural areas as mats etc or thrown away. The slaughterhouses and abattoirs take hides as their property, which is used as a vehicle to recover cost. So they have some incentive to produce good quality hides and grade them. As more animals from the communal sector are slaughtered for meat, the chances of collecting hides will remain low unless more animals are brought to slaughter houses rather than slaughtering in the scattered rural areas.

Price of hide is an important factor determining collection from the communal and smallholder sector. Overall, the price depends on meat price and the supply-demand balance in the hides and skins sector. Meat price is controlled by the government hence is currently low. But hides and skins prices have gone up a bit in keeping with the currency value in the open market. In Zimbabwe, meat price is Z\$124-700 per kg based on cut and quality while rawhide price is about Z\$200 per kg. Goatskin price is about Z\$ 50-100 per piece, which is one-fifth of the price in Ethiopia and one-third that in Kenya. However, in the long-run price has to be used as a mechanism to encourage sale and collection, and quality differentiated price may serve this goal better

During the last two years, there has been sudden increase in overall supply of hides because of de-stocking by many commercial farms that are apparently closing businesses due to the uncertainty created by the land redistribution policy. However, this short-term increase has already leveled off and there is a rapid drop in supply as the size of the commercial sector has

become smaller and no dramatic change in off-take rate in the communal and smallholder sector has occurred. The country is in the midst of a drought that is forecast to last two years. The last major drought in 1991/92 caused a loss of one million cattle and this may happen again as feed supply is already in a critical stage. Supply of quality feeds is scarce and costly.

Reduced export orders and opportunities may also have led to reduced supply of hides. A large order to the tune of 9000 tones of meat (about 150,000 cattle) from the European Union has stalled for some time due to recent outbreak of foot and mouth disease from the communal sector. Another order for 5000 tones of meat (about 45,000 cattle) from Libya is still under negotiation but Libyan demand to supply EU standard meat has made this deal somewhat uncertain at the moment. There is a commitment to supply 5000 animals to South Africa over the next two years but ban on export of grade cattle may hamper delivery of this order. These uncertainties will impact on the leather sector by reducing the flow of supply of hides. Previously a network of 400 vet stations and 2650 dipping units and strict control on animal movement allowed the commercial sector to be protected from various contagious diseases. This also allowed producing and exporting meat of international standard. However, the on-going resettlement process has accompanied a slight breakdown of these control mechanisms leading to irregular dipping and vaccination and uncontrolled movement of animals.

This situation has already put the leather sector into difficulty as many tanneries and footwear factories are running much below capacity while a few years ago they were running at nearly full capacity. The tanneries and hides and skins traders are making extra efforts to collect more hides from the rural areas (communal and smallholder sector) through various means to maintain capacity utilization though these hides and skins are of lower quality (have many parasite infestation due to irregular dipping, have cuts, scratches and thorn damage, brand marks, sand soaked as slaughtered on sandy ground). Such collection is costly because of the need to collect from scattered places around the country requiring more vehicles and manpower, and processing of low quality hides and skins is also costly. However, they realize that the choice is between working with these lower quality hides and skins collected through extra efforts that were not required in the past and loosing money and closing the factories. Some hides and skins traders using ESALIA/CFC grading guidebook (see below) are going as far as providing training and guidance to their rural agents about quality and grades so they work with local slaughter points and workers to produce better quality hides. They are also providing price differential for better quality to encourage rural suppliers to give attention to quality of hides and skins.

3.3 The Sudan

The Sudan has the second largest livestock population in Africa, next to Ethiopia, accounting for an average of 15.7, 17.6 and 17.7% of Africa's cattle, goat and sheep population, respectively (Table 3.5). The average livestock population during 1995-2001 was 34.4 million cattle, 36.8 million goats and 42.06 million sheep, with a corresponding growth rate of 4.09, 4.65 and 1.88 %, respectively. Sudan's share of cattle, goat and sheep population in Africa is lower than its share of hides and skins production, suggesting that Sudan may have a lower off-take rate of cattle, goats and sheep or lower collection rate of hides and skins than some other African countries. The annual growth rates of cattle and goats population during 1995-2001 were lower than the corresponding growth rates of cattle hides and goatskins. However, the growth rate of sheep population was lower than the growth rate of sheepskins production, suggesting a decrease in the total number of sheep population. In the year 2001,

Sudan produced 56280, 227050 and 22500 metric tons of fresh cattle hides, goatskins and sheepskins, respectively. The Chamber of Commerce estimated that the annual value of raw cattle hides, sheepskins and goatskins produced is US\$ 18 million, 17 million, and 5 million, respectively.

Table 3.5: Livestock population and hides and skins production in the Sudan (1995-2001 average)

	Population			Raw hides/skins production			
	000 head	Annual growth rate %	% of Africa	Tonnes	Annual growth rate %	% of Africa	Tonnes/1000 population
Cattle	34,382	4.09	15.7	50,670	3.78	9.1	1.47
Goats	36,837	4.65	17.6	22,477	0.85	15.8	0.61
Sheep	42,068	1.88	17.7	21,076	3.25	12.1	0.50

Source: FAOSTAT, 2002

Most of the hides and skins are collected from abattoirs, community backyards or popular markets that supply to the hide and skin collectors who then supply to the tanneries. Abattoirs provide slaughtering service to butchers on fee basis. The butchers or meat exporters sell the hides and skins to merchants who will then export them or sell them to domestic tanneries. The slaughter service, the meat business and the hides and skins business (for export and domestic use) remain separated, with most abattoirs operating below capacity. Cattle, sheep and goats, when bought, are valued based on the overall condition of the animal, including the hides and skins, which possibly provide incentive to the herders to care for the quality of the skins and hides. However, as can be seen from the extensive branding of livestock that adversely affects hides quality, the price incentive of basing livestock prices on their overall condition, including the hide's quality does not seem to transmit strong enough signal to farmer to do proper care to the hides while the animal is alive. This is an area where awareness creation can play a role.

While 75% of hides and skins are either wet-salted or dry-salted with antiseptics applied, 25% is air-dried. While wet-salted cattle hides in Sudan weigh on average 20 kg per piece, the dried weight ranges from 5 to 7 kg. Wet salted sheepskins weigh 2.25 kg per piece with a corresponding dry weight of 0.75 kg. Wet-salted goatskins weigh 1.65 kg per piece while the dried weight is about 0.55 kg.

The domestic supply of hides and skins in Sudan is higher than local demand, necessitating the need to promote raw hides and skins export from the country. The total value of hides and skins exported in the year 2000 amounted to US\$ 16.9 million. During 1995-2001, the total volume and value of hides and skins exported decreased by 15.52% and 6.19%, respectively. However, there is a variation in the growth rate of export volume and value by type of preservation of the raw hides and skins. While the exported value of wet-salted cattle hides grew by 116.8% from a very low base, the value of dried-salted decreased by 28.85% (Table 3.6). However, the export value of dry-salted goatskins grew by 17.33%. Exporters of hides and skins report that it is easier for them to export dried hides and skins than wet. The main destinations of export for Sudanese hides and skins include Egypt, Syria, Turkey, India, Italy, Pakistan, and the Far East.

Table 3.6: Cattle hides and skins export (volume and value), the Sudan (1995-2000 average)

Items	Mean qty mt	Annual growth rate %	Mean value, US\$000	Annual growth rate %
Hides wet-salted	100	110.03	158	116.28
Hides dry-salted	737	-32.63	410	-28.85
Goatskin wet-salted	-			
Goatskin dry salted	209	16.76	640	17.33
Sheepskin we-salted	-			
Sheepskin dry-salted	1,102	-13.66	1,901	-9.91
Sheepskin with wool	-			
Total hides and skins	2,148	-15.52	3,110	-6.19

Source: FAOSTAT, 2002

3.4 Senegal

During 1995-2001, Senegal had an average of 2.9, 3.7 and 4.3 million cattle, goats and sheep, respectively (Table 3.7). These averages account for about 1.3%, 1.7% and 1.8% of Africa's cattle, goats and sheep population, respectively, similar to Senegal's share in Africa's hides and skins production. The cattle, goat and sheep population of Senegal shows a significant positive growth rate during 1995-2001, as do the production of cattle hides, and goat and sheepskins. Zebu and Ndama are the two dominant cattle breeds in Senegal. Zebu cattle produce hides with better physical characteristics than Ndama.

Table 3.7: Livestock population and hides and skins production in Senegal (1995-2001 average)

	Population			Raw hides/skins production			
	'000 head	Annual growth rate (%)	% of Africa	Tonnes	Annual growth rate (%)	% of Africa	Tonnes/1000 population
Cattle	2,958	2.07	1.3	9,618	2.07	1.7	3.25
Goats	3,674	3.39	1.7	3,214	3.23	2.3	0.88
Sheep	4,339	3.23	1.8	3,021	3.37	1.7	0.70

Source: FAOSTAT, 2002

About 2/3 of the total hides production in Senegal is used by local artisans, while about 2/3 of skins is exported. Total volume of hides and skins export from Senegal amounted to an average of about 2078 metric tons during 1995-2001, about 80% of this being cattle hides (Table 3.8). During the same period, the value of Senegal's export of hides and skins amounted to about US\$ 4.2 million. While Senegal's export of wet-salted hides and skins showed an impressive positive growth rate, its export of skins declined significantly, except for sheepskins with wool, which accounts only for 5 metric tons per year. It is important to

relate the decline in export of skins with the substantial positive growth rate of the sheep and goat population in the country. This disparity may indicate a declining recovery rate of hides and skins, a declining off-take rate and/or declining competitiveness in the export market.

Table 3.8: Cattle hides and skins export (volume and value), Senegal (1995-2000 average)

Items	Mean qty mt	Annual growth rate %	Mean value, US\$000	Annual growth rate %
Hides wet-salted	1,602	16.01	2,528	13.49
Goatskin wet-salted				
Goatskin dry salted	261	-4.29	1,164	-18.07
Sheepskin we-salted				
Sheepskin dry-salted	134	-15.58	394	-19.99
Sheepskin with wool	5	76.71	10	18.43
Total hides and skins*	2,078	9.57	4,205	0.17

* Includes small quantities of other types not mentioned in the table.

Source: FAOSTAT, 2002

The leather sector in Senegal is essentially oriented towards exports. The export value of the leather sector is estimated to be about 3 billion CFA (about US\$16.76 million). The meat sector in Senegal consumes nearly 1.5 million small ruminants and about 0.3 million cattle annually. The leather and skins are for the most part collected from official slaughtering places. Significant quantities of hides and skins are also collected during certain Muslim holidays, such as Tabaski or feast of sheep, Tamkharite, Maouloud, return from Mecca etc. During such events, hides and skins merchants organize countryside campaigns of collection of the hides and skins. There is also a substantial supply of skins during Christmas and the New Year holidays. Senegal also imports leather and leather products. Senegal imported 46, 6 and 42 tonnes of leather and leather products in 1999, 2000, and 2001, respectively.

4. Factors Affecting Quality of Hides and Skins Production

In the hides and skins industry quality is reflected in the 'grade' of output. A grade roughly indicates the fitness of a hide or skin for a specific use. Grades are defined in terms of the presence or absence of certain types of defects on the hides and skins. However, the definitions of these defects are not absolutely concrete, so there are rooms for subjective judgments. Moreover, these definitions may not be known equally throughout the production and processing chain, so perception about those defects and their application for grading hides and skins may vary at different stages of the production and processing chain and between different operators within a stage. These problems notwithstanding, quality remains the main factor determining the market potential of hides and skins.

The quality of hides and skins is influenced by factors throughout the production chain including animal husbandry and disease management, slaughter facilities and practices, handling and preservation methods. The general and specific conditions with respect to these factors in the case study countries are discussed below.

4.1 Animal husbandry practices affecting quality of hides & skins

The animal husbandry practices have some similarities as well as dissimilarities between the four case study countries. In Tanzania, the Sudan and Senegal most of the animals are local breeds raised in pastoral systems by nomadic or semi-nomadic herders and a small proportion of animals are raised by smallholder crop-livestock mixed farmers. For example, 91, 89 and 71% of agricultural land in Tanzania, the Sudan and Senegal are under permanent pastures supporting their pastoral livestock populations (ILRI, 2000). Zimbabwe is the only country in sub-Saharan Africa other than South Africa to have a livestock sector with large and developed commercial farms raising exotic and high grade cattle. As mentioned earlier, of the current population of 5-6 million cattle in Zimbabwe, about 100, 000 are high grade animals in the commercial sector and the rest are zebu cattle in the communal smallholder sector, while sheep and goats are raised by smallholders. Eighty six percent of agricultural land in Zimbabwe is under permanent pastures, a large portion of which is used by the commercial sector though its share of livestock population is smaller.

These differing breeds as well as husbandry practices have implications for quality of hides and skins produced. In Zimbabwe, traditionally over 90% or the bulk of the cattle hide production was from the commercial farms, which has a smaller population but high off-take rates. These hides are amongst the best in Africa because of the breed of cattle and improved feeding methods, making them ideal for all types of leather including automotive upholstery. Also a good number of animals from the communal sector were fattened in feedlots for supplying to the abattoirs, which improved quality of hides. The decline of the commercial sector in the country has led to reduced supply of high quality hides. In the other three countries, local zebu breeds do not generally produce very high quality hides.

In pastoral and smallholder systems, farmers keep livestock for other purposes such as signs of wealth as well as for ploughing. Therefore they are less inclined to sell animals when they attain maturity and only sell when they must in order to raise money to pay for urgent and important needs. Therefore animal husbandry practices do not promote measures or methods, which lead to high off-take rates, and livestock slaughtered usually constitute of mature or old animals whose skins have suffered damage through exposure to the environment.

There is little documented information on the correlation between quality of livestock nutrition and the quality of raw hides and skins. However, it must be appreciated that poor animal nutrition affects adversely the production of all animal products, i.e. meat, milk. It is therefore unlikely that hides and skins quality remain unaffected. For example, animals from the commercial sector in Zimbabwe produce better quality hides because of better breeds as well as better nutrition. And zebu cattle from the communal sector fattened for supplying to the abattoirs also produce better quality hides than those produced by pastoral cattle, indicating that nutrition plays a role in improving both meat and hide quality.

Mature cattle, goats and sheep normally do not require high dietary feeds and largely depend on coarse feeds high in cellulose content. However, due to various ecological conditions within the sub-region and sometimes within the same country, some of the animals are usually exposed from young age to seasonal drought conditions, poor pastures and low quality highly lignified forage.

Although nutritional deficiencies are usually non-specific and are often the result of low plane nutrition, insufficient intake of feed energy is the main cause of retarded growth. Hides and skins from areas where feeds available for the animals are inadequate usually bear tell-tale quality characteristics. The hides are normally of small size, mainly lights and mediums with thin substance. The grain structure is normally tight but is usually degraded by the environment, which is normally thorny and bushy. These types of hides and skins originate mainly from marginal areas where animals are not reared in ranches. The post-mortem preparation of hides and skins is generally poor so that these materials result in high lime-loss rejects percentages when processed in the tannery (Kiruthu et al., 2000).

Moreover, the damage caused to the hides and skins under pastoral and smallholder husbandry conditions when the animal is alive is mostly attributed to various types of mechanical actions and is classified as mechanical damage. Loss of value due to these types of damages is perceived by stakeholders in the industry to be around 40% of the total value of hides and skins for Africa in general. The defects are identified according to the type of damage caused or by the causative agent.

4.1.1 Scratches and horn rakes

Scratches are amongst the most common mechanical damages found on both hides and skins in all four countries as elsewhere in Africa. This is because most of the livestock is concentrated in areas of open savannah grasslands or areas with fairly dry environment where thorny bushes are found. Multiple scratches are therefore quite common. Scratches give leather an anaesthetic appearance and if deep, cause considerable loss of tear strength especially on skins. The quality is also degraded as tanners try to obscure the faults on the grains by embossing or printing, which also increase processing costs. Consequently, the raw materials fetch lower prices.

On cattle hides *horn rakes* are a general problem as animal husbandry practices in these countries discourage dehorning. Therefore cattle injure the hides mostly in crushes, in fights or during transportation. In some cases the damage is quite serious as the wound is generally deep. Another type of serious damage is caused in many countries in goads, and other pointed instruments, which produce actual punctures, usually in the most valuable part of the hide, but the practice is not common in the Sudan.

4.1.2 Branding

The widespread and indiscriminate practice of branding cattle with hot irons causes high losses in the hide and leather industry. Anything from 10-40 percent of the value of the hide is lost by the unsightly and irreparable damage caused by branding. The practice of branding is common due to prevalence of cattle rustling and farmers use prominent branding in order to identify their animals. There are also pastoral tribes who use branding as treatment method for certain diseases especially by applying hot irons on glands. Unfortunately most branding is done on areas of hides, e.g. on the back and rumps, which have high value (Figure 4.1).



Figure 4.1: Extensive brands on cattle

4.1.3 Tick bites

Infestation of ticks on livestock not only causes damage to hides and skins but also spread of livestock diseases, as ticks are important vectors of tick-borne diseases. Unfortunately in many African countries animal husbandry measures for controlling ticks are expensive due to the use of chemicals (acaricides) and therefore a lot of farmers leave their animals unprotected from ticks. Among the four case study countries, only Zimbabwe has an extensive infrastructure for dipping animals as well as for providing other veterinary services. Compulsory dipping of pastoral animals also protected the commercial sector. However, recent changes due to the land resettlement scheme have apparently led to a disruption in the dipping practices, which may negatively impact on the livestock sector in general and the quality of hides and skins production.

One of the major causes of down grading of hides and skins emanating from East and Central African countries is attributed to tick-marks. The tick-marks are cause by ticks, which are found mainly in tropical and sub-tropical countries. These parasites attach themselves on the hides and skins in order to feed on the blood of the host animal. When in unfed state, they are usually flat but when engorged with blood, they become almost spherical.

Heavy infestation of these parasites can cause substantial loss of blood from the host animal making it weaker. The ticks are also major disease vectors and cause transmission of diseases e.g. East Coast Fever, anaplasmosis in Tanzania, Streptothicosis and Nodular Dermatofoliosis

in Senegal. More specifically for the hides and skins industry, they damage the skin in areas where they attach themselves which become inflamed and sometimes permit entry of other parasites e.g. screw-worms and various microbes. The healing of areas of attachment normally leaves behind pinpoint scars and the raw material cannot be used for full grain leather. Raw materials affected by tick-infection are therefore down-graded and are of reduced value to the leather industry

Another important skin condition due to ecto-parasite is caused by Mange or scab, which is fairly common in all the four countries. This is a skin disease, which is caused by various species of mites infesting domestic animals. The distribution of these ecto-parasites is almost universal. The parasites are minute, rounded or oval, short-legged, flat organisms, which are normally host-specific. In the recent past a condition caused by Sheep ked infestation has been found to cause substantial damage to skins especially in Ethiopia.

4.2 Slaughter facilities and slaughter practices affecting quality

Slaughter facilities in the case study countries as elsewhere in Africa consists broadly of slaughter slabs in rural and urban areas, mechanised abattoirs/slaughter houses, and non-specific places used by farms and households. The type of facilities used in a country also determines quality of hides and skins produced.

4.2.1 Homestead slaughter

Most of the small stock is slaughtered in homesteads and therefore this is scattered and periodic. Small stocks (goats and sheep) are mainly killed during festivities, either for religious purposes or wedding celebrations. The methods of slaughter and conditions vary widely not only from homestead to homestead but also the practice in different countries. For instance in the Sudan the flaying methods employed in abattoirs is pulling of skins (Figure 4.2) instead of flaying with knife practiced in other countries. In Senegal pulling as well as knives and machines in abattoirs are used for flaying. Pulling reduce incidence of flay cuts as the skins are pulled off the carcass. The different methods of slaughter reflect directly on the quality of raw skins obtained with the pulled skins having less slaughter defects and therefore fetching a better price. This slaughter method however cannot be applied on cattle at this level due to physical limitations, as the animals are large.

4.2.2 Rural slaughter slabs

Most livestock slaughtered in rural slaughter slabs is done under very poor conditions. While goats and sheep are slaughtered mainly in homesteads, cattle in many countries are slaughtered in poorly equipped slaughter points where the infrastructure is sometimes a slab of concrete, under a tree or using poles for hoisting carcasses. These facilities are normally located adjacent to butcheries in various trading centres. The slaughtering therefore takes place in scattered areas and often without adequate supervision.

The tools used in these facilities or in homesteads are usually rudimentary and cause damage to the hides and skins during slaughter. In many cases running water is not available and hides are not washed off after slaughter. More often than not lifting blocks for raising carcasses are not available and therefore all operations are carried out on the floor. The general situation, however, varies greatly from country to country depending on the capacity and availability of veterinary extension services as well as the legislation, if it exists, governing operations of these facilities.



Figure 4.2: Skinning of sheep by pulling in Sudan

4.2.3 Mechanised abattoirs/slaughter houses

Among the four countries, only Zimbabwe has abattoirs and meat processing plants of high standard designed to export meat to Europe and other developed countries. Mechanised abattoirs used to provide about 90% of the hides in Zimbabwe as the commercial farms with high off-take rates used to supply animals to the abattoirs. Resent land resettlement and accompanying disruption has initially increased supply of animals for slaughter hence increased supply of hides, but this has now levelled off and a reduced supply from the commercial sector is envisaged. Most of the hides and skins in the Sudan also come from abattoirs and slaughterhouses. In Dakar, 45% of the hides and skins come from slaughterhouses. In Tanzania, less than 10% of the animals are currently slaughtered in organised slaughterhouses.

The abattoirs and slaughterhouses are generally located in towns and cities where the high level of meat consumption and veterinary hygiene requirements dictate concentration of slaughter in centralised abattoirs. In Zimbabwe, the location of these facilities is partly dictated by the distribution of commercial farms, which are the main source of slaughter cattle. Municipalities or Governments own most of these facilities but increasingly there is now a lot of private participation in abattoir ownership, though actual extent in each country could not be established. Some of the abattoirs were built a long time ago and while maintenance is largely inadequate these facilities still provide hygienic slaughter and are equipped with refrigeration rooms. Unfortunately the high cost of running these large facilities compared with smaller unregulated abattoirs have over the years diverted slaughter from the centralised points. As a result, smaller abattoirs are mushrooming and in some cases unsupervised backyard slaughter due to weak legislation and supervisory capacity in many

cities are expanding in Tanzania and Zimbabwe. In Senegal also, backyard slaughtering is expanding.

In most cases poor flaying, lack of skills and absence of for instance hide pullers in modern abattoirs lead to production of low quality hides and skins. The post slaughter handling of raw materials exacerbates the prevailing bad situation. The following defects on hides are directly caused by slaughter and post slaughter operations.

Rubbed grain: This damage is produced by dragging the unflayed carcass over rough and uneven ground and can even be caused by rough concrete. The grain is generally rubbed off or ‘frizzed’ and is a definite cause of loss in value to the tanner. Preventative measures can be adopted in the field or slaughterhouses. Stout poles could be used to raise the carcass off the ground or the carcass could be supported on poles, which are then dragged along. Slaughterhouses should have smooth floors where the animal is flayed which eliminate or reduce trauma caused by dragging.

Bad pattern: This is caused by indiscriminate ripping. ‘Ripping’ being the initial opening cuts down the centre of the belly and the four legs. The correct method of ripping ensures a uniform pattern, with bellies of equal width, well opened shanks and dewlap, a round butt and adequate tails.

Flay cuts, scores or gouges: This damage is caused by the careless use of the knife or by the use of unsuitable knives. Flay cuts constitute the most serious mechanical defects on hides and skins. Lack of proper tools like the rounded flaying knives, lack of flaying skills and carelessness lead to loss of quality or outright rejection of raw hides and skins.



Figure 4.3: Flay cuts on air suspension dried hides

4.3 Causes and impact of post slaughter defects on quality

Investigations carried out by UNIDO Africa Leather Programme found that at least 60% of hides and skins defects found in Tanzania are attributed to defects, which are caused during slaughter, due to handling and preservation procedures. In the Sudan, damages to hide and skins during and after slaughtering is higher than the damage caused while the animal is alive. Loss of quality of hides and skins due to post-slaughter activities is therefore very significant for the leather industry and has contributed to a large extent to the poor image of raw materials of African origin. The following are some of the damages caused during flaying, handling and preservation of hides and skins:

4.3.1 Grain cracks

Drying in a crumpled condition and by multifolding causes grain-cracks or any pressure and strain, combined with low moisture content will result in this troublesome damage. The theory that excessive strain, exerted by the tension of the strings when frame or “tent” drying, causing grain-cracks has now been disproved.

Folding and unfolding when the hides are dry will always be a danger and cracks are very frequently caused in this manner (Figure 4.4). The initial fold along the ridge of the back after framing should always be done when the hide still retains some moisture. If the hide is dried out before folding it should be “conditioned” by leaving it over night and folding early in the morning.



Figure 4.4 Dry salted sheepskins- folded and strapped

4.3.2 Bacterial damage

Bacterial damage is sometimes not evident straight away and indications or signs of putrefaction are loss of hair in some areas (Figure 4.5) and an unpleasant smell. It is essential to wash well early after flaying, clearing off all traces of blood and dirt and then either salt down, brine or air-dry as soon as possible. The explanation of early bacterial damage will be difficult to convey to the traders who may not actually understand what is actually happening to his hide during drying before air drying or salting.



Figure 4.5: Putrefaction- Bacterial damage on wet-salted hides

4.3.3 Mechanical damage

When hides are being prepared for air-drying by the framing method, it is customary to remove excess flesh left on the hide by de-fleshing. This is normally done using a concave knife on a table where the hide is spread with the flesh side facing up. Most times the operators taking off the flesh do not take care as they try to make the hide too clean by getting maximum amount of flesh out. During this process hides suffer flay cuts and gouges are made.

4.3.4 Defects during wet salting

In wet and dry salted hides the salt acts as bacteriocidal agent as well as a preservative against insect damage, but certain halophyllic bacterial (salt loving) can thrive in a salted hide and can give rise to a common defect known as “red heat”.

Defects likely to appear during wet salting prior to drying mainly fall into two categories, firstly those arising from careless cooling, washing, piling salting and draining and secondly, those arising from the use of dirty used salt or the wrong kind of salt.

Attempts to salt down before the hides have lost their natural heat should be avoided and every effort to keep the hides cool, by washing in cold water, keeping in the shade, should be encouraged especially in hot countries. There is however often delay and laxity in initiating timely preservation processes.

Uneven salting, poor quality salt, attempts to pile too high, and the use of unsatisfactory premises are some of the causes of defects during wet-salting.

In order to have good preservation use of approved bacteriocides is encouraged by incorporating this into the salt or brine. However use of arsenic compounds and pentachlorophenols is banned by many importing countries.

4.4 Damage caused during storage, packaging and transportation

4.4.1 Scratches and tearing

Even after the hides are properly dried or cured they may still suffer damage by careless handling. Inadequate strapping when the hides are baled can do serious damage by the loose shanks and edges getting torn. Outside hides of loosely packed bales have been almost torn in half when being moved and thrown about during transportation.

Excessive pressure by baling presses will cause tearing of the edges and cracking at the folds and attempts should be made to place protective materials underneath the straps. Wet salted stocks can suffer damage by abrasion if baled singly hair side out.

4.4.2 Wetting and contamination

If hides are allowed to get wet in shipment or in transit, bacterial action (putrefaction) will occur. Contamination in transit can cause varying degrees of damage, the worst being direct contact with seawater and iron decks. The resulting iron salt stain being permanent and a serious loss to the tanner.

4.4.3 Insect infestation

Hides and skins are prone to insect damage from the day they are stripped from the animal until they are first processed in the tannery.

The most destructive of these insects, which attack hides and skins are members of a beetle family, the larvae of which are distinguished from all other beetle larvae by their hairy coats. They are commonly known as the hide or leather beetle. All hides and skin prepared in tropical countries are most liable to this extensive destruction especially in warm and humid coastal areas, where conditions in store favour rapid multiplication of these larvae on untreated skins.

Another insect causing damage of similar nature is the white ant but the loss through destruction is not so serious as that of the hide beetle. This damage can also be eliminated by the application of insecticides.

4.5 Relative importance of different factors affecting quality

There is no empirical quantitative data to rank the various factors affecting quality. Also there is no general consensus among stakeholders at various stages in the production and processing chain about the relative importance of the factors affecting quality and where to begin any action for improvement. Each stakeholder looks at the problem from its own perspective. However, taking the viewpoints of different stakeholders with whom discussions were held during field visits, a qualitative assessment of relative importance of different factors affecting in each of the case study countries is presented in Table 4.1. It appears that post slaughter defects are the most important at the present moment and these can be overcome with better skill, management and information dissemination in order to improve the quality of current supply.

Table 4.1 : A qualitative assessment of the relative importance of different factors affecting quality of hides and skins in the case study countries

Country and product		Level of significance of the problem by main category		
		Animal husbandry Defects e.g. branding	Slaughter house defects, e.g. flay cuts	Post slaughter defects e.g. putrefaction
Tanzania	Hides	****	****	****
	Skins	*	****	****
Sudan	Hides	****	****	****
	Skins	**	**	**
Senegal	Hides	****	****	****
	Skins		***	***
Zimbabwe	Hides	*	*	*
	Skins	*	*	*

Key : **** very high, *** high, ** moderate, * low

A parallel study looking at the quality problems from the importers' perspective has concluded that European importers of raw hides and skins perceive poor quality, i.e. 'prevalence of defects' as the most important issue related to imports from Africa (TLC, 2002, p.41). Many tanners are apparently prepared to accept pre-slaughter defects as a nuisance (that can be accommodated) as long as the hide or skin does not break up (because of improper preservation) during processing (ibid., p.34)

4.6 Impact of poor quality on exports and prices

Defects or poor quality lead to reduced net output (defective parts have to be trimmed out) of the raw material as well as reduced price as the hide or skin can't be used in full where it might fit best, instead it may be used for secondary purposes. Poor quality also increase cost of processing thereby reduce the competitiveness of the product for export or for production of value added products at home.

Overall, poor quality creates a poor image of the product in both domestic and world markets and it has long term effects on potential export and export earnings. For example, hides and skins from some countries, e.g., Ethiopia, Kenya, Zimbabwe have fairly good reputation in the world market so they can export more easily than other countries and can also get better price as the world market pays premium prices for higher grade products. Although average quality of African hides and skins is poorer than those produced in the developed countries, each country produces at least a certain proportion of better quality hides and skins but because of poor image of the product from a given origin, these countries may not get fair price for their higher grade products. Apparently, the international and national trading systems also have bottlenecks that deprive individual countries from getting fair price for their better grade products. International trade is largely controlled by agents and brokers who mediate between exporters and importers. Domestic traders and tanners do not have brand names or other means for their products to signify and guarantee quality in the world market so they depend on brokers and agents. Importers also depend on brokers and agents who usually assembly supply from various sources and deliver to importers with statement of origin. Importers usually do not have any mechanism for tracing the origin of the product, they depend on the guarantee of the agents and brokers. Therefore it may be possible for

agents and brokers to make supernormal profits on supplies from countries with poor image by delivering the higher grade products from these countries to importers in the name of those countries which have better reputation or at least by blending the higher grade products from different sources and delivering them as products of a better reputed country. In the absence of traceability of each lot, the importer may pay a fair price for the defined grade but actual suppliers may not benefit from this as the margin may go largely to the intermediaries. An adequate and objective assessment of the national and international marketing systems will be required to understand the true nature and dimension of this problem and to identify options to overcome them.

5. Structure and Operational Status of Hides and Skins Processing Industry

5.1 Tanzania

During the 1975-1995 period, the government gave leather sector a high priority for development and established several tanneries and leather industries under the supervision of the Tanzania Leather Associated Industries (TLAI) for producing semi-finished and finished leather and various leather products. Although these industrial units did not always run efficiently and on profit, they operated under protective economic policies and produced significant amount of leather products for the domestic market. Once economic liberalization programme was started in the mid 1980s, some private investors also started business in the sector. However, by mid 1990s, under the structural adjustment programme, all large tanneries and leather industries were privatized in order to make the sector more efficient, dynamic and profitable. But this objective has not been realized. All the large tanneries are non-functional, only three smaller tanneries are operating at 20-30% capacity producing raw and wet blue hides for export rather than further processing (Table 5.1). The shoe industries are also non-functional. As a result of these, 600 jobs in the tanning sector and another 800 jobs in the footwear sector have been lost. Some of the reasons are as follows.

5.1.1 Poor quality hides and skins

As mentioned earlier, poor animal husbandry and disease management practices lead to production of poor quality animals and poor quality hides and skins. Then improper slaughtering and flaying practices cause further damage to hides and skins. No public grading of hides and skins is practiced at slaughterhouses, so supply is not differentiated by quality and value. Better quality product therefore obtains no price benefit, thus providing no incentive for skilled slaughtering and flaying. As a result of all these, tanneries get poor quality hides and skins, and often they get product of unpredictable quality, and spend extra cost for grading and sorting. No reliable statistics on grade classification exist. A survey of slaughter points in Dar es Salaam in 2000 indicated that of the total number of hides produced, only 10% were of grade 1, 20% grade 2, 35% grade 3, 30% grade 4 and 5% reject (CFC project, 2001). Another document produced by a Task Force of Stakeholders reported that over 50% of all hides and skins are of reject category and less than 15% are of grade 1 and 2 (Task Force report, 2002). Irrespective of the discrepancy in statistics, the problem is a serious one as with such poor and unclassified supply, tanneries need to spend more time on grading before processing, cost of processing poor quality product is high and the cost become even higher at advanced stages of processing because only a small proportion of supply eventually gets processed into quality finished leather. Although there is demand for higher quality products at domestic and export markets at higher prices, current practices are reducing the current and potential value. Consequently, everyone in the chain – farmers, hides collectors, traders, slaughterhouses and tanners – see hides and skins as low value items not deserving enough attention or proper treatment.

An on-going multi-country pilot project sponsored by the CFC and run by the ESALIA has developed a manual or booklet for grade classification based on certain indicators. The hides and skins handlers at different stages are being trained to use the booklet for grading and traders and tanners are also encouraged to pay incentive prices for better grades. The project has also developed a composite index based on a set of indicators to classify slaughterhouses and those achieving a benchmark index are given a certificate of quality (similar to a trade

Table 5.1: Processing industry in Tanzania: capacity and operational status of selected firms, April 2002

Plant name	Ownership	Installed capacity	Current status	Remarks
Africa Tanneries Ltd, Mwanza	Private since 1993	10 million sqft/annum	Closed	Operated during 1994-97, producing leather for local and export market; stopped due to lack of working capital, management problems and environmental problems
Tanzania Leather Industries Ltd, Morogoro	Private since 1992	10 million sqft/annum	Closed	The factory needed major rehabilitation, which was started soon after privatization but not finished yet.
Moshi Leather Industries Ltd	Private since 1993	10 million sqft/annum	Operating at 30% capacity	After take over, rehabilitated wet blue sector; exports wet blue leather and sells finished leather domestically
Bora Industries Ltd	Private since 1995	4.6 million pairs/annum	Operating	Leather shoes are not produced due to fear of competition from cheap imports including second hand shoes; producing only rubber products
G & T Shoe Co, Morogoro	Private since 1992	4 million pairs/annum	Closed	Operated during 1993- Feb 1997. Closed after a fire breakout.
Lake Trading Co Ltd, Kibaha	Private	4 million sqft/annum	Operating	Producing wet blue hides for export; skins supply inadequate and irregular making uniform quality production difficult.
Afro Leather Industries Ltd	Private	5 million sqft/annum	Operating 25% capacity	Producing wet blue for export

mark or brand name). This certificate is expected to increase competition among slaughterhouses to produce better grade hides and skins. The launching of the Tanzania component of this project was delayed due to inadequate internal arrangements, its results are yet to be evaluated but the overall project seems to have potential to make significant contribution to improve quality.

5.1.2 Management of industries

At the time tanneries and leather industries were established by the government under the supervision of Tanzania Leather and Associated Industries (TLAI), this was a good public policy initiative to develop local material based industry for income and employment generation, earn foreign exchange and supply cheap leather products to domestic consumers. However, as everywhere else state management of these industries was not efficient. So labour productivity was low and cost of production per unit was high yet under a protective economic policy these enterprises were functioning. After the initiation of in any way. the structural adjustment programme, hides and leather sector was one of the first to be privatized. All the big enterprises were sold to the private sector expecting they will be more efficient, dynamic and profitable as well as serving the interest of the nation. Good economic incentives, financial assistance including investment in improving pollution control systems were provided to some of the enterprises. Yet most eventually closed operation after short periods of operation for a variety of reasons e.g. management problems, lack of working capital, low world market price for the products produced. However, some stakeholders in the industry now believe that the privatization was done in a hurry, with over enthusiasm to get rid of loss making enterprises and make account books look better without putting in place supporting policies to make them work under a changing economic environment. Also not enough attention was given to identify appropriate buyers with adequate experience in the industry who would be able and willing to make adequate investment in updating the technology, improve the skills of workers and make the enterprises work under the evolving policy and economic environment.

The Leather Association of Tanzania (LAT) was formed by stakeholders in the industry for promoting the sector, improve investment environment and capacity through its own efforts as well soliciting support from the government and other agencies. However, in the past weak leadership, lack of adequate interest of members and lack of financial resources have made the association less effective. Recently, a new leadership team has taken responsibility of the association, the team has taken active role in the national task force for revamping the industry and a more proactive role on other aspects of the association is expected.

5.1.3 Skills and manpower

There is a shortage of tanning skills in the country and since most tanneries are not functioning, demand for skills and further training is limited. Tanzania Institute of Leather Technology (TILT) was established by the TLAJ to train skilled manpower for the industry and civil construction and equipment installation was completed under UNIDO assistance.

However, the institute never came into operation partly due to the decline of the leather sector and reduced demand for manpower and partly due to lack of funds. In 1990, the institute was supposed to be transferred from TLAI to the Ministry of Industry and Trade but was never done. Later it was leased to an entrepreneur who is using its production facilities to produce leather products while other infrastructure and training facilities remain idle. Its fate is still to be clearly decided. This is another vicious circle, which needs to be broken to improve quality of hides and skins production and processing.

5.1.4 Market situation

The tendency of business firms in the sector for trading rather than manufacturing, i.e. exporting raw hides and skins rather than processing them for value addition, is partly the result of the market situation. The Tanzanian products do not have a good image in the world market as Ethiopian and Kenyan products do. Moreover, countries like China, Pakistan, India, Egypt import raw hides and skins while European Union import wet blue hides and skins but the price offered by EU is not sufficiently attractive, so traders find exporting raw hides more rewarding. Some Asian governments provide policy support to the hides and skins industry to promote exports earnings. Integrated, more mature tanning and leather products companies in some developing countries, e.g., China and Pakistan, have lower production costs and high value-added end products and can therefore pay a higher price for raw Tanzania hides than can local tanners. This also provides incentive for rawhides export rather than processing. This way they also reduce the problem of labour management and related problems. Another disincentive for processing is that there is little commercial import of chemicals for the tanning industry due to limited market, so tanners have to import individually which is both costly and cumbersome due to the import procedures to be followed. Local tanners can lower costs by purchasing and working with lower quality skins that are not exportable, and that is what some do to a limited extent.

With economic liberalization, imports have become easier. The result is that cheap shoes and secondhand shoes are imported to meet domestic demand with limited buying power. There is minimal border control between Kenya and Tanzania so Kenyan leather and leather products, where scale economies are far greater, can come across with low costs. On the other hand, due to a reputation of better quality, Kenya has a competitive advantage for importing rawhide from Tanzania for re-exporting at a higher price and for processing and exporting value added goods. This has also limited the incentive for value added processing throughout the production chain in Tanzania. Current production techniques and facilities are inadequate to produce at cost that will provide effective competition with the secondhand shoe market. Imposition of import tariffs may not solve this problem because this will raise the overall cost to all consumers, who will then be obliged to higher prices for lower quality domestic shoes from low-end leather. A level-playing field for domestic footwear manufacturers should be established by maintaining a balanced tax and tariff regime between imports and domestic products.

5.1.5 Cost of production

Slaughterhouses are not well organized and well administered, so not many animals are slaughtered in these facilities, instead scattered slaughtering is common. This makes collection of hides and skins time consuming and costly. In smaller town and markets, there is not a large quantity of supply in any one place or geographic area, which combined with poor transport network make raw material collection costly. This structure does not allow cost savings for either producers or traders and tanners. Electricity, communications and transport costs are high in country compared to some of its neighbours, resulting in higher processing cost of material. Also 20% VAT is higher than some of the neighbouring countries, making the cost of processing uncompetitive.

5.2 Zimbabwe

5.2.1 Structure of the industry

There are four components of the industry: slaughter houses and abattoirs, tanneries, footwear factories, and marcquinerie (small leather goods producers). There are 22 registered abattoirs slaughtering cattle, sheep, goats, ostriches and crocodiles but there are 59 other smaller abattoirs or slaughterhouses scattered throughout the country. Among the registered ones, the Cold Storage Company, a parastatal, has 5 large abattoirs cum meat processing units of which 3 are currently functional and the other 2 have been closed due to inadequate export orders. There are 8 tanneries with varying capacity and production line (from tanning wet blue to finished leather) affiliated to the Leather and Allied Industries Federation of Zimbabwe (LAIFEZ), 24 footwear factories and 35 small leather goods production enterprises (Table 5.2). Together they employ about 2700 people. A number of additional tanneries established in the Export Processing Zone (this is not actually a physical

Table 5.2: Hides and skins industry structure in Zimbabwe, 2000

	Abattoirs	Tanneries	Footwear	Marcquinerie (small leather goods)
Total number (N with >10 workers) (N with <10 workers)	22	8	24 (17) (7)	35 (27) (8)
Number with effluent treatment	na	2	na	na
N of employees	na	670	1581	525
Technology age, yrs	na	20	20	10
Value of production, \$000				
1999	na	12,000	16,107	3,000
2000	19,800	12,000	14,864	2,000
Value of export, \$000				
1999	na	7,961	3,286	2,303
2000	1,288	6,635	3,228	1,575
Value of imports, \$000				

1999	1,865		504	20
2000	1,356		504	20

Source: PISIE survey on ‘diagnostic study on leather, footwear and leather products in Africa’, 2002 by ESALIA

area but a concept applied to a special category of enterprises licensed to export their products) which are based mainly in rural areas and they do not normally have capacity to tan beyond wet blue. While some LAIFEZ affiliated tanneries have good effluent control facilities, others don’t have and the EPZ tanners are apparently not required to strictly follow this guideline.

The LAIFEZ affiliated tanneries have a total capacity to soak 680,000 to 750,000 hides per annum. In 2001, they soaked 520,000 cattle hides and 260, 000 goat and sheepskins, including certain quantities soaked on contract basis for non-member third parties (abattoirs and hides traders). This allowed about 70% capacity utilization. The capacity of the EPZ tanners for soaking could not be ascertained.

5.2.2 Policies and performance of the industry

There has been a ban on the export of raw hides since the mid 1980s. Abattoirs and hides and skins traders are supposed to supply raw hides to the local tanneries for processing, who in turn are supposed to supply finished leather to the domestic footwear factories as well as export. This policy enabled a highly integrated and efficient hides and leather industry producing quality products for domestic market as well as export. However, in recent time, several uncoordinated actions have led to some disintegration of the process and under-utilisation of the industrial capacity.

First, in spite of a ban raw hides export, about 83, 000 pieces of hides were exported in 2000 and perhaps a little smaller number in 2001 with government permit from the Ministry of Lands, Agriculture and Rural Settlement though LAIFEZ member tanneries were running at 60-70% capacity due to shortage of raw material. These permits have been issued to tanneries established in the EPZ as those tanneries are apparently not subject to the rawhides export ban by virtue of their export oriented status.

Second, there is currently a partial ban on the export of wet blue hides; any export has to be approved by the Ministry of Lands, Agriculture and Rural Settlement. In reality, the local tanneries have the capacity to process about 300,000 to 350,000 hides per annum to finished leather, therefore limited export of wet blue is possible, especially lower grades, which may not be useful for further processing. Such export may allow foreign exchange earning for importing chemicals and other machinery for the leather sector.

About 245,000 pieces of wet blue hides were exported in 2000 and permits were issued for exporting 300,000 in 2001 though actual export figures for 2001 are not available yet FAO estimates suggest a secular decline in export during 1995-2000 (Table 5.3). However, these export permits have also been largely issued to EPZ tanners, who exported both good and low quality hides and the earning could not always be ploughed back to the leather sector. It

is alleged that some abattoirs and hides traders also export through the EPZ tanners to benefit from foreign exchange earning. LAIFEZ member tanneries are apparently strictly monitored before issuing export permits for wet blue hides. The result has been reduced production of finished leather, reduced supply to footwear industries leading to their reduced capacity utilization. It has been suggested that capacity utilization in the footwear factories reduced by 30-40% in the last 2-3 years.

Third, currently the currency is highly over valued, the parallel market rate is about 5 times the official exchange rate. By regulation exporters have to surrender 40% of the export proceeds to the central bank at the official exchange rate and may use the remainder for importing raw materials, chemicals and machinery for the industry. It has been suggested that the remaining 60% of export earnings are not often adequate for necessary imports while the local currency equivalent of the 40% export earnings are not adequate for operating expenses as wage rates need to be kept in line with inflation rate as far as possible. Clearly, the macroeconomic policies are favourable to EPZ exporters of raw and wet blue hides and less favourable to tanners for processing.

Table 5.3: Cattle hides and skins export, Zimbabwe (1995-2000 average)

Items	Mean qty mt	Annual growth rate %	Mean value, US\$000	Annual growth rate %
Hides wet-salted	1,242	-3.13	1,673	-0.49
Hides dry-salted	80	na	208	na
Goatskin wet-salted	135	-6.28	157	-19.88
Sheepskin with wool	40	3.36	47	-18.31
Total hides and skins	1,584	3.69	6,491	4.50

Source: FAOSTAT, 2002

5.3 The Sudan

Among about 15 slaughterhouses that are designed to cater for export of meat, only four are currently operational (Table 5.4). Most cattle meat is consumed domestically while there is a large export market for mutton. The killing rate of these export-oriented slaughter houses ranges from 300 sheep/hr to 150 sheep/hr. The cattle killing rate ranges from 50/hr to 30/hr. These slaughterhouses also have chilling capacity ranging from 20 to 150 tons/day.

There are about 17 tanneries operating in Sudan at the moment, of which 4 have effluent treatment facilities. However, the machineries and technology being used currently are about 20 years old. The tanning sector is estimated to provide employment for about 2000 employees. According to the Chamber of Commerce estimates, the value of finished and semi-finished hides and skins in Sudan in 1999 and 2000 was US\$ 13 million, and US\$ 20 million, respectively.

There are about 550 footwear workshops, which employ less than 10 workers each. There are about 12 footwear enterprises, which employ about 10-25 workers each, while those that employ more than 25 workers are 10 in number. As is the case with the leather manufacturing sector, the technology and machinery used in the footwear production is as old as 20 years. Currently, the footwear sector employs about 1000 employees, with an estimated annual production of 7.5 and 5.0 million pairs in 1999 and 2000, respectively. There are only 4 enterprises manufacturing small leather goods, clothing and other leather goods and employ less than 10 workers each, operating with technology and machinery about 20 years old.

Table 5.4: Slaughter houses currently operational in the Sudan

Name	Site	Killing rate/hr		Refrigeration capacity (tons/day)	
		Sheep	Cattle	Chilling	Freezing
Kadero	East Kadero Village, 15 km North of Khartoum	300	30	150	60
Western Omdurman (Ghanawa)	West of Abu Seid town	150	50	70	--
Gezira Meat Company (Gemco)	Elgadid Ethawra, 50 km south of Khartoum	300	30	200	60
Assabaloga	Dongola- Omdurman Road, 9 km North of Sug Libya	150	30	20	

Source: field survey

Between 1993 and 2000, there was a ban on export of raw hides and skins in Sudan, except for special licensees. The ban was intended to encourage local tanneries. During the ban excess supply of raw hides and skins was being smuggled out or exported by the special licensees. The ban was lifted in January 2000, as a result of the liberalization policy of the government of Sudan. Moreover, after the liberalization policy, prices of raw hides and skins, and leather and leather products are determined by the operation of market forces. A tariff of 15% is imposed on export of raw hides and skins.

Most abattoirs are privately owned, although the Ministry of Animal Resources and Fisheries regularly inspect the abattoirs. Most flayers are licensed by the Department of Hides and Skins under the Ministry. Two divisions exist under the Director General for Quarantine and Slaughter Houses within the ministry. One division is responsible for quarantine services before the animals are slaughtered and the other division is responsible for inspection of slaughterhouses to ensure quality of meat, and hides and skins.

Some of the structural problems in the industry are due to the following factors:

5.3.1 Poor quality hides and skins

Sudan is estimated to produce 2.1 million pieces of cattle hides, 8.5 million pieces of sheepskins and 7.0 million pieces of goatskins annually. However, as indicated earlier, the quality of hides and skins is not very good. The loss in value due to quality problems appears to be more serious for hides than skins. Most of Sudan's cattle hides are of lower grade with 60% categorized under grade 3 or grade 4, suggesting the need to focus on improving quality of cattle hides significantly (Table 5.5). However, most of sheepskins are considered as high grades with 60% categorized under grade 1 or 2. Half of goatskins are graded as grade 1 or 2. Hides and skins traders perceive that most of the quality problems come from the abattoirs due to inappropriate flaying than from diseases and parasites. Lack of skilled manpower to preserve hides and skins is cited as another problem, although abattoirs do not seem to recognize shortage of trained manpower for slaughtering and flaying as a problem.

Table 5.5: Structure of grades of raw hides and skins in Sudan

Grade	% Cattle hides	% Sheepskins	% Goatskins
Grade 1	10	40	30
Grade 2	30	20	20
Grade 3	40	20	20
Grade 4	20	20	30

Source: ESALIA survey

Hides and skins merchants report that delayed delivery of the raw hides and skins from abattoirs also cause quality problems due to bacteria. Bactericide treatment could alleviate the problem. Normally, hides and skins should be treated within 3 hours of flaying. Abattoirs may not have the incentive to care for the quality of hides and skins since they charge their fees on per animal basis. Lack of awareness of the importance of hides and skins by abattoir employees may also be contributing to the quality problem. Green fleshing is done mostly manually and affects quality due to cuts and holes. The butchers sell the hides and skins to the hides and skins traders, and there is no direct contact between the abattoirs and the hides and skins traders as far as the marketing of the raw hides and skins is concerned.

5.3.2 Management of industries

The Hides and Skins Improvement Centre of Sudan was established in 1954. It is mandated to oversee the implementation of hides and skins legislation, give training and determine grades and standards. As a federal institute, the centre was operating effectively prior to the decentralization process. After decentralization, however, the effectiveness of the centre has reduced significantly due to decline in funding, lack of equipment and facilities, and trained manpower. The centre provides practical training to veterinary students and others on flaying, drying, salting etc. Training on slaughtering and flaying is given at abattoirs by staff of the centre.

Licenses for hides and skins business are issued by municipalities, with the approval of veterinary inspection based on assessment of the premises taking into account water supply, storage facilities and manpower. Nowadays, environmental concerns are taken into account in licensing hides and skins traders.

The government does all inspection for quality control. Abattoirs give slaughter service and transport export meat to airport. Almost all abattoirs were found to be operating below capacity. Export tax of 5% is levied on hides and skins in Sudan. Lack of use of detailed grades and standards is one major problem of the hides and skins sector in Sudan, since hides and skins are graded based on size and weight only. Other quality criteria are not explicitly taken into account. This practice undermines the incentive to improve quality since there is no reward for better quality hides and skins.

5.3.3 Skills and manpower

The government of Sudan is increasingly withdrawing from interventions to improve the leather industry, although it is still active in quality control, grades and standards and extension services. As a result the Sudanese Leather Chamber was formed to take over the responsibility of taking measures to improve hides and skins.

The National Leather Technology Centre in Khartoum, a government institute that has been operating since 1963, gives short-term training on leather technology and conducts research on leather production. It provides training on leather manufacture, footwear design and development and quality control. It operates under the Department of Industrial Research and Consultancy Centre (IRCC). Some Sudanese universities also provide training in leather technology. For example, Gezira University College of technology gives training in leather technology.

For updating workers skills in the hides and skins, and leather sectors, fellowships from UNIDO, FAO, CDE, and the EU are sometimes available, although declining significantly now. A proposal on capacity building in the leather sector has been proposed to UNIDO. For product quality improvement, there is a joint committee with the Sudan Corporation for Standards and Meteorology. Assistance from the Centre for Development of Enterprises to upgrade the capabilities of staff and managers is being expected. A CFC funded project on value added leather products in COMESA countries is expected to benefit the National Leather Technology Centre in Khartoum.

5.3.4 Market situation and production costs

While the liberalization of the domestic market for hides and skins, leather and leather products and footwear is good news for the sector, competition from low cost imported products which are smuggled to the country is considered a major problem for the development of the sector. Sales and promotion of products is done in local markets, regional trade fairs, international trade fairs and through the internet. However, promotion is considered inadequate. With improvements in quality, the export market for raw hides and skins and semi-processed leather appears to be large.

There appears to be strong labour union in Sudan, although abattoirs, tanners and merchants do not complain about labour cost. However, tanners and hides and skins processors complain of the high rate of electricity cost. Tanners also consider that taxes levied at various levels (central, state, local, value added, and profit) are high. Moreover, pricing by customs for tax purposes is considered to be sometimes unrealistic.

5.4 Senegal

There are 8 public slaughterhouses that have refrigeration facilities currently operational in Senegal. However, there are no private slaughterhouses. There is a plan to transfer a slaughterhouse from Dakar to one of the livestock producing pastoral areas. A new slaughterhouse is expected to be established in a place called Tuba. About 50% of the cattle slaughtered are handled in slaughterhouses, while 35-40% of goats and sheep are slaughtered in slaughterhouses.

The abattoirs (slaughter houses) charge fees for providing slaughter services. The butchers sell the hides and skins directly to the hides and skins merchants, who then export the product or resell them to domestic tanneries. Hence, the abattoir service, the meat trade, and the hides and skins trade remain essentially separate.

Due to the intense competition among hides and skins traders, merchants pre-finance butchers as an advance payment to collect the hides and skins. The lack of strong organization of the sector and the involvement of unlicensed traders is considered a bottleneck to the development of the sector.

Most tanneries in Senegal operate below capacity. The major reason for their under capacity operation is lack of adequate supply of raw hides and skins. For example, TANAF S.A., one of the Senegalese tanneries, operates 1/5 of its capacity for skins and 2/3 of its capacity for hides. The other tanneries are reported to operate 2/3 of their capacity. Some of the reasons are as follows.

5.4.1 Poor quality hides and skins

As mentioned earlier, quality is a major problem of hides and skins in Senegal due to several factors in the production chain. Grading standards for hides and skins in the country are not very well developed. Traders mostly categorize the raw hides and skins in to two: acceptable and reject, although the tanneries use a more detailed grading standards. It is estimated that 3-4% of hides and about 5% of skins are categorized as rejects. The lack of detailed grading standards should obviously undermine the incentive for producers to strive for high quality products. The lack of such incentive reduces the overall value of the hides and skins in the country. However, traders appear to be willing to pay for differentiated products in order to satisfy the quality requirement for export.

The lack of effective organization of the sector also has effect on the quality of hides and skins, since unlicensed people are able to participate in the market without fulfilling the necessary minimum skill requirements. Availability of skill is one requirement for obtaining licenses in the hides and skins business. Inadequate facilities for proper slaughtering and flaying and outdated technologies are also other causes of quality problems.

5.4.2 Management of industries

After an export monopoly by a public organization known as SERAS (Society for the Exploitation of Animal Resources) until 1990, the hides and skins, and leather sector is completely privatised at the moment. However, the government attempts to influence the price of meat. SERAS is currently involved in management of abattoirs and hides and skins trade, among others. SERAS produces and markets primary livestock products such as hides, skins, horns and tails, and bone flour. SERAS has a nationwide network for collecting hides and skins. SERAS collects and processes an average of 180, 000 hides; 350, 000 goatskins; and 350, 000 sheepskins annually, of which about 95% is exported. The SERAS is owned by private shareholders (70%), the state (25%), and employees (2%).

Currently, a semi-government organization known as SOGAS is mandated for the control of slaughterhouses and inspection of meat, and hides and skins quality in Senegal. SERAS owns 51% of the share of SOGAS, while 49% of shares belong to private shareholders. A West African hides and skins exporters association was formed in 2001 in order to take collective measures to improve the operation of the sector. However, its operational status and effects on the industry could not be ascertained.

5.4.3 Skills and manpower

Dakar hosts a veterinary school that caters for 10 West African countries. Unlike most veterinary schools in Anglophone Africa, the veterinary schools in Francophone Africa do not focus exclusively on veterinary medicine. Several production courses and courses on hides and skins are taught by the programme. The veterinary doctors are trained on practical aspects of slaughtering and flaying techniques, abattoir management, and meat inspection, in addition to health. The veterinary doctors in turn train middle level veterinary assistants, and animal husbandry assistants who work at the village level. There is limited foreign assistance for training in the hides and skins sector in Senegal.

However, there is no formal lower or middle level training for slaughtering and flaying, or for handling and processing of hides and skins. The skill appears to be transferred traditionally through generations. This is one area where government or the private sector may need to initiate a training service in order to improve the quality of hides and skins in the country. The only hides and skins school in West Africa is located in Nigeria. Radio programmes on hides and skins diseases and their control, and handling of hides and skins are broadcast on the national radio. The availability of market information is expected to increase the efficiency of the operation of the hides and skins market.

5.4.4 Market situation and production costs

The hides and skins business in Senegal is very dynamic at the moment. After liberalization, competition in the sector is stiff. While the liberalization of the skins and hides sector should in principle contribute to more efficient operation of the sector due to the competitive atmosphere it creates, the lack of effective organization and public control discourages business enterprises that face competition from unlicensed businesses.

Market information on hides and skins and the lather sector is broadcast every week on public media such as radios and television programmes. In addition, several newspapers also publish price and other market information regarding the sector. Hides and skins exporters are subject to pay export tax. Although there is no price control of hides and skins, the government attempts to influence the price of meat.

6. Investment Environment and Related Policies

6.1 Tanzania

In theory there are few serious start-up difficulties for new investors in Tanzania. The Investment Centre is apparently well organized and tries to be helpful. However, leather is not yet a priority sector like textiles, mining and tourism under the current industrial development strategy, so local entrepreneurs and foreign investors interested in joint ventures are not yet fully attracted to the leather sector. Local private entrepreneurs are not perhaps adequately experienced in the sector and they also apparently have a short-term trading mentality making them reluctant investors in a sector that is subject to global market fluctuations and competition. Absence of a clear policy in relation to this sector may also be a source of lack of interest. Nearly all the current investors in the leather sector, principally those who bought the privatized enterprises, are Asian, though some of them have long standing businesses in Tanzania or in the region. However, in the absence of clear priorities and policy support to the sector, these investors are also not able to make significant impact.

Capital cost is also high – 20% or more – which has been the result of past poor repayment practices driving up the risk factor for lenders. Tanning is an industry with high potential pollution unless appropriate control measures are taken. To conform to current pollution control laws requires expensive treatment plant, and treatment cost may outweigh other capital investments. When the parastatal enterprises were privatized, some were given financial support to improve pollution control facilities. Yet they did not function properly.

Private investors in the sector requiring dealing with the government for licenses and other regulatory issues have to interact with several ministries and departments due to division of mandates. The Ministry of Agriculture oversees the value chain from animal production to tannery, the Ministry of Water and Livestock Development also oversees the livestock markets, market routes and abattoirs, while the Ministry of Industry has authority from tannery to other stages in the chain. The city municipal councils also have control over slaughterhouses. The Investment Centre, an autonomous body, is supposed to harmonise the activities of different ministries but often the policies and procedures pursued by these different ministries and bodies are not well coordinated, making the investment process time consuming. Sometimes it is difficult to get a license for investment where competition may be involved with parastatal or cooperative organizations. Also some investment incentives may be announced by the Investment Centre but may not be actually followed by the individual ministries involved, e.g. the investment centre may announce that no duty will be charged on imported equipment to be used for producing products for export but the Revenue Authority may not follow that. There is no duty drawback for imported equipment to be used for export production. Duty drawback for exported products is seen to be very slow and often not worth the extensive effort required to apply for and receive it. It is also reported that the minimum duty value specified by government is often not related to the real value of the import, which in reality should be determined by pre-shipment inspection.

6.2 Zimbabwe

Both local and direct foreign investment made the Zimbabwean hides and leather industry vibrant and efficient. After independence, investment policies were supportive of expansion of the industry, which led to the development of an integrated industry linking tanning and leather and leather goods manufacturing. However, recent land resettlement policies coupled with restrictions from the global market and donor agencies have made the economy somewhat unstable, even if temporarily. High inflation, over valued currency, restrictions on foreign exchange uses are apparently discouraging new investment and also re-investment to upgrade existing technology. It was mentioned earlier that 40% of export earning is to be surrendered to the central bank at official exchange rate and the remaining 60% can be used for importing raw materials. However, industry operators alleged that 40% in local currency is inadequate to pay wage bills and other running costs while 60% is inadequate for importing raw materials and high cost machinery for upgrading technology; hence the technology is falling behind. d

Also high inflation and existence of a parallel market encourages unofficial crossborder trade in leather goods, mainly shoes, which also adversely affect the leather goods enterprises to compete efficiently in the market.

6.3 The Sudan

The hides and skins sector and the leather industry are important in the economy of Sudan. After the government's policy to privatize the Sudanese economy, the hides and skins sector and the leather industry is increasingly being privatized, with the government lifting its control over the sector. Previous public interventions to improve the performance of the sector are being left to the private sector itself. Price of hides and skins, leather and leather products is also determined by the operation of market forces.

After denationalisation and market liberalisation, the tax and customs regulations have become more supportive of investment in the sector. Tax and customs measures are offered to ease the purchase and importation of modern machinery. Investment act provides tax-free capital goods and machinery, tax holidays for 5-15 years, and constant low tax for projects worth over US\$10 million.

6.4 Senegal

The hides and skins, and leather sectors in Senegal is being increasingly privatised. Until 1990, export of hides and skins was under the monopoly of a government parastatal, the Society for the exploitation of Animal Resources (SERAS). In 1990 the government of Senegal privatised production and commercial aspect of the hides and skins, and leather sectors. The privatisation has brought in new competition into the sector, which should possibly contribute to a more efficient operation of the sector. However, along side the

privatisation, there appears to develop organizational problem and less effective public control of the operation of the sector. Government laws and regulations pertaining to the sector do not seem to be effectively implemented, and black export markets of hides and skins exist. There is also an increasing awareness of the value of hides and skins among the public. People that used to even throw away hides and skins during holidays, are increasingly supply the products to the market.

Investors interest in the hides and skins sectors in Senegal appear to be increasing. This increase in interest is bringing in new capital with the establishment of new enterprises and creating additional employment opportunities.

7. Initiatives for Improvement

7.1 Tanzania

7.1.1 Government initiative

The poor performance of the industry after privatization was contrary to expectation, which led the government to seek assistance of the UNIDO in 1998 to diagnose problems and develop a strategy for revitalization of the industry. After an in-depth study, the UNIDO identified a set of problems similar to those described earlier and made a set of recommendations including the following:

- A meaningful strategy for revitalization of the sector should begin with the upgrading of the quality of hides and skins through both long and short term actions covering all stages of the hides and skins chain, i.e. animal husbandry, disease control, slaughtering, preservation, storage, grading and pricing, laws and regulations.
- In order to facilitate a common approach to the elimination of the current bottlenecks and implementation of appropriate revival measures, all stakeholder in the industry – government authorities, donor agencies, leather associations and enterprises – should be involved in formulating and implementing a comprehensive action plan.
- Government intervention is required on macro-economic issues such as taxation, import control, provision of incentive package to investors.
- Revisit the privatization process and take measures in relation to the non-functioning private plants including inviting new investors or joint venture partners from abroad who have the skills and resources to make the plants workable.
- Give high priority to human resource and skill development for the sector by revitalizing the Institute of Leather Technology by transferring it to the LAT for leasing to a private entrepreneur or company for operating it as both a production and training unit so as to become self-sustaining.
- Strengthen the LAT by updating its constitution and creating office facilities.
- Review and amend existing laws and regulations affecting hides and skins trade and the industry for better performance.
- In order reverse the trend of raw hides and skins export and encourage their use in the domestic industry for value added processing for domestic market and export, impose an export levy on raw hides and skins export, put the proceeds under a ‘Leather Development Scheme’ to facilitate hides and skins improvement activities and provide incentives to exporters of processed leather with added value. A levy of 2% of export value of raw hides and skins could be imposed subject to review after one year. (Kenya had at that time a levy of 2% on raw hides, 1% on wet blue and 0.1% on finished leather).

Practically none of these recommendations have been implemented except one project undertaken with ESALIA/CFC support to improve hides and skins grading and pricing system (see below). The efficacy of some of the recommendations may also be questioned. For example, some countries provide incentives, e.g. export subsidy on processed leather

while tax on raw hides export, to encourage value added processing but this might not be effective in the Tanzanian situation. If export duty is imposed on raw hides export, effective price at slaughter houses and collection points in rural market town would perhaps be even lower, which may provide further disincentive for careful handling of hides. Also effective price of animals to producers may decrease. Unless other measures to provide incentive to produce better quality hides can be implemented, export duty alone may not solve the problem of exporting raw hides.

The Leather Association of Tanzania proposed in January 2001 to the government several measures for revitalization of the industry as follows:

- Impose 12% duty on export of raw hides and skins and use the revenue for encouraging local industries for processing leather.
- Encourage local processing by offering an export incentive of 6% on wet blue export for a specific period of say three years.
- Allow duty free import of tanning chemical as most of the products from the industry is exported

These proposals have also not been implemented.

7.1.2 The ESALIA/CFC project

Poor quality hides and skins is a common problem in the East and Southern Africa region. CFC funded a project through the East and Southern African Leather Industries Association, based in Nairobi, to assist Tanzania, Ethiopia, Kenya and Zambia, in improving the hides and skins grading and pricing systems. The project has a total budget of US\$3.2 million including a grant of US\$1.4 million by the CFC. The project is based on the premise that better grading system at supply sources (slaughter points or even at producer level) and price differentiation based on grade will encourage better handling of hides and skins leading to overall quality improvement and revenue for the entire chain.

The project has four components: technical assistance for grading by quality and pricing system, technical assistance to national associations at country level, institution building and establishment of a leather technology training institute, and technical assistance at the regional level for project coordination and management (FAO, 2001).

The Tanzania component of the project was launched in January 2000 with a view to improve grading of raw hides and skins through provision of training, information dissemination and slaughter kits (knives, grading norms etc) The Leather Association of Tanzania serves as the coordination office of the project. Table 7.1 shows the prevailing grade structure at the time of the launching the project and also the target to be achieved by the end of the project.

Table 7.1: Estimated hides grade structure in January 2000 and target structure by end of the project

Grade	% of supply in 2000	% of supply end of project
1	10	12
2	20	24
3	35	35
4	30	26
Reject	5	3

Source: CFC project, 2001

During the first year of its operation, it has reportedly held workshops and meetings with various stakeholders and people from different part of the value chain, distributed flaying knives among butchers, a grading manual among butchers, traders and tanners. Initial indications are that as a result of these efforts, in some slaughter points slaughter defects have reduced from an average of 9 holes to 2 and grade structure has changed to 12% for grade 1, 23% for grade 2, 30% for grade 3 and 4, 5% for reject. However, discussions with the tanneries indicated that these improvements were related to specific slaughter points as the general situation in the system remains poor.

The ESALIA, the executing agency of the project reported that a Slaughter House Index has been developed based on selected criteria related to quality of hides and skins produced in order to differentiate quality of slaughter houses. The index could be used by rawhides and skins traders, tanners, international leather business to peg a price to the material from a particular slaughterhouse. This should also promote competition among slaughterhouses to improve quality and raise the index. Moreover, a set of grading standards have been developed based on the UNIDO/FAO guideline (ESALIA, 2000) and a quality certification stamp has been designed and registered for use as a marketing tool by tanners who follow the project's grading guidelines to differentiate them from those who do not follow the guidelines (FAO, 2001). However, apparently neither the slaughterhouse index nor the quality stamp is in use in Tanzania yet though information on these have been disseminated.

7.1.3 Task force suggestions for improvement

A task force has been formed by the government involving various stakeholders early this year to review the problems in the industry and recommend solutions. The task force took into account earlier findings by various agencies, identified a set of problems and made a set of recommendations as in Table 5. These are still under review by the government.

Table 7.2: Programme for revitalisation of leather sector in Tanzania: Action plan recommended by a task force

Problem	Causes	Action to be taken	Resources Required	Actors (*lead actor)	Time Frame
1. Poor Quality of hides and skins	<ul style="list-style-type: none"> • Poor animal husbandry practices & diseases • Inappropriate branding • Lack of appropriate slaughter facilities & tools • Poor slaughter practices & skills • Poor storage & preservation techniques • Lack of grading knowledge & skills • Outdated hides & skins law 	<ul style="list-style-type: none"> • Improve extension services and diseases control • Improve extension services and enforcement of the law • Improve slaughter facilities according to the law • Promote/upgrade of slaughter facilities • Impose export levy for the establishment of Leather Development Fund • Capacity building and training • Education & enforcement of appropriate law • Review the existing laws 	<ul style="list-style-type: none"> • Staff • Funds • Tools 	<ul style="list-style-type: none"> • MoWL* • MoH • MoRLG • Donors • Stakeholders • TBS • Tanneries • LAT • Other Stakeholders 	<ul style="list-style-type: none"> • Short Term • Long Term
2. Low capacity Utilization of Tanneries	<ul style="list-style-type: none"> • Outdated technologies & worn-out equipment • High tariffs on imported inputs • Lack of committed investors • Lack of working capital • Lack of good quality hides • Lack of industrial oriented skills • Lack of incentive package 	<ul style="list-style-type: none"> • Technical assistance & rehabilitation of factories • Review tariffs on imported inputs • Strict scrutiny and review conditions of investors • Impose export levy for the establishment of Leather Development Fund. • Sensitise people about the banking opportunities available e.g. export credit schemes, commodity funds etc. • As action on (1) above • Funds be made available for investment in the leather sector and encourage industrialization process (UNIDO) • Establish Leather Development Funds 	<ul style="list-style-type: none"> • Staff • Funds • Various equipment & tools 	<ul style="list-style-type: none"> • MIT* • MoF • Plancom 	<ul style="list-style-type: none"> • Short term • Medium Term • Long Term

Table 7.2 (continued)

3. Lack of Capital & imports	<ul style="list-style-type: none"> • High cost of financing • Lack of finance management knowledge 	<ul style="list-style-type: none"> • Provide incentives to attract suitable investors • Sensitize the community on finance management (training) • Encourage partnership 	<ul style="list-style-type: none"> • Technical staff • Funds 	<ul style="list-style-type: none"> • MoF* • MIT • Donors • Stakeholders • LAT 	<ul style="list-style-type: none"> • Short Term • Medium Term • Long Term
4. Competition of local products & imports	<ul style="list-style-type: none"> • Trade liberalisation • Lack of good quality of finished leather • Low capacity utilisation of tanneries 	<ul style="list-style-type: none"> • Review tariffs for imported leather products • Provide incentive to local producers • As in problem (2) above • Establish Leather Dyeing Units 	<ul style="list-style-type: none"> • Staff • Funds 	<ul style="list-style-type: none"> • MIT* • MoF • Stakeholders • TIC • Donors 	<ul style="list-style-type: none"> • Short Term • Medium Term • Long Term
5. Weak LAT	<ul style="list-style-type: none"> • In-effective Leadership • Lack of financial resources • Lack of committed members 	<ul style="list-style-type: none"> • Review the constitution of LAT • Conduct fresh election • Improve financial resources • Carry out a sensitization programme of LAT • Establish Leather Development Fund 	<ul style="list-style-type: none"> • Staff • Funds • Tools 	<ul style="list-style-type: none"> • MIT* • Stakeholders • Donors • Members • MoWL • CTI • TCCIA 	<ul style="list-style-type: none"> • Short Term • Medium Term
6. Lack of Technical personnel	<ul style="list-style-type: none"> • TILT not functioning • Lack of funds 	<ul style="list-style-type: none"> • TILT to be revitalised for human resource development • TILT to be production cum training centre • Implement Kiruthi/Calabro Report • Mobilise funds for human resource development 	<ul style="list-style-type: none"> • Staff • Funds • Equipment 	<ul style="list-style-type: none"> • MIT* • Donors • Stakeholders 	<ul style="list-style-type: none"> • Medium Term • Long Term
7. Poor coordination in policy making	<ul style="list-style-type: none"> • Various Ministries involved in this sector 	<ul style="list-style-type: none"> • Establish coordination mechanism • Involve stakeholders 	<ul style="list-style-type: none"> • Meetings 	<ul style="list-style-type: none"> • MoWL* • MIT • Stakeholders 	<ul style="list-style-type: none"> • Long Term

7.2 Zimbabwe

The Leather and Allied Industries Federation of Zimbabwe (LAIFEZ) has recently undertaken a review of the situation in the industry and made a set of recommendations to the government (LAIFEZ, 2002). The following have been recommended for immediate measures:

- Export of wet blue hides must be very carefully controlled (not banned) with local tanners being offered a minimum of 50% of all raw hides available as agreed at Hides Technical Committee. This has to be reviewed at regular intervals to provide optimum support to local industry.
- Third part contract clients (abattoirs) must prove that they have supplied local tanners with the requisite percentage of raw hides before they are allowed to export.
- Remove 10% tariff on export of raw and wet blue hides.
- ZIC/EPZ Authority should consult local industry before granting new tannery licenses.
- Persuade small-scale and communal farmers to sell cattle on a regular basis to optimise feed use and supply more hides.
- Resettled small-scale ranchers be allocated sufficient land with freehold title for commercial livestock breeding. Breeding of commercial cattle requires 4-6 hectares per head with minimum herd of 50 beasts but preferably a larger herd to be profitable.

The following recommendations have been made for long-term strategy:

- Resettlement exercise should make provision for the retention of existing farmers who are recognised as among the best in the world.
- Farms should be no less than 1500-2500 hectares for economically viable commercial herd of 300-500 beasts. They can be run as cooperatives. In the Lowland areas, cattle require 8-10 hectares per beast.
- It takes 3-5 years of intensive, specialised farming to breed cattle for the meat market, so will require substantial long-term funding.
- Farmers should be persuaded to purchase suitable pedigree cattle that will be readily marketable for the export beef market, and produce good quality hide.
- Implementation of training programmes on rearing of high productive cattle, animal husbandry and veterinary awareness.
- Introduce the hide improvement programme for newly settled farmers in collaboration with overseas donor (e.g. CFC) and LAIFEZ.

These recommendations are still being discussed and considered by the government.

7.3 The Sudan

The major problems confronting the hides and skins sector and the leather industry in Sudan include poor quality of raw materials and products; and lack of skills, technology, intermediate inputs, processing facilities and relevant information. There is also low recovery of hides and skins in the country.

Grades and standards improve the value of products by providing incentive to produce higher quality products and undermining the incentive to produce lower grades. As indicated above, detailed grades and standards are not used in the Sudanese hides and skins sectors, with

several quality criteria left out of grading and standards by merchants. Therefore, instituting more detailed grades and standards is another area that deserves immediate attention in order to improve the performance of the sector.

The Centre for Development Enterprise (CDE) interventions are ongoing in the Sudan to upgrade the quality of manpower in the hides and skins sector and improve the quality of hides and skins, and leather products. Moreover, the ESALIA/CFC project on value added leather products is expected to start in the country aimed at improving and developing skills in leather sector. There is also a plan to revive the leather development projects with UNIDO, FAO and other agencies. However, compared to the needs of the sector, these interventions appear quite inadequate.

Several measures are required to exploit the full potential of the hides and skins, and leather industry in Sudan. Hence, there is a need for an integrated policy framework for the industry to develop and be more profitable. However, the most immediate pressing needs for improvement and development of the sector are skills upgrading and access to markets. As mentioned above, the government, as part of its liberalization policy, is increasingly withdrawing from interventions to improve the performance of the sector. The government owned Hides and Skins Improvement Centre, the only one of its kind in the country, is becoming ineffective due to lack of resources and manpower. The private actors in the hides and skins, and leather sector also appear to be willing to pay for improvement measures. A privately run institute to cater for services to improve the performance of the sector may need to be established in the country. Such an institute may first be established as a project initiative supported by external funding, and let to eventually evolve in to a fully domestic funded institute.

Efforts also need to be made to improve access to overseas markets. Exporters may need to be involved in more regional and international trade fairs. Increased use of the internet to advertise and promote Sudanese hides and skins, and leather and leather products may improve market access. A closer working relationship with regional and international bodies involved in the leather industry such as the EAST and Southern Africa Leather Industries Association (ESALIA), Common Market for East and southern Africa (COMESA), The United Nations Institute for Industrial Development (UNIDO), FAO, the Common fund for Commodities (CFC), the centre for development Enterprise (CDE) could contribute to the improvement of the sector.

7.4 Senegal

The international community has been providing technical assistance in the field of hides and skins and their derived products in Africa. FAO has been active in the improvement of hides and skins, and is a major source of statistical data. On the other hand UNIDO has been active in the improvement of leather and leather products, and information technology and provision of price and other market information. However, unlike in the East and Southern Africa countries, projects that were designed for West African countries have not been implemented due to unavailability of funds. Hence, Senegal has not benefited from international funding and assistance for the improvement of its hides and skins, and leather sectors.

The major problems confronting the hides and skins, and the leather sector in Senegal include problems of organization and ineffective public control of the operation of the sector; inadequate technology and facilities for proper slaughtering and flaying; poor preservation,

handling and grading techniques; remoteness of livestock production areas and insufficient transport facilities; lack of awareness among the primary producers regarding the economic value of hides and skins; lack of market information; and poor or non-existent training facilities. Low recovery rate of raw hides and skins is another problem that deserves attention. Any initiative for improvement needs to take account of these major problems.

Environmental pollution due to salt used for preservation, arsenic and some types of insecticides used while storing hides and skins is also a serious problem in Senegal. Tannery operations wash out salt and other chemicals and contaminate ground and surface water, and degrade agricultural land. Environmental concerns by importing countries may lead to import ban, if banned chemical solutions are detected in Senegalese leather.

References

Ballance, R H, Robyn, G, and Forstner, H. (1993) The world leather and leather products industry – a study of production, trade patterns and future trends. Shoe Trades Publishing Ltd, Liverpool, UK. 253pp.

CFC project. (2001) Status report on the CFC project on hides and skins grading and pricing systems – Tanzania component. Draft report to CFC, Mimeo. 4pp.

CTC (Centre Technique Cuir Chaussure Maroquinerie). (2000) Wastes generated in the leather products industry. Paper presented at the 14th session of the UNIDO Leather and Leather Products Industry Panel, Zlin, Czech Republic, 13-15 December, 2000. 51pp.

Delgado, C, Rosegrant, M, Steinfeld, H, Ehui, S and Courbois, C. (1999) Livestock to 2020 – the next food revolution. Food, Agriculture and the Environment Discussion paper no 28, International Food Policy Research Institute, Washington, DC, USA. 72pp.

ESALIA (East and Southern Africa Leather Industries Association). (2000) Hides and skins quality guidelines. ESALIA, Nairobi, Kenya. 28pp.

FAO. (2001) Commodity development activities – review of proposals. 7th session of the Committee on Commodity Problems, Intergovernmental Group on Meat, Sub-Group on Hides and Skins, 4-6 June, 2001, FAO, Rome, Italy. 7pp.

ILRI (International Livestock Research Institute). (2000) Handbook of livestock statistics for developing countries. Socioeconomics and Policy Research Working Paper No 26. ILRI, Nairobi, Kenya. 298pp.

Kiruthu, S M, O’Shaughnessy, R, Masuku, T, Awale, Y, Paya, L L, McCallin, T and Mwasoye, A. (2000) Assessment for the development of the hides and skins, leather and leather products sectors in Botswana. Draft report to the United Nations Industrial Development Organisation, Gaborone, Botswana. 58pp.

LAI FEZ (Leather and Allied Industries Federation of Zimbabwe). (2002) Summary of leather industry workshop held at the IDC Centre, Harare, 27 March, 2002. Mimeo. 2pp.

LAT (Leather Association of Tanzania). (2001) Leather sector – plan for revitalization. Draft recommendation to the Government of Tanzania. Mimeo. 5pp.

LAT (Leather Association of Tanzania). (2002) Programme for revitalization of the leather sector in Tanzania. Draft recommendation of the Task Force on the Leather Sector to the Government of Tanzania. Mimeo. 10pp.

TLC (Triple Line Consulting Ltd) (2002). Study 1: Market requirements for importers of African hides and skins. Draft report submitted to the Common Fund for Commodities, the Hague, Netherlands. 74pp.

World Bank. (2002) World Development Report. World Bank, Washington, D.C., USA.

Annexe

List of people and organisations visited in the case study countries

Tanzania (19-21 May 2002)

1. Dr J N Melewas, Regional Livestock Adviser, Ministry of Agriculture, PO Box 5429, Dar es Salaam.
2. Dr A J Kileo, Veterinarian, Dar es salaam City Council (or Municipality), PO Box 31902, Dar es Salaam.
3. Dr S O Singa, Veterinarian, Dar es salaam City Council (or Municipality), PO Box 31902, Dar es Salaam.
4. Dr P J Henjewell, Veterinarian, Dar es salaam City Council (or Municipality), PO Box 31902, Dar es Salaam.
5. Mr Dominic B Massawe, National Project Manager, Tanzania Livestock Marketing Project, Ministry of Water and Livestock Development, Dar es Salaam, 1st Floor Ex LIDA House, Nakrumah Street, PO Box 9153, Dar es Salaam.
6. Mr Alawi Sharif, Lake Trading Co., Kibaha Tannery, PO Box 744, Dar es Salaam.
7. Mr Azim S Mawji, Afro Leather Industries Ltd, Po Box 1414, Dar es Salaam.
8. Mr Aziz, Slaughter House owner ????
9. Mr E J Muyinga, Secretary, Tanzania Leather Association, Po Box 9182, Dae es Salaam.
10. Mr B. Rao, Tanner and Trader

Zimbabwe (23-25 May 2002)

1. Munyaradzi Betera, Manager, Deraswiss Zimbabwe (Private) Limited, P O Box BW 1452, Borrowdale, Harare, Zimbabwe
2. Marck Chikanza, Quality Ass. Mgr, Intermediate Technology Development Group, P O Box 1744, Harare, Zimbabwe
3. T. Chitauro, Principal Mkt Econ., Ministry of Lands, Agriculture & Rural Resettlement, P Bag 7701, Causeway, Harare, Zimbabwe
4. S. Choga, Officer, Department of Veterinary Services, P O Box CY 66, Causeway, Harare, Zimbabwe
5. Ramji Govan, Chief Buyer, The Zimbabwe Bata Shoe Company Limited, P O Box 279 Guweru
6. Bev Jack, Executive Director, Leather & Allied Industries Federation of Zimbabwe, Box UA406, Kwame Nkrumah Ave. Harare
7. Mrs. Christine Jardim, Director, Hides & Skins Collectors (Private) Limited, P O Box 1312, Harare, Zimbabwe
8. Dr. Wellborn Madzima, Deputy Director, Department of Veterinary Services, P O Box CY 66, Causeway, Harare, Zimbabwe
9. Les Mallett, Chairman, Livestock & Meat Advisory Council, P O Box BE 209, Belvedere, Harare, Zimbabwe
10. Francesco Marconati, Director, Traverse Investments (Pvt) Ltd., 91 Piers Road, Borrowdale, Harare, Zimbabwe
11. E. Maroodza, Farmer
12. Ms Sikhanyiso Matshalaga, Project Analyst, Zimbabwe Progress Fund (Private) Limited, P O Box 3150, Harare, Zimbabwe
13. Aidi Mbagarira, Depot Manager, P O Box 8399, Belmont Bulawayo

14. Joseph Muvhundura, Managing Director, Afro Elephant Trading (Private) Limited, P O Box CY 580, Causeway, Harare, Zimbabwe
15. J M Nyandoro, Agricultural Econ., Ministry of Lands, Agriculture & Rural Resettlement, P Bag 7701, Causeway, Harare, Zimbabwe
16. John C. Reeler, Operations Manager, Superior Holdings (Pvt) Ltd (Imponente Tanning)
17. N D Miller, Finance Executive, Superior Holdings (Pvt) Ltd (Imponente Tanning)
18. Mrs. S. Shuro, Director, Fish Eagle
19. Johnson Gwatipedza, Agricultural Economist, Ministry of Agriculture, Economics and Marketing Division, PO Bag CY7701, Harare.
20. N. Chinogaramombe, Finance Director, Cold Storage Company Ltd, PO Box 953, Bulawayo, Zimbabwe.
21. Ms Mazula Rose, Managing Director, Zimbabwe Progress Fund Pvt Ltd, The Courtney Hotel, Po Box 3150, Harare.

The Sudan (June 4- 8)

1. Dr. Ahmed Hag Elsheihli Abbo, Leather Chamber, Khartoum
2. Dr. Abdelhalim Mohamed Kheir, Head of Slaughter Houses Department, State of Khartoum, Ministry of Animal Resources and fisheries
3. Dr. B.M. Mongash, Manager, Kadaro Slaughter House, Khartoum
4. Dr. Osman Elhadri, Production Manager, Elsabaloga Abattoir, Khartoum
5. Dr. Mamoon Ahmed Fazaa, Head, Department of Meat inspections, Ministry of Animal Resources and Fisheries, Khartoum
6. Dr. Issam Fadllala Ahmed, General Manager, West Omdruman Abattoir, Khartoum
7. Mr. Abdelrhaman Elsawi, General Manager, Sawko hides and skins trading company, Khartoum
8. Mr. Marwan Abdalla Osman, Manager, Summer Sun company (Tannery), Khartoum
9. Mr. Yousif Adam Yousif, Deputy Chairman ,Leather and Footwear Chamber, and General Manager, Nabta Shoe Factory, Khartoum
10. Mr. Ibrahim M. Sid Ahmed, Acting General Manager, W.N. Tannery, Khartoum
11. Mr. Amir Muzamil Elkobani, Chairman ,Leather and Footwear Industries Chamber, Khartoum
12. Mr. Hamza Yassin, Hides and Skins Merchant, Khartoum
13. Dr. Mohammed Sir Elkhatim, Director General, Animal Production Development Directorate, Ministry of Animal Resources and Fisheries, Khartoum

Senegal (14-18 June)

1. Dr. Coumba Kebe Gueye, Veterinarian and Director,, SOGAS (General Society of Slaughterhouses)
2. Madam Ndeye Fama Diagne, Director of Commerce of SERAS (Society for the Exploitation of Animal Resources)
3. Mr. Doudou Mane, Agricultural Economist, Director of Livestock Production, Ministry of Agriculture and livestock
4. Mr. Babacar Mbengue, Director, TANAF S.A.,
5. Dr. Mustapha Saal, Veterinarian and Ranching Business Man