



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 • www.unido.org • unido@unido.org

21516

Distr.
RESTRICTED

ISED/R.66
23 April 1996

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

ORIGINAL: ENGLISH

REGIONAL AFRICA LEATHER AND FOOTWEAR INDUSTRY SCHEME*

US/RAF/92/200

REGIONAL AFRICA

**Technical report: Long-term strategies and impact of the hides and skins improvement
component of the Regional Africa Leather Programme
Phase I and Phase II**

June - August 1995

Based on the work of T.J. Devassy

Backstopping Officer: Aurelia Calabrò
Agro Industries Branch

* The designations employed and the presentation of material in this document do not imply the expression of any opinion of the secretariat of UNIDO concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontiers or boundaries. This document has not been edited.

TABLE OF CONTENTS

	Page
Explanatory notes	4
Foreword	5
Introduction	6
 PART I - SUMMARY AND CONCLUSIONS	
1. Project implementation	9
1.1 Project approach	9
1.2 Selection of target areas	9
1.3 Upgrading/construction of infrastructures	10
1.4 Supply of tools and other inputs	10
1.5 Local demonstrations	10
1.6 Grading norms and incentives	11
1.7 Policy outlines	12
1.8 Training and study tours	12
1.9 Revolving Fund Operation	13
1.10 Leather associations	14
2. Hides and skins improvement is a long-term process	15
3. Is UNIDO's approach the right one?	15
4. Problems and suggested solutions	16
5. Future of hides and skins improvement programmes	19
6. Observations and conclusions	20
7. Recommendations	23
 PART II - PROJECT'S IMPACT	
1. Introduction	26
2. Monetary benefits	26
3. Non-monetary benefits	27
4. Sustainability of hides and skins improvement activities in the region	28
4.1 Role of Revolving Fund Operations	28
4.2 Role of ESALIA and local leather associations	28
4.3 Role of government policies	29
 PART III - COUNTRY PROFILE, INPUTS AND RESULTS	
1. ETHIOPIA	
1.1 Introduction	30
1.2 Outputs and results	33
1.3 Project achievements	36
1.4 Constraints	36
2. KENYA	
2.1 Introduction	37
2.2 Outputs and results	40
2.3 Project achievements	42
2.4 Constraints	42

3.	MALAWI	
3.1	Introduction	43
3.2	Outputs and results	45
3.3	Project achievements	46
3.4	Constraints	47
4.	SUDAN	
4.1	Introduction	48
4.2	Outputs and results	51
4.3	Project achievements	52
4.4	Constraints	52
5.	TANZANIA	
5.1	Introduction	53
5.2	Outputs and results	56
5.3	Project achievements	57
5.4	Constraints	58
6.	ZAMBIA	
6.1	Introduction	59
6.2	Outputs and results	61
6.3	Project achievements	63
6.4	Constraints	63
7.	ZIMBABWE	
7.1	Introduction	64
7.2	Outputs and results	68
7.3	Project achievements	69
7.4	Constraints	70

ANNEXES

1.	Countrywise UNIDO contribution for hides and skins improvement component
2.	Map of Africa showing livestock population in project countries
3.	Countrywise livestock population for the country and target areas
4.	Countrywise production of hides and skins for the whole country and the target area
5.	Project impact on collection of hides and skins in the target area
6.	Project impact on quality of hides and skins in the target area
7.	Monetary benefits due to increase in collection of hides and skins in the target area
8.	Monetary benefits due to increase in quality of hides and skins in the target area
9.	Revolving Fund Operations - UNIDO inputs countrywise
10a.	Revolving Fund Operations - details of countrywise payback
10b.	Revolving Fund Operations - details of countrywise payback
11.	Revolving Fund Operations - Status of bank accounts in sample countries
12.	Training of extension officers and artisans-countrywise details
13.	Hides and Skins - capacity utilization of tanneries, countrywise
14.	Leather and Leather Products Industry System
15.	Forecast of bovine hide production

EXPLANATORY NOTES

AHC	Animal Health Centre
Br.	Birr, Ethiopian currency
CSC	Cold Storage Company
ESALIA	Eastern and Southern Africa Leather Industries Association
ECDC	Economic Cooperation Among Developing Countries
4.W.D.	Four-wheel drive
FAO	Food and Agriculture Organization of the United Nations
Gr.	Grade
ITC	International Trade Centre
IPP/PPD	Industrial Policy and Perspectives Division
KAM	Kenya Association of Manufacturers
KIRDI	Kenya Industrial Research and Development Institute
KW	Kwacha, Zambian currency
Kg	Kilogram
KSh	Shilling, Kenyan currency
LDC	Leather Development Centre
LIZ	Leather Institute of Zimbabwe
LIAZ	Leather Industries Association of Zambia
LS	Pound, Sudanese currency
MK	Kwacha, Malawian currency
m/m	man/month
NLSC	National Leather and Shoe Corporation
No.	Number
PTA	Preferential Trade Area
RFO	Revolving Fund Operation
Sq.ft.	Square foot
Tsh	Shilling, Tanzanian currency
UN	United Nations
UNIDO	United Nations Industrial Development Organization
USA	United States of America
US\$	United States Dollar
Z\$	Zimbabwean Dollar

FOREWORD

The implementation of the hides and skins improvement component of the UNIDO project "Regional Africa Hides and Skins, Leather and Leather Products Improvement Scheme" was accomplished by the untiring efforts of the backstopping officers and international experts of UN agencies namely UNIDO, FAO and ITC and the national experts along with their team of extension officers in seven countries with varied inputs and activities. In this document, the consultant, after studying the individual country aspects in relation to inputs, outputs and results, has drawn conclusions and recommendations on a regional basis.

Part I of the document "Summary of the Efforts Made on the Regional Basis", after analyzing the project approach and the selection of the target area, describes various physical inputs for local demonstrations and activities like formation of revolving fund, and tanners' associations, introduction of grading norms, training of personnel and collection of statistical intelligence reports. It also deals with the efforts made by international hides and skins experts and the formulation of documents "Guidelines for Grading of Raw Hides and Skins by Quality" and "Improved Policy Guidelines and Industrial Strategy for the Leather Industry".

Part I also deals with various factors like revolving fund operation, formation of leather associations and government policies which will sustain the future hides and skins improvement programme in Africa.

The consultant has made an attempt in Part II to evaluate all the results obtained in monetary and non-monetary terms and shown how by improved collection and quality of hides and skins in the target area, the countries have benefitted.

Based on the above studies, this part deals with the lessons learned, conclusions drawn, and recommendations made, with the analysis of various problems related to the hides and skins sub-sector and the need for a long-term strategy for hides and skins improvement work.

Part III deals with individual country profile with inputs made in each country and the outputs created thereby. An analysis of the project achievements and the constraints faced in each case is given. The presentation of the data from UNIDO document "Eastern and Southern African Hides and Skins" is done to have a relative background information of the countries and the region compared to the target areas and to ensure ready reference.

There are 15 annexes which deal with UNIDO contributions for hides and skins programme and the revolving fund; countrywise and target area-wise livestock population; production of hides and skins, project impact on collection and quality of hides and skins and their monetary benefits; details of payback under RFO, training of personnel and capacity utilization of tanneries.

INTRODUCTION

The UNIDO Regional Africa Hides and Skins, Leather and Leather Products Improvement Scheme (US/RAF/88/100) was launched in 1989 in a group of eight African countries for the accelerated growth of the leather industry in that region. During 1992/93, the first phase of the project was completed and it was felt by UNIDO that the operations under the hides and skins component of the project had to be evaluated for the benefit of the countries covered by the project; for the present and potential donor countries and for UNIDO itself.

This evaluation document contains:

- a) Summary and Conclusions;
- b) Results obtained in comparison with the resources utilized and to arrive at a cost efficiency of the operations;
- c) Long-term sustainability of the hides and skins improvement in Africa through RFO etc.; and
- d) Lessons learned and to provide proposals on how to improve the situation.

Accordingly, the Hides and Skins Consultant was fielded from 12 June 1995 to 11 August 1995 and initially briefed at UNIDO HQ, Vienna by the project managers Mr. J. Buljan, Senior Industrial Development Officer and Ms. A. Calabro, Associate Industrial Development Officer. At a later stage, the consultant visited Nairobi to have discussions with the Chief Technical Adviser, Mr. G. Felsner and Hides and Skins Improvement Coordinator, Dr. S.M. Kiruthu. Both in Vienna and Nairobi, the consultant had access to all the files and documents related to the hides and skins component of the project. The conclusions drawn in this document are based on the discussions mentioned above and on the data collected from the available documents.

The Regional Hides and Skins, Leather and Leather Products Scheme (US/RAF/88/100) was conceived on the basis of the recommendation of the UNIDO Third Consultation on Leather and Leather Products Industry, held in Innsbruck, Austria in 1984. Subsequently, UNIDO convened a regional meeting on the Leather and Leather Products Industry in Africa in Alexandria, Egypt in January 1987 which focussed on the constraints and shortcomings experienced in the African Leather Industry as a whole. The meeting identified several major constraints affecting the leather industrial sector development in Africa and, therefore, proposed as a follow up a regional scheme which would reduce the enormous wastage of raw hides and skins, increase capacity utilization of industries within the sector, improve productivity and train manpower at all levels of the various subsectors of the African Leather Industry.

In order to assess the prevailing situation of the leather sector in the African countries at that time and also to collect the pertinent data for the whole programme, a preparatory phase entitled "Preparatory Assistance for a Regional Hides and Skins, Leather and Leather Products Improvement Scheme" (UC/RAF/87/069) was launched. The studies were carried out by two senior experts whose findings and recommendations formed the basis of the "Programme Approach" adopted during the implementation of US/RAF/88/100.

This scheme was funded generously through the special purpose contributions of the governments of Austria, France, Finland, Germany, Italy and Switzerland. The regional programme and the country project activities of eight countries covered by the scheme, that is Ethiopia, Kenya,

Malawi, Somalia¹, Sudan, Tanzania, Zambia and Zimbabwe, operated under the overall administration of the Leather Unit at UNIDO, Vienna and were co-coordinated by the Chief Technical Adviser, who was based at the regional headquarters in Nairobi and was assisted by the regional coordinator and national experts operating from their respective countries. From the regional headquarters, the CTA supervised the activities of the International Experts and the subcontractor's team fielded in the various countries.

The implementation of this umbrella project was based on the integrated programme approach concept and comprised several programme components according to the various subsectors of the industry such as hides and skins improvement, tanning, footwear and leather goods. Project activities were carried out at both regional and national levels taking into account the broad regional needs as well as the more specific national requirements for the individual countries.

UNIDO acted as the executing agency and under Inter-Agency Agreement, the sister agencies FAO and ITC implemented the programme components which fell under their specific areas of competence.

The hides and skins improvement programme was selected as one of the main components of the present scheme as in any integrated leather industry development plan, hides and skins improvement formed the first essential step. The success of any such integrated development depended on a strong raw hides and skins base. While it was possible to import hides and skins from other countries for tanning purposes, it may not be always feasible due to technical and economic reasons. The most pragmatic approach will be to base the leather industry mainly on the locally available raw hides and skins. Most of the countries under this scheme had along tradition of leather making based on their large livestock population. The estimated livestock population of the region was 86.75 million cattle, 58.7 million sheep and 55.5 million goats. The estimated production of hides and skins were about 8.3 million cattle hides, 17.3 million sheepskins and 16.3 million goatskins.

However, due to various reasons, the actual collection of hides and skins was only 5.52 million cattle hides, 13.47 million sheepskins and 12.75 million goatskins involving a wastage of about 33% in cattle hides, 22% in sheepskins and 21% in goatskins. The quality of raw hides and skins was very poor due to defects before and during the slaughter of animals and during preparation and preservation of hides and skins. Hence, the industry had never been able to fully exploit the available resources. As leather and leather products have high export potential, all the countries in the region were very keen to develop the industry to earn the much needed foreign exchange.

It was in this context of high expectations of good performance by the leather industry, the hides and skins improvement programme was given top priority and taken up as essential part of the programme. As indicated above, the hides and skins improvement programme was implemented by FAO under Inter-Agency Agreement.

¹ Due to unforeseen developments in the country, the project activities in Somalia were suspended.

Objectives and Outputs

The project objectives were:

- a) to establish a national pilot scheme and to demonstrate, in practical terms, the process of hides and skins improvement from butchering and flaying to conservation, grading and collection;
- b) to act as catalyst to national authorities to introduce incentives for improved quality performance;
- c) to rehabilitate existing infrastructures and selected tanning and processing plants by increasing their efficiency and capacity utilization, upgrading technical standards, operational methods and skills, product quality and marketing performance, as well as knowledge of those attached to these industries at various levels, starting from primary producers.

The expected project outputs were:

- a) Improved policy guidelines and industrial strategy for the development of the region's hides and skins, leather and leather products industry which was to be produced in the form of a regional document specifying both regional and individual country aspects.
- b) The establishment and/or rehabilitation of well-operating hides and skins, leather and leather products improvement schemes with trained butchers, flayers and extension officers. Better slaughtering tools were to be provided together with preservation chemicals.
- c) Improved statistical intelligence throughout the region through uniform statistical country report which will be sent periodically to the regional office for transmission to UNIDO/FAO/ITC for further monitoring and dissemination.
- d) Improved quality of raw hides and skins through incentives to primary producers and a realistic quality grading system, based on well operating hides and skins improvement schemes.
- e) Increased collection of raw hides and skins by minimizing waste and through providing suitable incentives to the primary producers.

PART I - SUMMARY AND CONCLUSIONS

1. PROJECT IMPLEMENTATION

1.1 Project Approach

Hides and skins improvement was one of the components of an integrated Hides and Skins, Leather and Leather Products Improvement Scheme being implemented in a group of seven countries with regional headquarters in Nairobi, Kenya. The integrated approach aimed at the development of the leather industry as a whole and the regional approach permitted more exchange of ideas and co-operation on trade and technology between the countries and for utilization of common facilities available for training and development in the region.

The project was co-coordinated by the Chief Technical Adviser in the regional office in Nairobi through national experts in every country. Based on the requisition from the national experts, all the project inputs and supplies were arranged by the regional office or through UNIDO, Vienna. International hides and skins improvement experts were fielded through FAO and each expert covered a group of countries, except in case of Ethiopia, where the expert was posted exclusively for that country. A consultant was fielded by ITC for the preparation of a document on "Policy Guidelines and Industrial Strategy".

As a pilot scheme, each country selected a target area which had high potential for development in the field of hides and skins. All the inputs and activities were directed to the target area only. The national experts sent regular progress and field reports to the regional office Nairobi and UNIDO, Vienna. The backstopping officers from UNIDO, Vienna and the regional project office in Nairobi, visited the project sites for on-the-spot study and for periodic in-depth evaluation of the project. Regional seminars were conducted in the region.

1.2 Selection of Target Areas

As the hides and skins subsector was highly dispersed and rural oriented, it was difficult to develop the whole country within a given period of time without considering the necessary prohibitive financial outlay. Hence, it was decided to select target areas in each country as a pilot development scheme. The selected target area was characterized by the presence of large livestock population and production of hides and skins with high potential for development. Taken as a pilot study for the country, the inputs were directed to the target area with specific development objectives to produce time bound results. Once the targets were achieved, the efforts could be duplicated with necessary modifications in other parts of the country with or without external assistance.

In relation to the total livestock population in the seven countries of the region, the target areas had 17.86% of the cattle, 12.7% of sheep and 12.96% of goats. The estimated production in the target area was 15.2% of cattle hides; 9.9% of sheepskins and 7.00% of goatskins of the whole region. The target areas were provided with some of the necessary infrastructure such as slaughter slabs, curing sheds and trained manpower. Easy access to the project sites for extension work and communication links with the headquarters were other pre-requisites.

1.3 Upgrading/Construction of Infrastructures

For the present and future development of the hides and skins subsector, the necessary infrastructure for training, extension and for actual production and preservation of hides and skins had to be provided. The project assisted in the upgrading of existing institutions like the Leather Institute of Zimbabwe (LIZ), Bulawayo and the Leather Development Centre (LDC) in Nairobi, both of which played an important role in the implementation of the project. LIZ organized various regional workshops on hides and skins for the benefit of all the participating countries. LDC is under the control of Kenya Tanners' Association and various machines were renovated in the centre to make it in better working condition. The PTA Leather Centre which had planned to start operations in Addis Ababa was to benefit from project assistance. Both in Ethiopia and Sudan, there are leather training institutes with good facilities for training in hides and skins improvement work. The project assisted in building model drying sheds in Ethiopia to function as production cum demonstration centres. Through the revolving fund, the project upgraded the existing slaughter slabs and drying sheds and also built new ones in Tanzania. The extension services of hides and skins improvement department in all the countries were revitalized by various inputs and this enabled them to function more effectively for technical dissemination.

1.4 Supply of Tools and Other Inputs

The revitalization of the extension services was possible by providing essential inputs for improving mobility and technical skill. For the region, the following inputs were provided:

1. Thirteen 4 W.D. vehicles and 53 motorbikes for improving the mobility of the extension officers.
2. 10,000 ripping and fleshing knives for proper flaying and preparation of hides and skins; 100 pulley blocks for hoisting of carcass for flaying purposes and 100 sets of marking hammers for marking the quality grades on hides and skins.
3. Seven sets of video projectors and overhead projectors with films and other projecting material to be used during demonstrations; posters and leaflets in local languages on hides and skins improvement work for display and distribution and guidebooks on hides and skins improvement for extension officers.

Provision of vehicles, motorbikes and other tools and equipment made it possible for the extension staff to visit rural areas and demonstrate the correct techniques which made them more effective. The combined effect of all the above inputs was the general improvement in quality and collection of raw hides and skins and recognition of grades and graded prices.

1.5 Local Demonstrations

Very closely related to the artisans' training were local demonstrations whereby the correct methods of slaughter of animals, hoisting the animal (cattle) for flaying, ripping and flaying, use of proper knives, preparation of hides and skins, frame drying, trimming and storage were demonstrated under field conditions. In all the countries of the region, flay cuts formed one of the major defects and the demonstrations showed how by use of proper knives and techniques, these could be avoided. Along with the demonstrations, proper knives were also distributed to the artisans. Another important technique demonstrated was the correct lacing of the hides and skins while frame drying. Improper lacing was responsible for the poor pattern of hides and skins which downgraded their

quality. Skinning of goat and sheep without the use of knives to eliminate the flay cuts and use of hoists under rural conditions for flaying of cattle were also demonstrated. Advice was given to avoid delays between flaying and drying; on ways of avoiding sun drying and how to remove fat from hides and skins during air drying, as these were mainly responsible for putrefaction of hides and skins.

The demonstrations were held in a number of places in each target area and these were supplemented by audio-visuals like film showing combined with explanatory talk and display of posters on different aspects of hides and skins improvement. These demonstrations succeeded in enhancing the technical skills of the artisans and created more awareness among butchers and farmers on the importance of hides and skins.

1.6 Grading Norms and Incentives

It was difficult to envisage any planned development in hides and skins sector without established grading standards and graded prices. Grading was important not only for the producers to know the worth of their commodity but also for the tanners to determine what type of leather can be produced out of a particular raw material. Most of the countries in the region had their own grading norms, which were government approved legal notices. Though the norms existed, they were not strictly enforced in the trade. Having recognized the need to have a system of grading which will be simple and easily adoptable, UNIDO prepared a document "Guidelines for Grading of Hides and Skins by Quality" with norms and pictograms for the introduction of uniform grading of hides and skins in the region. The document was discussed during the regional seminar on hides and skins held in Bulawayo and later presented during the FAO Sub-group on Hides and Skins meeting held in Rome. After finalization, UNIDO submitted the document to all the governments in the region for necessary action to incorporate them into national standards so that a uniform grading standard for the region could be established. The matter was under active consideration of the respective governments and may be implemented during the second phase of the project.

Meantime, based on the existing grading norms, a system of marking on hides and skins was introduced as the first step in introducing an incentive based pricing. The marking of the grade which determined the value of the material was expected to encourage the primary producer to improve the quality and even the collection of hides and skins. These marked grades should be acceptable to the tanneries and form the basis for purchase of hides and skins. In some countries, special grading practices were held jointly for the extension and tannery staff to avoid conflicts on commercial grading. A start was made on marking grades on hides and skins and their purchase by the tanneries on that basis.

In the hides and skins subsector, incentives could be either for preventing specific defects like flay cuts and branding or as a general incentive based on graded prices. As grading was not always adopted in the trade practices, there was very little incentive for the primary producer for quality improvement and when there was a downward trend in prices, the hides and skins were often thrown away. If there was a good price differential between the top 2 grades and the last 2 grades and the tanners adopted the grading system, one could expect real incentive for quality improvement.

While there were some efforts to offer incentives to producers to eliminate brand marks, it was not considered substantial enough to have good results. Similarly, in some countries, there had been offer of incentives to flayers in slaughterhouses to avoid flay cuts, but it needs follow-up on a wider scale.

1.7 Policy Outlines

A document entitled "Improved Policy Outlines and Industrial Strategy for the Development of Regions' Hides and Skins, Leather and Leather Products Industry" was produced by the marketing expert of ITC and the UNIDO leather consultant in the form of a regional document specifying both the regional and individual country aspects. On a regional level, the important recommendations on hides and skins improvement programme were:

1. The tanners, professional associations and other institutions should be encouraged to take an increasingly active role in hides and skins improvement through incentives, training and advice and especially through the revolving fund created during phase I. Above all, it is the tanners and the manufacturers who will benefit directly from the programme and are in the best position to provide the necessary financial incentives to the producers, rather than the Ministry of Agriculture.
2. With the assistance of the industry, UNIDO, and FAO, relevant government/ministry departments should formulate incentive schemes to counter the lack of motivation and neglect in hides and skins improvement and speedily initiate the mechanism to establish an improved statistical intelligence system. Such incentive systems should be based on the "Guidelines for Grading Hides and Skins by Quality" prepared during the first phase of the programme.
3. In view of the poor past record of such schemes, governments should encourage the state-owned and private industrial leather sectors to be directly involved in hides and skins improvement, in conjunction with existing trading, tannery and leather associations and institutes and utilize funds raised from levies on hides, skins and leather trades and from the revolving fund solely for such improvement schemes. Animal health, veterinary hygiene and hides and skins extension officers in the target areas should be encouraged to be involved in hides and skins improvement at country levels.

The finalized document was submitted to all the governments in the region and some of the governments adopted policies and strategies proposed and formulated according to their national requirements.

1.8 Training and Study Tours

One of the important objectives of the project was to develop skilled manpower at all levels which will be able to bring about the required development in the hides and skins improvement work and sustain it in the future. The project gave extra importance to training of artisans and farmers at rural level and that of skilled workers in organized slaughterhouses.

The extension officers were initially given an induction training to familiarize with the project objectives and procedures and thereafter a technical training on the theory and practice of hides and skins improvement work. More emphasis was given to practical aspects of the development work and in some countries, special training was given on the practice of grading in

the trade to bring about uniform acceptable grading norms. The extension officers were trained in the existing training facilities by the international experts with counterpart assistance. Some of the senior staff were provided overseas study tour to widen their outlook and give an insight into the modern developments in other countries.

Seminars were held occasionally in each country for an exchange of ideas between the participants as tannery technicians, livestock personnel, trade representatives and others and to work out the development strategy for the sub-sector. On a wider scale, regional seminars were held for an exchange of ideas and experiences between different countries, to build up inter-country contacts and co-operation and plan the development strategy for the region. The project provided 23 study tour trips for the senior staff to USA, Switzerland, Germany, India, Hong Kong, Zambia, Zimbabwe, Kenya and Ethiopia. Senior staff from all the countries attended the two regional seminars on hides and skins held in Bulawayo. 19 training courses were conducted (duration ranging from 1 to 4 weeks) which were attended by 553 hides and skins improvement officers. 25 artisans' refresher training (duration 3 to 6 days) courses were held along with demonstrations in the rural areas which were attended by 922 flayers, butchers, farmers and artisans.

The overall training programme had succeeded in creating the well-trained and skilled manpower at various levels, necessary for implementing the development programme in hides and skins and sustaining it in the future. The seminars and overseas study tours had created more cooperation and exchange of ideas between the countries in the region regarding trade and technology. It should be noted that hides and skins improvement required to be carried out continuously and training provided similarly.

1.9 Revolving Fund Operation (R.F.O)

The innovative Revolving Fund was conceived under the Regional Tannery Rehabilitation Project US/RAF/88/102 with the following objectives:

- (1) to assist the private industry who needed imported machinery and other supplies as part of the rehabilitation programme for the leather and leather products industry in the region, and were handicapped by the lack of foreign exchange.
- (2) to utilize the payback money in local currency for sustaining the development activities in hides and skins subsector.

The system worked as indicated below:

On receipt of the request from a private leather and leather products industry for the purchase of machinery and other supplies, the national expert when satisfied with the justification of the request, recommends it through the regional office, Nairobi to UNIDO, Vienna for necessary action. Once approved, orders were placed through the normal official channel for the supply of equipment, to the concerned country. After the installation of the machinery, UNIDO transfers the title of the machinery/equipment to the leather association in that country. In turn, the leather association enters into the lease agreement with the private party for the repayment of the total cost of the supplies in local currency in mutually agreed number of installments not exceeding ten years. The amount was to be paid to the leather development fund operated by the approved signatories of the country's leather association in any well established credit worthy bank in the country. The title of the equipment will be transferred to the private party on clearance of all the arrears.

This fund will be available for activities such as: organization of hides and skins improvement seminars; starting up additional collection points for hides and skins; purchase of modern equipment for hides and skins improvement activities; remuneration of international and local expertise to be engaged in special projects or any other activities as decided by the leather association.

It is noteworthy that the Leather Development Fund was opened in all the countries during the project period and the details of the revolving fund in each country are given in annexes 9, 10 and 11.

1.10 Leather Associations

The leather industry in most of the countries has recognized the need to have a trade and industry association to promote mutual interests and to act as the industry spokesman in dealing with government and other agencies. It was this UNIDO project which took it up as one of its objectives to assist in the formation of a leather industry association in each country in the region. It was expected that the association will have representatives from leather and leather products industry, traders, primary producers and retailers. This ensured that during discussions with the government, the views expressed were the clear distinctive views of the unified industry.

When the project began, Zimbabwe and Kenya already had the trade associations. Along with strengthening the above, the project successfully assisted in forming leather associations in Ethiopia, Malawi, Sudan, Tanzania and Zambia. The names of the associations are:

- Ethiopian Tanners Association
- Kenya Tanners Association and (The Kenya Footwear Manufacturers Association)
- Leather Association of Malawi
- Sudanese Leather Association and (Sudanese Chamber of Industries Association)
- Leather Association of Tanzania
- Leather Industries Association of Zambia
- Leather Institute of Zimbabwe

The formation of the Eastern and Southern Africa Leather Industries Association (ESALIA) in 1995 with registered office in Nairobi was a milestone in the regional co-operation for the development of hides and skins, leather and leather products industry in the region consisting of countries, namely, Ethiopia, Kenya, Malawi, Namibia, Sudan, Tanzania, Uganda, Zambia and Zimbabwe and any other country in the region that shall express interest to join the association.

The objectives of the association are:

- To provide for an interchange of views amongst members i.e. national associations of leather producers in membership with ESALIA on matters affecting the leather industry.
- To promote and protect the interests of the industry in the region by ascertaining the solutions of problems of mutual interest and transmitting these solutions to its members. To promote sales both within and outside the region of the products of the leather industry in the region and the attainment and maintenance of proper standards of quality in relation to price.

- To encourage market surveys and such other forms of economic and statistical research as may be valuable to the association and to make available to members the results of such investigations.
- To collaborate with any other organization having objectives altogether or in part similar to those of the association.
- To engage in other activities which are to the advantage of the members.

2. HIDES AND SKINS IMPROVEMENT IS A LONG-TERM PROCESS

The very origin of hides and skins implies serious difficulties in implementing any development programme. Most of the hides and skins are produced in the rural areas (about 80%) by the farmers where communication links are far from satisfactory. As most of the slaughter of animals in the rural areas are done in unhygienic backyards without proper knives and facilities like water, the hides and skins are often downgraded in quality. The farmers lack the technical skill to prepare and preserve the hides and skins properly. There is quality downgrading also due to many animal diseases like pox and insect bites like ticks which will require long term measures by the veterinary departments. The farmers are often exploited by the traders and hence they have no motivation or incentive to improve the quality or even to do collection.

They have their own traditions and methods of handling and marketing of hides and skins. Being more tradition bound and often uneducated, they tend to resist changes. The trend in rural production of hides and skins depends very much on harvest season and festivals.

The change in the present situation can be brought about only through an effective extension service combined with practical demonstrations. Even if the extension staff has the ability to communicate with the farmers on technical matters, they often lack the transportation facilities to reach the remote areas. The impact of any campaign is going to be slow and changes can be brought about only gradually. One language the farmer understands well is the language of money. If an awareness can be created that he can earn more money by improving the quality of hides and skins, he will definitely go for it.

On one side, we have the supervisory staff, who have no motivation to do their job well. On the other side, there are conflicting interests of farmers, butchers, flayers, traders and tanners. The combined effect is a very difficult situation for any time-bound planned development in hides and skins subsector. The training of artisans and farmers and training of trainers is a continuous extension exercise. As the problem is immense, the medium of dissemination highly dispersed, solutions very difficult, and as the government inputs are not always adequate, there is no short-cut methods in hides and skins improvement programme but only through a long term strategy.

3. IS UNIDO'S APPROACH THE RIGHT ONE?

The regional integrated programme approach for the development of leather industry was attempted in this project by UNIDO for the first time. While it was easier for the project to show substantial and concrete results in the field of leather and leather products, because of the special nature of hides and skins subsector, it was more difficult in this field. It was reported that the industry and the governments in the project countries appreciated the efforts and the results of the project and especially the new approach adopted by UNIDO.

The consultant concurs with the conclusions drawn by the 1991 in-depth evaluation team which stated "The good will towards the programme has been exceptional within the leather and leather products sector in the African countries and within the international leather community. The programme results and achievements have been extensively publicized in local and international branch papers and in the mass media including TV. Requests from other African countries to be involved in the project have also been received. Requests have also been received from the International Leather Community to co-operate with the programme."

With the introduction of revolving fund and formation of tanners' association, UNIDO has indirectly involved the industry as the major partner in leather sectoral development and made them responsible for present and future development activities in this sector. Again, they were made the spokesman for the industry in dealing with the government and other agencies so that the views expressed by the association were the disjunctive views of the unified industry, thereby eliminating the fragmentary views of small groups within the industry. Each group or subsector has started to appreciate the viewpoints of other parties and this will lead to a balanced development of the leather industry. It is expected, in the long run, the industry itself will be in a position to develop and implement its own support programmes.

The formation of regional association ESALIA with the membership of all project participating countries may be considered a remarkable UNIDO achievement. This augers well for the regional development of the leather industry by interchange of views between the member countries and promoting and protecting the interests of the leather industry in the region. UNIDO is expected to support these associations in their development programmes and provide whatever, external assistance necessary.

Particular achievements were made in hides and skins improvement with a recorded increased recovery of raw hides and skins as well as improved quality. Inputs from the programme included training programmes on correct flaying and curing methods, supply of appropriate slaughter tools and transportation facilities and supply of publicity materials in local languages. However, the quality and recovery of raw hides and skins remain pivoted to the development of the region and improvement in this area should be viewed as a long-term ongoing activity.

While inter-agency co-operation in project implementation was a welcome step, this aspect will require more serious re-consideration in future programmes.

In general, the scheme was considered by all participants as the first successful implementation of the integrated industrial development programme at a sub-regional level and may be considered a model for such programmes in future.

4. PROBLEMS AND SUGGESTED SOLUTIONS

Revolving Fund Operations:

To protect the development fund from the unlikely event of liquidation of private banks, it is suggested that the development fund should be deposited only in a national central bank in each country.

The leather associations should take special care to see that the instalment payments by private parties are done on schedule and the annual reports on fund operation sent to UNIDO.

There is no safeguard against the fast declining value of the fund in dollar terms and this may have practical implications when certain supplies or services are required for development work. UNIDO/Leather Association should look into this problem at the earliest.

Grading Practice:

Due to the interplay of various self-interests, there is considerable resistance in the introduction of technical grading and graded prices. Because of this, there had been no motivation or incentive to the primary producer to improve quality and collection. There had been no serious or uniform efforts in the region to give intensive training to the field staff on commercial grading practice jointly with the tannery staff which only can pave the way for avoiding the conflicts in judging the grades. The active participation of the tanneries in this effort is not yet properly sought for.

The Leather Association should take a decision that all the tanneries will purchase hides and skins only on grade basis and prices paid according to the established market price for each grade. The hides and skins department may arrange the training on grading as indicated above.

Statistical Intelligence Reports:

Due to various reasons as lack of motivation, staff and government support, the desired results were not achieved in collection of statistical intelligence reports. There had been an effort from UNIDO to develop a more systematic data collection through a project. However, the collection of the periodic field data should be continued with the present format. UNIDO should insist that the national experts strictly follow the procedures in this respect.

Green hides and skins direct to the tannery:

One of the problems the leather industry facing today is the high cost of pollution control and keeping the environment clean. While the problem is very serious in the developed countries, it is slowly but definitely coming up in the developing countries. Preservation of hides and skins by salting creates the problem of disposal of salt both in solid and liquid form. though to a lesser extent, air dried stock also needs environmentally undesirable chemicals both during storage and soaking.

In all the countries covered by the project, there are abattoirs or slaughterhouses which are in the vicinity of the tanneries or within the economic transportation distances. According to the data available, annual output of hides and skins from slaughterhouses in the seven project countries is 1,842,000 hides, 2,215,000 sheepskins and 2,283,000 goatskins. If these hides and skins can be directly transported to the tanneries in green state and then processed without preservation or with a light preservation as is practiced partially in Kenya, one can bring down the salt pollution to a minimum.

Apart from that, it will be easy to introduce graded prices and incentive measures to eliminate flay cuts which happen during the slaughter of the animal. In effect, there will be substantial quality improvement.

However, the above measures can be introduced only after a detailed study of the availability of hides and skins in the slaughterhouses, cost and availability of transportation to the tanneries, agreement between the butchers, slaughterhouses and tanneries and the system to be introduced in each location and country.

In view of its economic and environmental importance, this problem may be studied by UNIDO or other agencies for early implementation.

Slaughter Facilities:

The origin of the hides and skins has a lot to do with its quality. It is well established that the hides and skins from slaughterhouses are of much better quality compared to those produced in the backyard. In a slaughter facility, it is possible to maintain necessary hygiene during and after the slaughter of the animals and introduce quality improvement measures, grading incentives etc. Also, it is easy to monitor the quality and collection of hides and skins. Much has been done in the region for providing slaughter facilities, but it is not good enough. There should be an effort to link up the slaughter slabs and drying sheds in any given area. Only about 15 to 20% of hides and skins in the region are produced in the slaughterhouses.

Necessary details for the construction of slaughter facilities of varying sizes are available with UN Agencies like FAO, and also with most of the individual countries. What is lacking is an organized effort and money to build the rural slaughter slabs in a given period of time, say 5 to 10 years. The hides and skins department should take up the initiative to prepare such a plan and get started with tanners' association help. The governments are committed to the development of hides and skins sector with expectations of earning considerable foreign exchange. Towards this, the governments may invest on building up necessary infrastructure as slaughter facilities.

Method of preservation:

Due to the environmental problems, salting of hides and skins for preservation has become controversial. All the available data in the region shows that the quality of hides and skins especially sheepskins are much better in the salted stock compared to other types of preservation. In case of cattle hides, it is well established that in regions with long rainy season, curing with air drying led to heavy losses due to rotting and putrefaction. At present, salting is the only method of preservation which can economically check this rot. The modern systems of preservation as freezing, use of biocides and others are yet beyond the technical and economic reach of the region under consideration. Until an economic and environmentally clean alternate system of preservation is developed, salting technique should continue, where ever it is feasible.

Branding:

Branding of cattle is mentioned as one of the major quality downgrading factors in the region and its occurrence varies from country to country and from region to region. Unless the present system of hot iron branding is changed, the damage is bound to be there. By audio-visual methods and better extension system, it may be possible to teach the farmers how to brand the animals on safer spots, but it is going to be very slow transition. The incentive system as being adopted in Zimbabwe may be applicable only to countries with organized livestock sector.

It must be possible to identify dyes or other coloring material which are used for similar purposes as for sheep identification. These colors will be bright and can be easily identified from long distances. Once applied, it will last for long periods of time and should remain on the body of the animal, even if the hair is shaved off.

The existing extension services of the livestock department can distribute the material with simple instructions on its use. The cost sharing of the operations should be worked out by the tanners' association. It should be easy to identify chemicals or dyes manufacturers who specialize in this field and with their co-operation, the system of colour marking may be tried for introduction.

5. FUTURE OF HIDES AND SKINS IMPROVEMENT PROGRAMMES

As already stated, the hides and skins improvement programme will have to be based on a long-term development strategy. The 1991 in-depth evaluation team stated that "In spite of the vast complexity of the pilot scheme, it has been successful in many areas, particularly in relation to the Leather and Leather Products Rehabilitation Programme. It has created an awareness that there is need for change and improvement, and clearly the pilot scheme is being viewed as the catalyst to assist in creating changes. However, many of the results are not yet sustainable and a second phase should be designed and introduced to consolidate the results of the first phase."

The FAO-organized ECDC workshop on Trade in Hides and Skins and their Derived Products in Bulawayo, 29 July-2 August 1991, recommended inter alia:

"The joint UNIDO/FAO/ITC Regional Hides and Skins, Leather and Leather Products Improvement Scheme should continue and efforts should be made to enlarge the programme to include additional African countries who have applied to join the programme."

Until the wastage and downgrading of hides and skins are stopped and good quality hides and skins are made available to the tanneries in sufficient quantities, the hides and skins improvement programme may have to continue. It will be a big national waste, if the built-in capacity of the leather and leather products industry and trained manpower in each country are not utilized at the optimum level. Hence, all possible assistance from UNIDO for hides and skins improvement programme may be continued for some more time. In general, such assistance may be directed to countries which have shown good results in project implementation.

While such assistance will have only a catalytic effect, the main effort should emerge in the country itself. The tanners' associations in each country should take the initiative to set out the priorities for development work and mobilize its own resources for implementing them. For example, top priority should be given for the introduction of grading and graded prices and construction of slaughter slabs and drying sheds in the rural areas. As already mentioned, the association should seek all possible government assistance in these endeavors.

The project has created through the revolving fund, the necessary infrastructure and means to sustain the hides and skins improvement programme on a medium term basis. The industry should take a long term view and start mobilizing resources through Development Cess Fund with government assistance in order to sustain the development programmes on a continuing basis.

6. OBSERVATIONS AND CONCLUSIONS

- The regional and integrated programme approach adopted by UNIDO in this project can be considered as a model for such programmes in the future and has clearly demonstrated how such a programme can contribute to the promotion of a regional community of interest in a particular sector willing to share experiences and know-how. It has also demonstrated how the cost of the project can be minimized by providing common inputs and services and how it has strengthened the inter-action and cooperation between different sub-sectors institutions, ministries, UN agencies and the industry involved at national and regional levels.
- The project has achieved most of the targets set out in the project document, though there were wide variations from country to country. The notable project achievements were: (a) improvement in collection and quality of hides and skins (b) formation of revolving fund operations in all the countries (c) formation of tanners' associations in all countries and the regional association ESALIA and the industry's realization that they are not spectators but active partners in the development programme (d) creation of a pool of trained manpower and upgrading of training institutions (e) formulation of the document "Guidelines for Grading of Hides and Skins by Quality" and (f) creation of awareness at all levels for hides and skins improvement programme.
- A remarkable achievement of the project was the creation of the Revolving Fund Operation (RFO) in all the countries through the payback by the private industry which were assisted in their rehabilitation programme and this is expected to sustain the hides and skins improvement activities in the region at least for ten years. The Revolving Fund has already been used in some countries for training purposes, strengthening of slaughter facilities and setting up of Training Production Centre for Shoe Industry.
- The project was instrumental in the formation of tanners' associations or strengthening of the existing associations in all the countries and subsequently in the formation of the regional association called "Eastern and Southern Africa Leather Industries Association" (ESALIA). While the associations will ensure the successful operation of the Revolving Fund for the hides and skins improvement, they will also be the spokesman for the industry in formulation of national policies and strategies. On a regional level, there will be better co-operation and exchange of ideas between the countries in the region on matters of trade and technology.
- Through practical demonstrations and more effective extension services, the project has shown during 1992/93 an increase of 104,000 cattle hides, 8000 sheepskins and 73,000 goatskins in collection in the target areas of the region and its estimated value is US\$ 1,697,000. There had been considerable improvement in the quality of hides and skins (for example, in Tanzania, the first grade hides went up by 20% in the target area and the estimated value by increased number of top grade hides and skins is US\$ 630,000 for the region.
- As a spin-off effect of the project, in some countries, there had been a general improvement in collection and quality of hides and skins on a national scale. This has directly helped the better functioning of the tanneries in respective countries resulting in enhanced foreign exchange earnings and other economic benefits to the country.

- While the direct UNIDO contribution for the hides and skins improvement component was US\$ 1,063,340, the benefits accrued due to improved collection and quality in the target area during 1992/93 was worth US\$ 2,327,000 a year. Apart from this, one should also take into account various visible and invisible benefits as general improvement in the leather sector of the region as a whole, privatization of the leather industry, manpower development, institution building, more effective extension services, creation of awareness etc which are pre-requisites for the development of the sub-sector.
- The catalytic effect of the UNIDO project was partially responsible for the privatization of the leather industry in some of the countries with a shift from the public sector industry.
- As a project activity, training of personnel at all levels was done exceedingly well in the existing training institutions in all the countries. About 1,000 artisans and 550 extension officers were given training. This, along with seminars and overseas study tours have enhanced the technical skill of extension officers and artisans, which will be instrumental in sustaining the future developmental activities of this subsector.
- The extension services were re-vitalized through better staff mobility, supply of proper tools and equipment and through demonstrations of correct methods of slaughter of animals, flaying and curing of hides and skins. This has resulted in reducing defects like flay cuts with consequent improvement in quality grades and collection.
- Creation of awareness at all levels through personal contacts, posters and mass media about the importance of hides and skins improvement and leather industry in general has resulted in the recognition of leather industry in the commercial, industrial and political circles. This is very important as in most of the countries, leather industry is considered as a cottage industry in spite of the modern technology adopted in the industry and the foreign exchange they earn for the country.
- Lack of motivation may be responsible for the sluggish collection of base and periodic data in the field, though it is well understood that periodic collection of simple data related to quality grades, production and collection of hides and skins is important for monitoring the project activities. Without reliable data, it is difficult to formulate suitable policy guidelines, investment decisions and development plans and for UNIDO to judge the progress of the project.
- The document "Improved Policy Guidelines and Industrial Strategy for the Development of the Regions' Hides and Skins, Leather and Leather Products Industry" was submitted with specific recommendations for each country and it is expected to speed up formulation of national policies and guidelines for the development of the leather industry.
- The document prepared by UNIDO for the introduction of uniform grading in the region "Guidelines for Grading of Hides and Skins by Quality" was well received by all the countries in the region. Until uniform grading based on the above document is adopted, the existing rules and regulations in each country can be used for introducing technical grading during sales and purchase at various trading stages. There can be substantial improvement

in hides and skins subsector only with the introduction of technical grading and graded prices in collaboration with the tanneries.

- In most of the countries, as there had been no intensive joint grading practices among the tannery staff and the field staff, there were conflicts between the tanners, traders and primary producers on the quality grades and prices. As a consequence of the above, no graded price incentives have been introduced.
- The major defects downgrading the quality of hides and skins in the region and which can be controlled to some extent are brand marks, flay cuts, putrefaction, and poor shape or pattern. Eradication of ticks and pox menace is another urgent problem as this is downgrading the quality of hides and skins in most of the countries.
- Though free trade permits free import/export of raw hides and skins, there is need for each country to define import-export policy taking into consideration the specific requirements of the leather industry in that country. In most of the countries, the leather industry is in infant stage and needs national support. In countries where the governments have banned the export of raw hides and skins, there had been considerable improvement in capacity utilization of the tanneries. However, the tanning industries must be prepared to play on a level ground in view of the liberalized world trade.
- Taken the region as a whole, it is estimated, the unutilized tannery capacity is about 4 million cattle hides and 11 million goat and sheepskins. Out of the total estimated production of 8.3 million cattle hides and 33.5 million sheep and goatskins in the region, about 4 million cattle hides and 14 million goat and sheepskins do not reach the tanneries in the region.
- There are favorable trends in the region which may lead to increased collection and improved quality of hides and skins and these are (a) The raw hides and skins traders themselves are entering the leather production sector. (b) To meet their commitment for supply of leathers, tanners may be forced to import raw hides and skins in the near future. In their own self interest, the tanners will take measures to obtain more of better quality hides and skins locally. One should expect lesser and lesser governmental support for hides and skins improvement work.
- On one side, there is a lack of motivation for personnel expected to do the supervisory work and on the other side, there are conflicting interests of different parties involved in this trade and industry. The combined effect is a very difficult situation for any time-bound planned development in this sub-sector.
- The team which did the in-depth evaluation of the project US/RAF/88/100 has rightly recommended the II phase for the project. There is a definite need for continued external assistance for the development of hides and skins sub-sector. The criteria and quantum of such assistance need more critical consideration and in general, such assistance should be directed towards countries in the region with a good record in implementing the programme. As FAO and other UN Agencies are not showing any interest in the field of hides and skins improvement, UNIDO may be the sole UN Agency to continue the good work being done now.

- Considering all factors, two developments which can trigger of a quantum jump in the field of hides and skins improvement are:
 - (a) All the tanneries in each country should insist on purchase of hides and skins only on the basis of technical grading and graded prices.
 - (b) The construction of slaughter slabs to cover most of the rural areas in the country and their proper utilization.

7. RECOMMENDATIONS

To UNIDO:

The smooth revolving fund operation may be continued by the tanners' associations in each country in coordination with ESALIA. Annual reports on the working of the fund may be sent to UNIDO for information; the development fund may be deposited only in a national central bank in each country, if it is not so already; UNIDO nominated financial experts should immediately examine how the liquidity of the fund in dollar terms can be maintained in view of the rapidly declining local currency values; The time is appropriate for UNIDO to use RFO as a lever to persuade the industry and the government to establish a development cess fund for the leather industry, which will become the main source of finance for development work in the future.

With the twin objectives of improving the quality of hides and skins and preventing the possible environmental pollution due to salting, the possibilities of supplying green hides and skins directly to the tanneries from the slaughterhouses may be examined in places where the tanneries are in the neighborhood or within economically transportable distance from the organized slaughterhouses. Until, an economic and environmentally clean preservation system is developed, preservation by salting of hides and skins should continue where-ever it is feasible.

While the efforts by the extension services to educate the farmers on proper methods of branding should continue, the project should identify chemical manufacturers who can develop dyes or other coloring material which can be used for identification purposes without damaging the hides and skins.

The project should strictly insist on collection of periodic data from the field staff, their compilation and analysis at the project headquarters and sending feed back to the field staff. The basic information required relates only to collection, grading and major defects in hides and skins. While the project may welcome the effort to introduce a modified simpler system of data collection, the present format may be used till then.

The impact of the hides and skins improvement programme is going to be slow and hence the development assistance should continue for some more time. As the only UN Agency interested in the integrated development of leather sector, UNIDO should continue providing development assistance to the hides and skins sub-sector. The inter-agency cooperation in project implementation needs scrutiny.

A regional classification of hides and skins in the project region based on the compendium published by UNIDO may be made available at the earliest to all interested parties.

To the Governments:

While there cannot be a uniform policy for all countries on the ban of export of raw hides and skins, there is a need to formulate national policies which will take into account the requirements of the industry, the built-in capacity of the industry and manpower in the country and their optimum utilization.

The government departments should enforce the trade rules and regulations more strictly.

To prevent the downgrading of hides and skins and to improve the collection, utmost priority should be given to construct rural slaughter slabs combined with drying sheds. National Governments should draw up a work plan to cover the whole country within a period of 5 to 10 years. It will be a much better idea to have smaller private slaughterhouses in cities and towns than having big public sector abattoirs.

With or without project, the training programme along with demonstrations on hides and skins improvement techniques especially skinning of goat and sheep without use of knives to avoid flay cuts should form a continuous activity of the hides and skins improvement department of the Ministry of Livestock Development.

They should also examine the possibility of revitalizing the dipping or any other programme to control ticks menace and other animal diseases which are downgrading the hides and skins.

The awareness programme initiated by the project should be further strengthened by the hides and skins improvement department through personal contacts, mass media, seminars, and more importantly through good results.

To the Tanners' Associations and ESALIA:

The tanners should insist of purchase of hides and skins only on grades and graded prices.

Quality grades per the existing grading norms should be marked on hides and skins during the primary sale itself and the primary producers should be made aware of the principles of graded prices and the existing market prices.

More intensive training on grading practice should be given to the extension staff jointly with the tannery staff.

The tanners' associations in each country should take a more active role in the following activities:

- a) Operation and maintaining the liquidity of the revolving fund and in its proper utilization.
- b) Formation of a development cess fund.
- c) Introduction of quality grades and graded prices for hides and skins.
- d) Introduction of incentives or dis-incentives for prevention of flay cuts.
- e) Upgrading and setting up of slaughter slabs and drying sheds in the rural areas
- f) Advice to the Government on national policies which will promote balanced development of the leather sector as a whole.

- g) More contacts with other trade and industrial associations, corporate bodies, government departments and institutions.

The newly formed regional association ESALIA may take up the publication of market news and a periodic technical newsletter for exchange of ideas on trade and technology in the region and the world in general.

PART II - PROJECT'S IMPACT

1. INTRODUCTION

The project benefits can be classified as those which can be directly measured in monetary terms and those which cannot be measured in monetary terms, but essential for any long term development. Under category one, the important aspects were improvement in collection and quality which could be measured in terms of added value from raw stage to leather products. Another related benefit was the enhanced income for the primary producer who was expected to have better returns when collection and quality improved.

The major project inputs were on institution building, manpower development and infrastructure upgrading which resulted mostly in invisible benefits. The investments in the project were only in the target area, but the benefits spilled over from the project area to the whole country and the region.

In general, the project beneficiaries were raw hides and skins primary producers, middle traders and focal collectors in selected target areas, tanneries, shoe factories, leather products factories, industrial institution (Leather Associations) and Technical Institutes.

2. MONETARY BENEFITS

UNIDO's input for the hides and skins improvement programme in the region including the services of the international experts was US\$1,063,340. Taking 1992/93 reports, the increase in collection in the target areas was about 104,000 cattle hides, 8,000 sheepskins and 73,000 goatskins a year, which had an estimated value of about US\$1,697,000. The main increase in collection of cattle hides was in Kenya and Zimbabwe; and the increase in goatskins was in Tanzania and Zimbabwe whereas the increase in sheepskins was only marginal in all the countries.

There was general improvement in the quality of hides and skins with an increase in top two grades with a corresponding decline in the lower grades 3 and 4. Taking only the increase in percentage of first grade hides and skins which varied very much from country to country and considering a 25% price increase for higher quality, the monetary gain in the target areas due to quality improvement was about US\$ 630,000 a year. While there was 50% increase in the first grade hides in Sudan, it was only 1% in Ethiopia. In case of sheepskins, while the increase was 17% in Ethiopia, it was only 3% in Malawi. In case of goatskins, while the increase was 30% in Sudan, there was only nil improvement in Zambia. The total benefits accrued in the target areas due to improved quality and collection was about US\$ 2,327,000 a year. The actual details countrywise are given in Annex nos. 7 and 8.

It is expected in varying proportions, the benefits mentioned above should have trickled down to the primary producers also. In most of the countries, as hides and skins are processed and then exported partially or converted into the leather products, the added value benefits will be more than double the figure given earlier.

As a spin-off effect, there had been a general improvement in collection and quality of cattle hides in some countries of the region as Tanzania and Ethiopia. Even if there was 1% increase in collection of hides, it accounts for about 68,000 hides valued at about **US\$ 680,000**.

3. NON-MONETARY BENEFITS: (refer to Part-1, summary of efforts made, for details)

There were many important benefits which could not be evaluated in monetary terms but very vital for sustaining the future development activities of hides and skins subsector. There were the visible outputs as the documents on policy outlines and regional grading system, revitalization of the extension services, upgrading of the institutions and formation of revolving fund and tanners' associations. The invisible results were the awareness created for the hides and skins improvement and the human resources development.

Short description of the above benefits are given below:

- The document "Improved Policy Guidelines and Industrial Strategy for the Development of the Leather Industry" specifying both the regional and individual country aspects was expected to give the necessary guidance to individual countries for their future planning.
- The document "Guidelines for the Grading of Hides and Skins by Quality" which had formulated a simple adoptable system of grading will form the basis for uniform grading system in the whole region.
- As all the essential physical inputs were provided, the extension services were revitalized and made more effective as a medium for dissemination of trade and technical information in the rural areas. This had directly resulted in improvement in quality and collection of hide and skins.
- Closely connected with the extension services was the awareness created at various levels about the importance of hides and skins improvement work. While at the rural level, the primary producer may be prompted to improve collection and quality, at the national level, there had been more recognition of the leather industry in the industrial, commercial and political circles. The national governments are showing more interest in all activities related to leather industry. The inter-country co-operation in the region in providing training facilities and exchange of information had created better environment for regional development.
- The formation of revolving fund and tanners' associations in each country will ensure the sustainability of hides and skins improvement programme at least for 10 years. Already, the funds have been utilized in some countries for training, conducting seminars, and setting up a training centre. The associations, in their own interest may advise and influence the respective governments to formulate policies which will promote the balanced growth of the leather industry.
- The upgrading of the existing training institutions and construction of newer slaughter slabs and drying sheds will meet the future requirements for training and demonstration.

- The skilled manpower created by extensive human resource development programmes will ensure that there will be sufficient technical expertise available in the region to adopt and disseminate the required techniques and technology. Without skilled manpower, no development is possible.
- In general, the project has created the proper atmosphere for accelerated growth of the industry .

4. SUSTAINABILITY OF HIDES AND SKINS IMPROVEMENT ACTIVITIES IN THE REGION

4.1 Role of Revolving Fund Operations

The novel concept of Revolving Fund Operations enabled the tanneries and the leather products units to obtain modern machinery, which could not otherwise been purchased due to lack of foreign exchange. Under the Regional Tannery Rehabilitation project US/RAF/88/102, the development fund was created through the payback in local currency by the private industry who obtained the supply of machinery through the above system which was designed to rehabilitate the leather and leather products industry in the region.

UNIDO's assistance to companies (involved in payback arrangements) in form of capital equipment amounted to approximately US\$3,698,822. The payback will extend to 10 years and during the first 5 years, the annual payback is expected to be US\$159,188, taking 1995 currency exchange rates.

In general, the payback is being done on schedule, in all countries. The utilization of the fund had started early in Zimbabwe for hides and skins improvement work. In Kenya, the fund had been utilized for conducting seminars and in setting up of Training Production Centre for the Shoe Industry. In Tanzania, the fund was utilized for the upgrading of the slaughter slabs and drying sheds in Shinyanga region and for conducting 3 seminars on hides and skins. In Sudan, a seminar on hides and skins improvement was already held under this scheme.

The Revolving Fund Operation has started very well and it is expected that it will be able to sustain the hides and skins improvement activities at least for the next ten years. This will be a welcome shift from the common practice of depending on government funds for development of the subsector and will gradually make the industry more self-reliant and independent.

4.2 Role of ESALIA and Local Leather Associations

The success of revolving fund operation depended on the tanners' associations which were entrusted with the management of the fund. The project was instrumental in forming the tanners' associations in 5 countries and strengthening the associations in other 2 countries where they existed. More than anything else, the big achievement is the self-realization by the tanners and the associated industry that they have to manage their own affairs in a co-operative manner with a long term development strategy. The objectives of the association given below clearly confirms that concept and one can be confident that hides and skins improvement work will be sustained continuously as part of their programme. The main objectives of the associations are:

- To provide a forum for interchange of information and experience among leather and leather goods industries on one hand and government institutions on the other so as to achieve optimum results in co-operation and corporate endeavors.
- To represent the interest of the leather and leather products industries and the administering and supervising institutions and ministry concerned with such industries, at a combined forum to evolve and recommend steps for the development of such industry in the country.
- To develop hides and skins improvement in conjunction with government and non-government organizations. The association will endeavor to develop hides and skins preparation, preservation and recovery of all hides and skins in the country.
- To develop leather and leather products sector in the country through the use and interchange of local experience, local expertise, co-coordinated co-operation and enthusiasm.
- To undertake organized training locally and outside the country.
- To manage the revolving fund operation properly to meet the objectives of the Fund utilization.

The subsequent formation of ESALIA in 1995 with country associations as members will ensure the long-term development of the leather industry on a regional basis.

For sustaining the hides and skins improvement programme, apart from operating the revolving fund, the associations should in consultation with national governments start a Development Cess Fund to meet the long term needs of the industry. On current issues like ban on export of raw hides and skins, and other policy matters, the association should have an objective and balanced outlook and offer an unified advice to the government. Introduction of grading and graded prices for hides and skins and construction of slaughter slabs in the rural areas should receive the associations' utmost attention as a long term development strategy.

4.3 Role of Government Policies

In all the countries, leather industry is mentioned as a potential foreign exchange earner with its rural heritage. However, in practice, in many countries, the leather industry gets very little governmental recognition and support. Most of the countries in the region have a long tradition of leather making, but, for various reasons, the leather industry in the region is passing through a critical stage (with exceptions, of course) and in many countries, it should be considered an infant industry. The government support is most crucial for the balanced growth of this industry. The industry has invested heavily on machinery and manpower and it is a national obligation to see that the industry operated in a healthy economic environment. If the hides and skins are not available, the tanneries will suffer when the leather is not available, the leather products industry and the exports of value added items suffer and ultimately creates imbalances in the sectoral development. So, the situation requires very careful handling to make sure that the government policies and strategies will protect the interests of both the nation and the industry.

Though, in the name of free trade, export of raw hides and skins can be allowed, in many countries, protective measures are needed to check free outflow of hides and skins. In most of the countries, which have banned the export of raw hides and skins, there had been an improved capacity utilization by the tanneries.

PART III - COUNTRY PROFILE, INPUTS AND RESULTS

1. ETHIOPIA

1.1 Introduction

Ethiopia has the largest livestock population in Africa and has a well established leather industry. However, the industry had gone through many ups and downs and at present poised to re-establish itself in the world leather trade. There was a big gap between the estimated production of hides and the actual collection. Lack of transport and access to the rural areas where 95% of the hides and skins were produced, was one of the main reasons. There are other factors like illegal trade and lack of price incentives to the primary producers adversely affecting the collection. Apart from the above, defects like flay-cuts, branding, putrefaction and improper shape were downgrading the quality. The government had banned the export of raw hides and skins and there was enough tanning capacity in the country to convert all the available hides and skins into leathers and to a certain extent to leather products and footwear. The hides and skins improvement programme envisaged was to help the industry to improve the quality and collection of hides and skins which was to boost the national effort to switch to export of more and more of finished leathers and leather goods to achieve an export potential of US\$.193 million a year.

The basic data related to leather industry in Ethiopia is as follows:*

TABLE 1

	CATTLE	SHEEP	GOATS
types, breeds and physical features	basically indigenous and product of in-breeding; there are long-horned Fallen, Zebu	differentiated by hair cover between hairy and wool type, hairy thin tailed, woolen thin tailed, fat tailed and fat-romped 75% found in highlands	small in size with short smooth-hair. 75% found in hot and arid lowland
livestock population	30 million	24 million	18 million
offtake rates	7%	33%	36%
production of hides and skins	2.1 million	7.9 million	6.5 million
actual collection and average weight (1988)	1.3 million (dry 5 to 7 kg., wet salted-20kg and green 20kg)	7.4 million (dry 0.75 kg; wet salted 2.25 kg)	5.8 million (dry .55 kg; wet salted 1.65 kg)
grades of hides and skins gr. 1,2 and 3	50,30,20	40,40,20	40,35,25
common methods of preservation: wet salted, air-dried and others	10%, 90%, 0%	80%, 20%, 0%	20%,80%, 0%

*(The charts in the country profile are from the UNIDO document "Eastern and Southern African Hides and Skins".)

	HIDES	SHEEPSKINS	GOATSKINS
Tanned to: wet blue	16-23 %	0-14%	91-100%
crust	13-26%	1-8%	0-9%
finished	52-64%	0-20%	0-20%

Number of Slaughterhouses: 102 (These slaughterhouses account for only 5% of the slaughter in the country)

TABLE 2
TYPES OF DEFECTS

BEFORE SLAUGHTER	DURING SLAUGHTER	DURING PRESERVATION
brands, grain scratches, and tears, smallpox, streptothricosis, these defects caused by mange, tick lice, cockles, and stephano-filariasis	Bruises, rubbed or dragged grain, improper bleeding, poor pattern or irregular shape, flay cuts, gauge marks, scores, corduroy, fouling with blood, and filth stains, trimming defects	putrefaction; mouldy hide, lacing defects, salt stains, smokiness, red heat, heat damage, blisters, damage due to bad salt

Defects Analysis

A preliminary defects analysis indicated flay-cuts, putrefaction, branding of hides were the main defects in the target area. Related data is given below:(as % of total collection)

TABLE 3

PERIOD	CATEGORY	PUTREFACTION	PATTERN	BRANDING	FLAY CUTS
4/90 to 3/91	cattle-hide sheep-skin goat-skin	5.1	5.7	6.2	16.4
		4.6	7.3	0.4	9.8
		4.4	7.5	0.5	9.4
4/91 to 3/92	cattle-hide sheep-skin goat-skin	5.0	5.3	8.8	15.7
		6.0	7.4	0.2	14.6
		5.5	7.0	0.1	12.0
4/92 to 3/93	cattle-hide sheep-skin goat-skin	4.7	5.5	6.4	13.3
		4.4	6.5	0.0	11.5
		4.9	6.2	0.3	14.1

Practically, there was very little change during three years but the tendency was to the negative side.

The Ethiopian cattle hides are classified as x-light, light, medium, heavy and x-heavy. The average area- yield per kg in sq.ft in wet blue is as follows:

TABLE 4

TYPE	WEIGHT	AVERAGE	KG	YIELD/KG
x-light	0-lbs	2.1bs	0.91	4.55 sq.ft
light	4-8	6.1bs	2.73	13.65sq.ft
medium	8-lbs	10.1bs	4.55	19.11 sq.ft
heavy	12-lbs	14 lbs	6.36	26.71 sq.ft
x-heavy	16-lbs	18.1bs	8.18	34.36 sq.ft

Average yield for sheep skins is 5.5 sq.ft per piece while for goats it is 5 sq.ft/per piece.

Categories of either raw, semi-processed or finished leather; leather markets and quantities:

All the raw hides and skins available in the country are processed in the local tanneries. In case of cattle hides, 25% are exported as wet blue/crust; 25% exported as finished leather and 50% used locally as finished leather. In case of sheepskins, 80% are exported as pickle and 20% used locally as finished leather whereas in case of goatskins, 90% are exported as wet blue and 10% used as finished leather locally.

The major importing countries of Ethiopian semi-processed hides and skins are Italy-24%; Japan-20%; England-15%; USA-13%; France-6% and others -15%.

Tanneries and Footwear Units:

There are 13 tanneries in the country with a production capacity of 1,760,000 hides, and 18,000,000 goat and sheep skins producing about 98,240,000 sq.ft of leather.

54 Shoe factories in the country produce about 5.1 million pairs of shoes for local consumption of which the government factories have a share of about 1.2 million pairs. The leather-goods industry is being developed now which has good potential. In 1987, the export earnings of the leather industry was US\$ 65 million which was the second ranking foreign exchange earner for the country. By 1996, the efforts will be to switch the export mix into 75% leather products and 25% semi and fully finished leathers with a potential value of about US\$ 193 million.

Existing infrastructure:

1. A well equipped training facility exists in Productivity Improvement Centre of Ethiopian Management Institute in Addis Ababa. This facility is used for the training of extension officers.
2. The Ministry of Agriculture has a well staffed department for hides and skins improvement with well-qualified headquarters and field staff (about 400) covering all the regions and districts. There is regular budgetary provision for the development work in this department. The communication links between the regions and the headquarters are reasonably good. The hides and skins trade is regulated by Government Legal Notice no.25 of 1975.

TABLE 5

PROJECT US/ETH/88/100 TARGET AREA PHASE 1 (INITIAL) 1989

	CATTLE	SHEEP	GOATS
livestock population	5,550,086	1,939,810	2,036,000
offtake rate	7%	33%	36%
estimated production of hides and skins	385,006	640,137	732,960
actual collection (1989)	153,303	597,435	257,676
grades of hides and skins%	gr 1-50 gr 2-30 gr 3-20	gr 1-42 gr 2-38 gr 3-20	gr 1-39 gr 2-37 gr 3-24

TABLE 6

US/ETH/88/100 TARGET AREA PHASE 1 (after 3 years)

	CATTLE	SHEEP	GOATS
livestock population	5,550,086	1,939,810	2,936,000
offtake rate	7%	33%	36%
livestock population	385,006	640,137	732,960
actual collection (92-93)	117,087	340,181	167,957
grades of hides and skins	gr. 1-51% gr. 2-27% gr. 3-14% gr. 4-9%	gr. 1-59% gr. 2-26% gr. 3-12% gr. 4-3%	gr. 1-46% gr. 2-29% gr. 3-19% gr. 4-6%

Number of slaughterhouses-12

Number of hides sheds-130

Strength of Extension staff-42

UNIDO contribution for hides and skins improvement-US\$279,763

Services of FAO International Expert-16 m/m

The second phase of the project has been initiated in another target area in 1993 with a UNIDO contribution of US\$974,000 and with the same objectives as in phase 1.

1.2 Outputs and Results

Output 1 - Improved policy guidelines and industrial strategy for the development of the country's hides and skins, leather and leather products industry.

All pertinent data and information with regard to existing policy guidelines and industrial strategy for the development of the sub-sector in the country were submitted in due time to the regional office in Nairobi based on this and other available information, the marketing expert and the leather consultant prepared a comprehensive report on improved policy outlines and industrial strategy for the development of hides, skins, leather and leather products, suitable for Ethiopia as well as for the region. The above report was submitted to the relevant government authorities namely the Ministry of Agriculture, Ministry of Industry and the NLSC for their views and actions. They were also presented to the FAO inter-governmental sub-group meeting on hides and skins in January 1987.

The highlights of the recommendations were as follows:

- i. To obtain a better quality of raw hides and skins and increase the quantity collected, rampant backyard slaughtering must be eliminated and all slaughtering must be done in centralized slaughter-houses/abattoirs which are equipped with adequate facilities i.e. water and flaying tools.
2. To strengthen the activities of hides and skins improvement, the Government must enforce the existing legislation on how the trade is conducted and introduce grading systems as well as train the extension officers through repeated refresher courses.
3. A co-coordinated effort is needed for a sectoral development by pooling all resources within the hides and skins, leather and leather products sector.

The existing Hides and Skins Improvement Proclamation has been revised and submitted to the Government of Ethiopia. Also, a new agricultural and livestock sector policy, including hides and skins improvement was prepared and submitted to the government and its implementation is foreseen in phase-II of the project.

Output 2 - Established and /or rehabilitated, well operating national hides and skins improvement scheme with trained flayers, skimmers and improvement officers and better tools and chemicals for conservation.

This output has proceeded satisfactorily in the target areas.

A one-week orientation seminar for 40 extension officers was held in the target area in order to brief them on the objectives and activities of the project. They were also given copies of the "Hides and Skins Improvement Manual" to use as a guidebook in their day-to-day activities. Also, selected extension staff, without previous training in hides and skins grading and marking, attended a hides and skins improvement course at the Productivity Improvement Centre Refresher courses were given for 60 hides and skins workers on ripping, flaying, curing methods and trade practices etc in different localities. During this, proper techniques of hides and skins improvement work were demonstration posters in local languages were displayed and distributed and movies on hides and skins improvement work were projected.

2 senior staff and 7 extension officers from the MOA went on overseas tours to study hides and skins improvement operations in other countries, namely Germany, India, Kenya, Switzerland, USA, Zambia and Zimbabwe. Four of these officers attended the regional hides and skins improvement seminar held in Bulawayo, Zimbabwe. Overseas study tours also boosted the morale of the officers and acted as incentives to improve work efficiency and effectiveness.

The input of 2 pick-up vehicles and 10 motorbikes improved the mobility of the extension staff. 650 ripping knives and 1100 fleshing knives and 60 sets of marking hammers with markings were distributed among the artisans and extension officers. The above measures were to improve the quality and collection of hides and skins.

The project had succeeded in revitalizing the activities related to hides and skins improvement from butchering to conservation in the target area and better mobility made the extension services more effective. By training, the skills of the artisans and extension officers had improved considerably.

Output 3 - Improved statistical intelligence throughout the region.

With the assistance of the International Expert, the project introduced forms for individual assessment and progress report to be prepared at various levels for monthly submission. Reports were regularly sent to Addis Ababa where they are consolidated and sent to the regional office and UNIDO, Vienna. However, statistical information was not easy to obtain from rural areas, especially from those covered by the pilot scheme. The project was making a good effort to collect the information regularly. The Ministry had indicated its interest to participate in a project/programme for the improvement of the statistical process which was planned to be undertaken by UNIDO's PPD/IPP/Statistical Unit and may take place during the second phase.

Output 4 - Improved quality and increased quantity of raw hides and skins through incentives to primary producers and a realistic quality grading system based on a well-operating hides and skins improvement scheme (as per Output-2).

Ethiopian skins were traded on the basis of table runs and there was no grading system. All skins were paid the same price irrespective of quality. However, cattle hides were traded on the basis of grades 1 to 4 and paid grade-wise. In order to give incentives to the primary producer, the MOA and NLSC had agreed to pay higher prices to the producers in the target area based on quality grades. The existing grading norms as amended by the project will be enforced for this purpose. The marking hammers, with necessary marks will be used in the area to mark the grades on the hides and skins.

The collection of cattle hides, sheepskins and goatskins showed a downward trend during the early periods of project implementation due to insecure social conditions in the target area. There was slight improvement in quality with an increase of 1% in first grade cattle hides whereas in case of sheepskins, the first grade rose to 51% in the first year and then to 52% in second year and to 59% in the third year. In case of goat skins, the corresponding figures were 42%, 44% and 46%.

Output 5 - Revolving fund to be utilized for further improvements and building of additional facilities namely curing sheds, collection centres and slaughtering slabs.

It was envisaged to build 6 curing sheds in the target area. A small fee of Br.0.50 per hide and Br.0.25 per skin was to be levied by the curing shed from the owners of hides and skins. As the work was delayed due to various reasons, the construction cost went up and as such it was possible to construct only 2 curing sheds. While one shed was operative by the end of phase 1, the second one was commissioned a little later. The collection of fees started only during the second phase.

1.3 Project Achievements

1. The revitalization of hides and skins improvement programme has resulted in better quality hides and skins. The project was expected to show better collection of hides and skins under normal socio-political conditions.
2. Manpower development through training, seminars, overseas study tours, refresher courses, provision of proper tools and use of various audio-visual aids have resulted in more effective working of the extension services.
3. The revolving fund formed through "payback" by the factories who received machinery and other supplies from UNIDO and through possible working of model drying sheds will sustain the future hides and skins improvement programme.
4. The formation of tanners' association and plans for a co-ordinating committee consisting of government ministries, UN agencies and tanners' association will address to the development problems of this sector and successful operation of the revolving fund.
5. The acceptance and subsequent approach to implement the project recommended policy guidelines and industrial strategy is a positive development.
6. Necessary action has already been taken to accept the regional standards for hides and skins replacing the existing national standards.
7. Awareness has been created at the government and industry levels for the hides and skins improvement work as reflected in the formation of tanners association and co-ordinating committee, better financial outlay and support from the Livestock Department and the industry's willingness to adopt quality (grade) based prices as an incentive to improve quality and collection.
8. There was substantial improvement in the quality of goat and sheepskins as there was 10% increase in the number of first grade goatskins and 22% increase in first grade sheepskins.

1.4 Constraints

1. Due to socio-political changes and insecure conditions in the target area during the first phase, the collection of hides and skins went down and there was practically no change in the quality of cattle hides. While the defects analysis shows no reduction in defects (given earlier), it is difficult to achieve higher quality grades as given in case of goat and sheepskins. Some of these issues are being addressed during the second phase.
2. There was initial effort and agreement between the tanneries and the project to start purchase of hides and skins based on grades marked on the hides and skins. However, this was not followed up.
3. Collection of the statistical field reports, their analysis, subsequent feed-back and monitoring are essential to follow the progress of work and achievements.
4. For various reasons already stated, the operation of the model drying sheds was started only during the II phase of the project.

2. KENYA

2.1 Introduction

Kenya had a well-developed leather industry and a good record for collection of hides and skins through private initiative. However, it did not meet the requirements of the tanneries which had very high installed capacity. The main problem in developing the leather industry remained to be the poor quality of raw stock especially from the rural areas. There were lots of flow of raw hides and skins into the country through unofficial channels from the neighboring countries. Most of the tanneries exported finished leathers. Footwear industry produced moderate quality shoes for local market. The leather-goods industry was not very much developed. About 40% of hides and skins are still exported in raw form due to high overseas prices in 1995. The envisaged programme was to bring about in rural areas an improvement of 15% in the collection and 10% in the overall quality of hides and skins. This will enable the tanneries to operate more efficiently with consequent benefits at all levels. The objectives were to be achieved through the demonstration of proper techniques, training of personnel, creation of awareness and by a system of graded incentive pricing.

The regional headquarters of the project "Regional Africa Hides and Skins, Leather and Leather Products Development Scheme" is located in Nairobi, Kenya and the presence of the Chief Technical Adviser and his team will be a catalyst in the development activities in Kenya.

The data related to the industry is given herein:

TABLE 1

	CATTLE	SHEEP	GOAT
types and breeds	mostly east african short horned zebu, largest breed is Boran, dairy cattle from Europe accounts for 20% of national herd	mostly hair sheep; mainly fat tailed Dosper; red Maasai and Nyanza fat tail and a few wool-sheep and mutton breeds	mostly east African the Galla, the Nubian and the Bedouin
livestock population	11.7 million	8.3 million	9.6 million
offtake rates (5)	8.2	28	41
national kill; abattoirs, in urban and peri-urban centres as % (recorded)	70%	39%	20%
total kill (1992) recorded	845,888	427,114	1,020,324
hides and skins production	1.5 million	2.5 million	2.0 million
non-recovery	14%	34%	29%
sources	70% urban	61% rural	80% rural

Grades %			
Upcountry:			
i	40	40	40
ii	30	31	31
iii	19	17	17
iv	11	12	13
tannery & go-downs:			
i	34	23	19
ii	25	30	40
iii	11	24	31
iv	30	23	10

	CATTLE	SHEEP	GOAT
average v t of hides and skins	dry 5-6 kg green 20 kg wet salted 15 kg	dry 0.6 kg/skin green 1.8 kg wet salted 0.9 kg	dry 0.5 kg/skin green 1.5 kg wet salted 0.8 kg
method of preservation:			
a. wet salted			
b. air dried	3%	5%	5%
c. ground dried	95%	85%	85%
d. others	25%	8%	8%
	-	2%	2%
average weight and area	5.5 kg; 24 sq.ft	0.5 kg, 4.5 sq.ft	0.5 kg, 4.5 sq.ft

only 15 to 20% of hides come from mechanized slaughterhouses

Prices: good cattle hide green Ksh 16/kg; dry hides Ksh 42 to Ksh 45/kg; good goat and sheepskins per piece Ksh 35 to 40. (fluctuates according to world price)

Types of defects

Common as in all other African countries, however, the main defects are flay cuts 20% putrefaction 20%, tick and pox marks 20%, blisters 15% and brand marks.

Tanning capacity

There are 13 tanneries operating currently and in 1992, those in operation processed 920,000 cattle hides and 6,500,000 skins. All the tanneries are private owned. They are operating at 60% capacity due to lack of raw material of right quality and also due to economic slump in the world market. The total installed capacity in the tanneries is 3,310,000 hides and 8,310,000 skins.

Exports and Imports

Uncontrolled cross-border imports of raw hides and skins from neighboring countries is prevalent. However, very little is exported to neighboring countries in form of semi-processed leather. It is now estimated that Uganda imports about 200,000 sq.ft of finished leather per month.

TABLE 2

EXPORTS (1992) IN KG	HIDES (KG)	SHEEP (KG)	GOAT (KG)
raw	301,934	36,000	49,000
wet blue	11,466,215	1,214,680	2,633,145
vegetable	530,092	-	60,425
crust	181,423	314,739	303,027
finished	226,817	22,673	7,536
Importing countries	Portugal Singapore Italy Pakistan Spain Hong kong UK, France, Belgium	India Japan USA	Italy Hong kong UK, USA Greece Brazil

Leather-goods

The main consumers of finished leather are the footwear manufacturers. In Kenya, there are 3 levels of footwear manufacturers, two levels in the formal sector with capacities 50 to 150 pairs per day and above 150 pairs per day and the third level is comprised of artisans in all parts of the country. The informal sector is estimated to control about 55% of the total national leather footwear market. Their share is increasing as their overhead costs are low and they are capable of copying designs from the formal sector. There are about 2,200 artisans and consume about 400,000 sq.ft leather per month. The formal sector consumes about 300,000 sq, ft leather per month. Leather-goods manufacturers consume about 70,000 sq, ft leather per month and they export small quantities of leather-goods to African and other countries.

Existing Infrastructure

There are 2 well established training institutes namely, Animal Health Industry Training Institute at Kebete and Leather Development Centre under Kenya Industrial Research Institute in Nairobi. The Ministry of Livestock Development, Veterinary Department has a well organized extension service for hides and skins.

The following trade associations (1) Kenya Association of Manufacturers and (2) Kenya Association of Tanners and (3) Butchers' Association, are very much interested in the development of hides and skins sub-sector.

TABLE 3

KENYA TARGET AREA PHASE I (1989)

	CATTLE	SHEEP	GOAT
livestock population	178,160	39,892	20,301
collection of hides and skins	114,786	53,699	55,227
grades (%)			
i	27	30	35
ii	33	31	28
iii	30	35.4	30
iv	10		7

TABLE 4

KENYA TARGET AREA PHASE I (END) 1992

	CATTLE	SHEEP	GOAT
collection of hides and skins	164,824	56,105	38,405
grades (%)			
i	37	43	47
ii	49	35	33
iii	20	18	17
iv	3	4	3

Number of hide sheds-54

Number of slaughterhouses-3 and slaughter slabs-20.

Extension staff strength-10

UNIDO contribution for hides and skins improvement-US\$.187,468

services of FAO international expert-14.5 m/m.

The proposal for the second phase of the project with the same objectives as in Phase I with a UNIDO contribution of US\$623,600 is yet to be finalized.

2.2 Outputs and Results

Output 1-Improved policy guidelines and industrial strategy:

Based on the information collected by the national co-ordinator, the project marketing expert and the leather industries consultant, a policy and strategy document was made with specifications for the country and the region. This document was further discussed in FAO forums and the recommendations were as follows:

1. The government should specifically include hides and skins, leather and leather products in its development plans as part of the crucial areas of the industrial sector which must receive priority in development.
2. Development of beef industry should be given similar attention as that given to the dairy industry, otherwise a situation may arise where the country will not only import beef but also hides and skins. Therefore, the sub-division of farms should be discouraged.
3. The sector has its activities regulated by the Ministry of Livestock Development including purely industrial activities. It is suggested that the formalities of clearing exports should not involve undue delays.

Output 2 - Improved well operating national hides and skins improvement scheme:

Though the project was initiated with 2 target areas for improvement, at later stages, the efforts were directed to one area only, namely Kiambu/Nairobi. The national project co-ordinator also was transferred to KIRDI and the regional office had to take over the entire management of the project activities.

Refresher courses for all hides and skins officers working in the target area were conducted by the international expert and the trained officers gave demonstrations of techniques in slaughterhouses and rural areas. Three senior officers took part in the regional seminars held in Zimbabwe. The other inputs in this area were supply of 550 skinning knives and 900 fleshing knives. 2 four wheel pickups, 5 motorbikes and video projector set. Posters were produced in local languages and distributed to enhance the popularity of hides and skins improvement programme. To ensure permanent operation of the development scheme, a revolving fund was created to be managed by the KAM.

Output 3 - Improved statistical intelligence:

In the beginning of the project, the baseline data was compiled and thereafter, the grades of hides and skins in the target area was being recorded. The experience gained during the implementation of the project clearly showed the difficulties to obtain, store, analyze and disseminate such reliable data. Some of the information obtained from the government officers seemed to differ from what was obtained from the tanneries such, this activity was suspended, awaiting additional inputs.

A proposal for a joint UNIDO/FAO pilot project was prepared and forwarded to the Ministry of Livestock Development and a formal government request was sent to UNIDO for funding.

Output 4 - Improved collection and quality of hides and skins:

For hides, there was 10% increase in number of first grades and 7% increase in second grades and 7% reduction in fourth grades. In case of sheepskins, the increase in the first two grades were 13% and 4% respectively and in goatskins, the increase was 12% and 5% in the first two grades and a reduction of 4% in the fourth grade. Most of the tanners do not pay higher price for better quality hides, but they follow their own ad hoc system of payment. The fall in international prices also was quoted as reason for not introducing graded prices. The present system does not encourage the farmers or artisans to improve the quality.

There was an agreement between tanners, butchers and traders that a better system of pricing should be introduced to improve quality. As Kenya Tanners Association and Butchers Association will be co-operating in the operation of the revolving fund, it may be easier to introduce the pricing system.

In spite of the efforts through personal contacts, campaign posters, demonstrations etc. there was no improvement in collection of hides and skin from the unorganized sector.

2.3 Project Achievements

1. Due to effective extension services, there had been an increase of about 6.2% in the first 2 grades of cattle hides in the target area and the corresponding increases were 10.4% in case of goatskins and 2% in case of sheepskins.
2. The formation of revolving fund (Leather Development Fund) and the agreement with the tanners association for its operation and management will sustain the hides and skins improvement activities and the development of leather products sector in the country, even without other external assistance.
3. The slaughterhouses in the target area are benefitted by the project activities, though only very little benefits trickled down to the rural areas.
4. There had been better awareness at the government level as evidenced by the formation of an implementation committee for the project under the chairmanship of the Permanent Secretary, Ministry of Livestock Development with representatives from the Ministry of Livestock Development, Ministry of Finance, Kenya Tanners' Association, and Kenya Manufacturers Association.
5. With more trained personnel and other inputs like audio-visual aids, tools and equipment, vehicles and motorbikes. the extension services have been re-vitalized.

2.4 Constraints

1. Cooperation from the officers in the Department of Livestock Development is very much essential for the smooth functioning of the project.
2. There was to be a difference between the data collected (grading figures) by the field staff and the tanneries in respect of hides and skins. Obviously, it was a case of not adopting uniform standards in practice. Unless the grading and the graded prices are introduced, there will be no incentive to the primary producer and there will be no quality improvement in the rural area.
3. There were difficulties in collection and compilation of simple data on hides and skins production, collection, their main defects and grades obtained in the target area. Without this data, it is difficult to judge the progress being made or otherwise and apply corrective measures in time. As the project personnel are on the spot. it should be possible for them to collect these elementary data and compile them. There is no need to wait until a project is initiated solely for the purpose of data collection.
4. Further efforts are needed to stop the use of knives in flaying goat and sheep to avoid flay cuts as flay-cuts are the major downgrading factor in the quality of hides and skins.

3. MALAWI

3.1 Introduction

Malawi is one of the smallest countries in this regional group with very modest livestock population and hides and skins production. The hides and skins sector was monopolized by the Cold Storage Company Ltd and there was no organized hides and skins improvement extension services. The producer prices were very low and there was no grading system for hides and skins. While there was a mechanized tannery producing semi-finished and finished leathers, large proportion of hides and skins were being exported in raw form. Quantity-wise, 70% of export was raw hides and skins and 30% as blue and finished leathers. There were 5 footwear units and 3 leather-goods units who were importing leathers at the beginning of the project. The envisaged project was to give incentive to the primary producers which will lead to improvement in collection and quality. Based on this, the operation of the tannery will improve and this would satisfy the local demand for finished leathers and possibly for export purposes. In 1992, the export earnings were US\$1.0 million. The country has gone through some political changes and it is expected that policies beneficial to the leather sector will be formulated by the Government.

The basic data related to the industry is given herein:

TABLE 1

	CATTLE	SHEEP	GOATS
types and breeds	Malawi Zebu major breed with long horns and big humps. Also British Frisian and their crosses for milk and Brahman cattle and their crosses for beef.	mainly indigenous and a few exotic e.g. Dorper sheep from South Africa	indigenous with Boer goats as exotic
livestock population (1993)	874,310	101,464	851,162
offtake rates	8-12%	5-10%	10-15%
national kill (1993)			
urban	22,964	5,000	60,000
rural	66,579	4,100	82,000
collection of hides and skins	75,411	3,100	63,000
Grades %			
i	25	45	45
ii	28	32	32
iii	29	18	18
iv (includes reject)	18	5	5

Type of defects (% of total)

flay-cuts 25%; tick and pox marks-15%; poor pattern-2%; putrefaction--3% and branding -1%.

Number of slaughter facilities: 47 slaughterhouses and 2 city abattoirs.

More than 30% of the slaughter is done in the slaughterhouses and the rest in the rural areas.

In 1992, export earnings were US\$1.0 million mainly through the export of raw hides and skins. The number of salted cattle hides exported was 52000 and those locally used were 21,278 pieces.

Average weight of cattle hides: green-15kg; wet salted-18 kg; dry salted-15kg and air dried-8kg.

Average area of cattle hide: 25 sq.ft

Type of curing: frame drying-70%; sun-drying-5%; dry and wet salting-25%.

Prices in 1993 per piece:

Cattle hides -gr.i-US\$2.15; gr.ii-US\$1.72; gr.iii-US\$1.29

goat/sheep skins-gr.i-US\$0.22; gr.ii-US\$0.17; gr.iii-US\$0.13.

Trade information: 70% of hides were exported as raw salted; 5% processed into wet blue and 25% into finished leathers.

Tanning Sector

Raw material suppliers were controlled by the Cold Storage Company which had been there for a long time as buyer and exporter of raw hides and skins. This sector is liberalized now and other buyers have entered the market.

Liwonde Tannery, the only one in Malawi, was initially set up as a cottage industry and later developed into a full-fledged tannery through UNIDO/UNDP assistance. This tannery has a capacity of 200 hides daily and is now working at full capacity.

Leather Products Subsector

There were 5 footwear units of which Bata was the largest unit with about 300 employees. At present, most of their production is non-leather footwear.

TABLE 2

MALAWI TARGET AREA PHASE I (INITIAL) 1990

	CATTLE	SHEEP	GOAT
livestock population	393,470	32,221	456,844
offtake rate%	8-12	5-10	10-15
estimated production of hides and skins	37,664	2,262	43,995
actual collection	25,933	2,142	20,780
grades as %			
i	25	45	45
ii	28	32	32
iii	29	18	18
iv (includes reject)	18	5	5

TABLE 3

TARGET AREA PHASE I (AFTER 3 YEARS)

	CATTLE	SHEEP	GOAT
livestock population	393,470	32,221	456,844
offtake rate%	8-12	5-10	10-15
estimated production of hides and skins	37,664	2,264	43,995
actual collection	29,454	2,710	24,160
grades as %			
i	36	48	48
ii	29	32	32
iii	19	18	16
iv (includes reject)	16	4	4

number of slaughter facilities: 1 abattoir and 33 slaughterhouses (7 slaughterhouses were added during the project period)

strength of extension staff: 7

UNIDO contribution for hides and skins improvement: US\$56,707

Services of FAO Expert: 3 m/m.

Proposal for Phase II of the project with UNIDO contribution of US\$ 626,897 with the objective of consolidating the achievements under phase I is still not finalized.

3.2 Outputs and Results

Output 1-Improved policy guidelines and industrial strategy:

A preliminary policy guideline for hides and skins production in Malawi based on the regional policy guidelines document was prepared by the project staff and presented to the Chief Veterinary Officer for his comments and necessary action. The project reviewed and recommended to the government the hides and skins trade act and hides and skins cess act for necessary implementation. A draft document "a policy document for hides and skins production in Malawi-1991 to 1996 was also submitted to the government."

Output 2-Improved well-operating national hides and skins improvement programme:

The following training programmes were held: (1) induction training course for extension staff, (2) one national seminar for extension staff, (3) one workshop on theory and practice of hides and skins improvement for officers of MOA and related ministries, (4) training of artisans at different places along with demonstrations of techniques and video film projections, (5) three extension officers attended the regional hides and skins improvement seminars held in Zimbabwe. Through the above programmes, the project trained 397 artisans and 34 extension officers who were actively involved in the improvement of collection and quality of hides and skins in the target area. The project inputs in this area were two pick-up vans; motorcycles; video projection set, 350 ripping and 600 fleshing knives; posters and pamphlets for display and distribution.

All the above efforts resulted in establishing a mobile and effective extension service .

Output 3-Improved statistical intelligence throughout the region:

The international expert and the national expert jointly produced reporting formats which were distributed to the extension officers. The reporting forms were completed by the extension officers on monthly and quarterly basis for transmission to the national expert. The reports were consolidated and forwarded to the project regional office in Nairobi and UNIDO, Vienna through the concerned ministry.

Output 4-Improved quality and quantity of hides and skins and incentives:

From the inception of the project, the national expert, in consultation with CSC, the Ministry of Agriculture, and hide merchants introduced the purchase of hides and skins on a quality basis as an incentive to vendors. The idea was generally accepted by all parties and grading of hides and skins started in June 1991 in the target area.

There was an improvement in the collection of hides and skins as the project progressed in the target area. Due to the sluggishness in the world leather trade, the hides and skins trade in Malawi also was adversely affected. However, the situation changed in 1992 onwards for the better.

Output 5-Hides and skins standard specification:

Several meetings were conducted to find the best way to introduce hides and skins standards in Malawi in line with the regional standards already suggested by UNIDO. The Malawi Bureau of Standards was assigned the task of developing standard specification for Malawian hides and skins. The Bureau had produced the second draft which was already reviewed by the concerned committee.

The decision on the final draft was still pending. The matter was being dealt with under sub-technical committee comprised of members from the Departments of Animal Health and Industry, the CSC, the Malawi Bureau of Standards, private hide merchants, Liwonde tannery and the national expert.

3.3 Project Achievements

1. Quality grading of hides and skins was introduced for the first time in Malawi and based on the effective extension system, the quality of cattle hides was improved by about 10% in first grade and about 3% in the first grade skins.
2. There was 14% increase in the collection of hides and 26% in the case of sheepskins and 16% in case of goatskins.
3. The Leather Association of Malawi was formed representing all the interests in the sector.
4. The revolving fund for sustaining the hides and skins improvement work has been created.
5. Manpower development through training, seminars, study tours, refresher courses, provision of proper tools, and use of various audio-visual aids and transport facilities had resulted in more effective working of the extension services.
6. The format for the collection of statistical intelligence reports from the field had been finalized and the system of reporting introduced.

7. Awareness for hides and skins improvement work had been created at various levels through mass media, individual contacts, campaign posters, leaflets and articles, local demonstrations and refresher courses. The project had good rapport with Cold Storage Company and Department of Animal Health. During the project time, 7 more slaughterhouses were built in the target area. The government has approved the plans to train the final year students of Natural Resources College on hides and skins improvement work by the project staff. This will provide the required technical support for the future development activities.

3.4 Constraints

1. Though grading system had been introduced, purchase of hides and skins by tanneries based on graded prices were not introduced and without this, there could be no incentive for the primary producer. It may be noted that the raw prices in Malawi are very low. While the grading norms have been accepted and preliminary action taken for necessary legislative measures, more follow-up is required for early implementation.
2. The draft policy guidelines and industrial strategy were submitted to the government for implementation but no decisions have been made on this.
3. Using the reporting format created by the international expert, more field data has to be gathered and monitored.
4. While the revolving fund has been created, the operation system of the fund was yet to be finalized. The introduction of special levy for hides and skins improvement work may be considered more seriously.
5. While one can expect all possible assistance through UNIDO, it should be the National Expert's effort to build up linkages between the ministries and take up training of artisans and technicians as a regular country programme through the co-operation of the Leather Association of Malawi and with financial support from the Revolving Fund. Also, the problems mentioned above need solutions at the earliest.

4. THE SUDAN

4.1 Introduction

The Sudan, endowed with the second largest livestock population in Africa and featuring the third highest population of goat and sheep on the continent has a great potential for development of leather industry. Though the production of hides and skins was quite high, only 10-15% of cattle and 20% of goat and sheep were slaughtered in the organized slaughterhouses, the rest being produced in the rural areas. Due to various inherent problems in the rural areas, the recovery rate was low and the quality of hides and skin was very poor. As the hides and skins trade was controlled by big traders and their agents, purchasing and pricing were done on an ad-hoc basis. Grading system was not practiced and no reliable data was available on actual collection of hides and skins. There were a number of mechanized tanneries but they operated very much below their capacity due to non-availability of raw material. At the same time, a large quantity of hides and skins used to be exported in raw form. The Government had declared a policy of privatization of tanneries, which was expected to improve the working of the tanneries. About 30% of hides and skins were processed by the artisan tanners spread throughout the country. Consequent to the poor working of the tanneries, the footwear units also were not functioning properly.

The envisaged programme was to revitalize the extension services, which, through proper training and demonstrations will introduce the system of grading and graded prices for hides and skins which will act as incentive for better collection and quality upgrading. Along with this, the system of statistical intelligence reporting will be introduced to monitor the developments in this sub-sector.

The data related to the leather industry is given hereunder:

TABLE 1

	CATTLE	SHEEP	GOATS
types and breeds	predominantly short-horned classified with types and sub-types kenana, Butana brown for dairy and bagara for beef with a few foreign dairy breeds, crossing is being introduced	mainly desert hair types classified according to areas all long ears and tails; nilotic sheep with short tails and ears found in the South	Nubian and desert types with long ears and hair; nilotic types with short hair found in the South.
livestock population (1993)	22.2 million	22 million	16.4 million
offtake rates	8%	24.9%	26.9%
national kill (1993)	1.72 million	5.5 million	4.4 million
hides and skins recovered	1.7 million	4.3 million	3.9 million
Grades %			
i	10	40	30
ii	30	20	20
iii	40	20	20
iv (includes reject)	20	20	30

The average green weight for hides is 16-20kg; sheepskins-26-32 lb/doz and goatskins 14-16 lbs/doz. It was estimated, in 1995, available hides will be 1,851,000 pcs. sheepskins-5,081,600 pcs and goatskins-2,686,000 pcs and camel hides 35,000 pcs.

The main defects in hides and skins are common with rest of Africa and mainly are tick and pox marks; brand marks, flay-cuts, putrefaction and poor pattern.

Preservation method adopted as percentage of total production

TABLE 2

	CATTLE	SHEEP	GOAT
ground drying	10	10	15
suspension drying	25	60	80
dy salting	60	5	-
wet salting	5	25	5

Only 10-15% of cattle and 20% of goat and sheep are slaughtered in the organized slaughterhouses.

Estimates of processed wet blue, crust and finished leather are as follows:

TABLE 3

	WET BLUE	CRUST	FINISHED	UNKNOWN
cattle	40	5	15	40
sheep	30	35	10	25
goats	20	50	10	20

(unknown includes stocks or smuggled). Foreign buyers are Italy, Spain, Turkey, Far East, Egypt, Libya, Jordan

Tanning Capacity

Though there were 10 factories licensed, all were not working. Sudan has the biggest artisan tanning industry. While tanneries handled 650,000 cattle hides, artisans handled 300,000 cattle hides. The corresponding figures for skins were 6,450,000 and 1,250,000. Hides tanneries operated at 30% capacity and skins tanneries at about 50% capacity.

Exports (1989) in pieces

	CATTLE	SHEEP	GOAT
raw	283,579	1,334,340	1,900,336
pickle	37,561	218,200	24,000
wet blue, crust		567,396	289,504
finished	-	2,119,936	2,213,840

Local consumption of leather in Sudan was 12,000,000 sq.ft.

Existing Infrastructure

The hides and skins sub-sector is under the Department of Animal Production Administration of Ministry of Natural Resources. The sub-sector has the Leather Institute, extension services for the hides and skins improvement and Nyala Tannery.

The leather institute conducts a four-month training course every year for extension staff and a four-week refresher course for 20 students. There is an existing association for Sudanese hides and skins exporters.

TABLE 5
SUDAN TARGET AREA PHASE 1, BEGINNING, 1989

	CATTLE	SHEEP	GOAT	CAMEL
livestock population				
Kassala				
S. Darfur	844,000	1,927,000	1,185,000	657,000
Blue Nile	3,590,000	1,494,000	1,432,000	164,000
	1,181,000	1,308,000	762,000	44,000
estimated production of hides and skins: Kassala				
S. Darfur	130,000	335,000	171,000	8,000
Blue Nile	83,000	230,000	117,000	5,000
	136,000	375,000	192,000	9,000
estimated collection				
Kassala				
S. Darfur	117,000	301,500	153,900	8,000
Blue Nile	74,000	207,000	105,000	5,000
	122,400	337,500	172,800	9,000
Average grades (%)				
i				
ii	10	40	30	-
iii	30	20	20	10
iv	40	20	20	30
(+ rejects)				
	20	20	30	60

Sudan Phase 1 -end (1993/94)

Grades (%) of cattle hides (green) in the target area:

Grade	1993	1994
i	55	60
ii	28	28
iii	10	7
iv	7	7

Average grades of hides and skins in 1993 for whole country:

	Cattle		Sheep		Goat
	w.salted	dry	w.salted	dry	
Grade i	30	20	65	45	50
ii	35	25	15	22	20
iii	25	35	15	20	15
iv+rej.	10	20	5	15	15

Number of slaughter facilities-27 slaughterhouses and 3 slaughter slabs

Strength of extension staff--117 for whole country

UNIDO contribution for hides and skins improvement--US\$.91,070

Services of international FAO expert- 3.5 m/m

The proposal for Phase II of the project with a UNIDO contribution of US\$ 830,000 with the same objectives as phase I is yet to be implemented,

4.2 Outputs and Results

Output 1- Policies and strategies:

The project leather consultant and marketing expert after discussions with senior government officials finalized the guidelines and industrial strategy which was in line with the national policies. especially on the issues of privatization and liberalization of trade.

The national comprehensive strategy for the sub-sector emphasized the following:

- Increase of livestock population
- Increase in export of meat rather than live animal.
- Establishment of modern abattoirs as well as collection and preservation infrastructure.
- Increase capacity utilization in tanneries and footwear factories

Output 2- Hides and skins improvement:

For revitalizing the extension services, the following inputs were provided: 2 vehicles, 5 motorbikes, one set of video projector; 950 knives and 30 pulley blocks. The above equipment were used for conducting demonstrations of proper techniques in different parts of the target area. During these occasions, the documents related to hides and skins improvement were distributed and various posters on the same were displayed at all hides and skins centres. 85 extension officers were trained during this period and 115 flayers were given one week practical training induction training and rural seminars were held at many places. 3 Extension officers attended the regional seminars held at Bulawayo, Zimbabwe and one officer was given overseas training in Kenya, Zambia and Zimbabwe.

Because of the above efforts, there was improvement in the quality of hides and skins. The training and extension services created the necessary awareness among the concerned people in performing their duties.

Output 3 - Improved statistical intelligence:

The FAO Hides and Skins Expert prepared a report form to be completed by the hides and skins staff to show the quality and collection of hides and skins. But this was not followed up. However, it is hoped that the proposed UNIDO project for statistics will materialize in the Sudan for solving this issue.

Output 4 - Guidelines for grading of hides and skins by quality:

The guidelines for the grading of hides and skins by quality prepared by the regional project was discussed and presented to the concerned for making the necessary changes in the existing rules and regulations. This grading system will form the basis for incentive pricing. However, no serious effort was made in implementing the grading system.

Sometime ago, Sudan had the system of paying bonus to flayers who produced first grade hides. With the present trend in privatization, the tanneries along with the industries association may be able to introduce the incentive to prevent flay-cuts.

4.3 Project Achievements

1. There had been an increase of 50% in the first grade hides from the slaughterhouses in the target area and the tanners believe that there is a general 15-20% quality improvement for hides and skins, because of changeover from the sun-drying and wall drying.
2. The awareness created by the project had resulted in many government initiatives for improving the hides and skins sub-sector. Some of the measures were (a) The Animal Resources Department's national scheme for the development of hides and skins sub-sector (1993-1996) and slaughter slabs construction; (b) Two large tanneries were privatized and one more is in the process of privatization; (c) The government had banned the export of raw hides and skins and this had resulted in a 75 % capacity utilization in tanneries; (d) The Leather Institute was being reorganized and modernized.
3. The hides and skins improvement programme will be sustained through- (a) the revolving fund created in the country and the management of the fund through the Sudanese Leather Industries Association and (b) the regular training programmes of extension officers and artisans being conducted every year by the Leather Institute.

4.4 Constraints

1. More serious effort in collection of data from the field and their compilation (relating to target area) is needed as otherwise, all the results may tend to be estimates.
2. Grading of hides and skins and their marking was not introduced and without this, no collaboration with tanneries for payment of incentive prices is possible.
3. Hides and skins rules and regulations (1955) need amendments based on the UNIDO recommended regional grading system. More than the introduction, better efforts are needed in enforcing them.

5. TANZANIA

5.1 Introduction

The leather industry sector of Tanzania has a great development potential. The relatively large livestock population made up of an estimated 12.5 million cattle, 3.1 million sheep and 6.3 million goats should be capable of sustaining and supporting a thriving leather and leather products industry. In spite of having a good infrastructure and well established tanneries and leather-products units, the performance of the industry was disappointing. Leaving the past behind, it is heartening to see the government has taken a very pragmatic approach and allowed the private industry to operate at all levels. There was the continuing problem of enormous waste of raw hides and skins and their quality degradation. Apart from the common defects affecting the hides and skins in Africa, illegal trade was drawing out a large proportion of hides and skins out of the country. This had a crippling effect on the local leather industry. The envisaged programme will work out a model scheme of improvement in selected target area to demonstrate how by suitable training and extension work the hides and skins collection and quality can be improved.

The basic data related to the industry is given herein:

TABLE 1

	CATTLE	SHEEP	GOAT
types and breeds	commercial sector - European breeds and for communal breeds, indigenous zebu, nkele etc.	improved breeds of sheep for wool and indigenous ones	improved ones for milk and indigenous ones
livestock population	12,776,643	3,551,999	7,747,668
offtake rate	8%	15%	25%
estimated production of hides and skins	1,800,000	980,000	2,010,000
actual collection			
1990	775,105	327,840	506,175
1991	705,276	301,870	525,180
1992	917,941	418,714	719,872
1993	1,400,000	450,000	1,000,000
quality grades			
i	10-20	45	45
ii	25-40	40	40
iii	25-30	14	14
iv	10-40	1	1
before slaughter	during slaughter	at preparation and preservation	
brand marks, disease conditions, scratches, horn rakes, barbed wire marks	cuts, bruises, rubbed grain, irregular shape gauges, corduroy	improper shape due to wrong trimming or lacing; gauge marks during defleshing; putrefaction, blisters, etc.	

Grades of raw hides for the country are as follows:

TABLE 2

GRADE	SALTED	GROUND DRIED	SUSPENSION DRIED
i	14%	0%	12%
ii	37%	8%	24%
iii	32%	32%	36%
iv	16%	56%	22%
reject	1%	4%	6%

Curing methods used are: 10% wet salting; 22% frame drying and 64% peg drying.
Average weight-wet salted hide-14 kg; dry salted hide-10.6 kg and suspension dried-5.6kg

Export of raw hides and skins:

TABLE 3

YEAR	HIDES	SHEEPSKINS	GOATSKINS
1990	848,347	264,323	753,799
1991	771,468	169,696	564,007
1992	879,817	217,467	415,341

Importing countries for the raw hides and skins from Tanzania are India, Pakistan, UK Italy, Gulf countries, and Hong Kong.

Number of abattoirs in 1989:-122; and in 1993:-134

Number of slaughter slabs in 1989:-518; and in 1993:-973.

Organized slaughter facilities account for 30% of slaughter in the country.

Tanning Capacity

There are 3 large and 2 small tanneries operating in the country with a total installed capacity of 1,240,000 hides a year. However, in 1994, the estimated production in the tanneries was only 200,000 hides. The Morogoro and Moshi Tanneries were under rehabilitation and so the production was low. These tanneries are expected to start operations by 1995.

In 1992, the value of export of raw hides and skins was US\$4.2 million and that of leather was US\$0.5 million.

In 1990, the number of exported raw hides and skins were: cattle hides-700,000; goatskins-600,000 and sheepskins 250,000. Also 83,000 wet blue cow hides and 50,000 wet blue goat skins were exported the same year.

Leather products sub sector

Footwear factories formerly under parastatal control are now closed for privatization. Morogoro Shoe is starting production under new management while Tanzania Shoe is yet to be privatized. Only operating shoe factory is Liberty Shoe in Dar-Es-Salaam using mainly synthetic leather. The leather goods factories and shoe factories do not have sufficient supplies of leather. Moshi based Shah Industries and Twins are operating with leathers available locally and by imports from Kenya. There are a few small leather-goods producers in different parts of the country.

Existing Infrastructure

The Ministry of Agriculture and Livestock Development has the Department of Hides and Skins Improvement with qualified staff at the headquarters and field levels. The Government Agency responsible for collection of hides and skins was Tanzania Hides and Skins Ltd. National Agriculture and Livestock Extension Rehabilitation project is responsible for the training of staff and give support to the H & S extension services on a regular basis.

TABLE 4

TANZANIA-TARGET AREA PHASE 1-BEGINNING

	CATTLE	SHEEP	GOAT
livestock population	1,852,696	480,303	833,751
offtake rate	8%	15%	25%
estimated production	150,150	720,000	208,438
actual collection (1987)	91,556	31,315	125,117
grades (%)			
i	1	10	10
ii	15	30	30
iii	30	40	40
iv (includes rejects)	50	20	20

TABLE 5

TANZANIA TARGET AREA PHASE 1 (END) 1992

	CATTLE	SHEEP	GOAT
livestock population	2,130,245	487,530	987,654
offtake rate	8%	15%	25%
estimated production	170,620	73,125	293,245
actual collection	100,711	35,072	145,044
grades (%)			
i	21	25	25
ii	42	40	40
iii	22	21	21
iv (includes rejects)	15	14	14

Number of slaughterhouses-initial 20; and final 49.
 strength of extension staff-10
 UNIDO contribution for hides and skins improvement: US\$259,995
 Service of FAO International Expert-:13.5 m/m

The second phase of the project with the same objectives as the first one but being duplicated in another target area has been initiated with a UNIDO contribution of US\$675,000.

5.2 Outputs and Results

Output 1-Policy guidelines and industrial strategy:

All information related to local policy guidelines and legislation concerning hides and skins, leather and leather products were collected, compiled and submitted to the government for necessary action. The main recommendations to the government, in order to increase the quantity and quality of raw hides and skins available to the tanning industry, government should strengthen the hides and skins activities by:

- (a) revitalizing the extension services
- (b) providing modern abattoirs or slaughter facilities with curing sheds
- (c) reviewing and modifying the existing rules and regulations regarding hides and skins trade and enforcing them
- (d) accelerating the privatization of the leather sector by providing necessary supportive environment.

Output 2 - National hides and skins improvement scheme:

The inputs made available by the project were 2 pick-up vehicles, 6 motorbikes, 400 ripping knives, 800 fleshing knives, 30 pulley blocks, salt and chemicals for preservation; one video projector set and construction of one salt shed.

Four training courses of 1 week duration for the artisans and two technical training course for extension officers were conducted. Senior project staff attended the regional seminars held in Zimbabwe and took part in overseas study tours. Three seminars in the target area and one regional workshop on hides and skins were conducted.

Several posters on hides and skins improvement in regional languages were displayed and distributed in the target area along with guidebooks and grading norms for staff. The revitalized extension services through education campaign with use of posters and video and technical demonstrations during training had succeeded in minimizing the ground drying, branding and flay-cuts, which are the main downgrading factors. The activities created necessary awareness in the rural areas on the benefits of hides and skins improvement.

More slaughter facilities and drying sheds were constructed during the project period. Suitable training was given to change over from the system of salt curing to air drying of hides, wherever it was feasible.

Output 3-Improved statistical intelligence reports:

The international expert had formulated the necessary reporting format for the field staff to send the monthly reports to the project headquarters. The field staff was sending regular field reports which were being transmitted to the regional project headquarters in Nairobi and to UNIDO Vienna.

Output 4 - Improved quality and quantity of hides and skins and incentives:

Because of better extension services and extra inputs from the project as in output 2, there was 10% increase in collection of cattle hides, 12% in case of sheepskins and 15% in case of goatskins. In case of cattle hides, there was 4% reduction in 4th grades with consequent increase of 6% in case of second grade.

The regional guidelines for hides and skins by quality as prepared by UNIDO was submitted to the government for necessary action. Tanneries were being encouraged to buy hides and skins based on grades.

Output 5 - Revolving Fund:

Through the payback by the leather industry, the revolving fund had been created for use in hides and skins improvement activities and for sustaining its development in the future. This fund was being managed by the Leather Association of Tanzania which was formed in 1991 as a project activity.

5.3 Project Achievements

1. During the project implementation period, in the target area, the collection improved by 10% in case of cattle hides; 12% in case of sheepskins and 15% in case of goatskins. The improvement in quality of hides was 6% increase in grade II hides with 7% reduction in grade IV hides. This was possible by reduction in incidence of flay-cuts in slaughter-houses. In case of skins, grade-III rose from 33 to 38% with reduction in grade IV and rejects.
2. The Leather Association of Tanzania was formed at the end of 1991 and giving full support on all developmental activities for hides and skins sub-sector.
3. Grading procedure was initiated in the target area.
4. There has been a general increase in the available slaughter slabs and drying sheds for which the butchers and traders have been contributing.
5. With the establishment of the revolving fund for hides and skins improvement, there was an assurance that the activities in the target area will continue uninterrupted. The fund was being utilized for rehabilitating the slaughterhouses and provision of necessary inputs as tables, slabs, water, tools etc.
6. In general, the project had succeeded to some extent to have better trained and motivated personnel, creation of awareness in the field and at the government level and more importantly, the re-vitalization of the extension services.

5.4 Constraints

1. National policies related to hides, skins and leather sector needed more serious consideration.
2. Database for hides and skins sector maintained by the Ministry of Agriculture did not always provide accurate information.
3. Wastage, non-collection and illegal trade in hides and skins continued and needed further corrective action.
4. The collection of statistical intelligence reports using the existing format, their analysis and monitoring has to be strengthened.
5. Though the grading of hides and skins was being practiced, coordination with tanneries for introduction of incentive graded prices was not yet done, which was expected to improve with the involvement of tanners' associations.
6. In reporting the grading results, goat and sheep skins should be given separately and not as one item and also the grades should be given as averages and not as a range of values. When given in ranges, it will be difficult to assess the changes.
7. The policy of exporting raw hides and skins, when the tanneries are getting rehabilitated needs serious government consideration. At this stage, the leather industry has to be considered as "sick industry" and needs support.

6. ZAMBIA

6.1 Introduction

In Zambia, the development of hides and skins sub-sector was taken for granted and this trade was not subjected to any legislation designed specifically to control and organize it through rules and regulations. Also lacking was an established mechanism for hides and skins improvement and demonstration purposes. Initially, Bata established its own collection network and introduced some incentive measures. These were followed by two other tanneries with their own collection system. Hence, there was no coordinated effort for the development of this sector. There was considerable recovery loss (about 40 to 45%) and the quality of hides was poor. It was reported that 70% of the hides had flay-cuts.

At the organizational level, there was no extension services for hides and skins; no proper equipment and slaughter facilities in the rural areas; no grading system based on quality and no reliable statistical data on collection and quality. There were 5 organized slaughterhouses with a capacity of 800 cattle a day. The awareness on the government side was very low as this sub-sector was seldom addressed in the Zambian National Development or Economic Recovery Programme, in its own rights. At present, the government is interested in earning more of foreign exchange through this sub-sector by export of value added leather products instead of raw hides and skins. It was in this context, the present hides and skins improvement scheme was initiated to demonstrate on a pilot scale how quality and collection can be improved by concentrated effort in a limited target area, mainly through the revitalization and proper functioning of the extension services and introduction of incentive based grading and pricing.

The data related to the industry is given herein:

TABLE 1

	CATTLE	SHEEP	GOAT
types and breeds	In the traditional sector, the main breeds are Zebu and sanga. Breeds in commercial sector are Sussex, Boran, Africana, Hereford, Frisian, Jersey, Brahman.		
livestock population	commercial: 500,000 communal: 2.7 million	85,000	565,000
off-take rates %	commercial: 15-17 communal: 2.7 million		
collection (1989)	217,488		2,000
types of preservation: wet salting dry salting others	commercial 95% 2% In communal sector only 5% is wet salted.		

Slaughter facilities:

Abattoirs in Lusaka (300 cattle), Mongu (100 cattle) Livingstone (120 Cattle) Chipata (30 cattle); Galaunia farms (100 cattle); Lendur Burton (40 Cattle), Chibote (80 cattle) and Kembe (30 cattle) There are 72 slaughterhouses owned by District Councils.

The main defects are (hides): tick marks 100%; scratches 100%; brands 16%; cuts and holes 70% and putrefaction 14%.

Tanning Sector:

Zambia's tanning industry had expanded rapidly since 1988 with the establishment of 3 tanneries. Earlier, Bata established the first tannery to process from raw to finished leathers. The estimated total capacity in the country was 1500 cattle hides a day and at present, about 920 hides are processed daily.

Leather Products:

The Bata Company is the largest, producing both synthetic and leather footwear. There are several other footwear manufacturers based in Lusaka and Ndola. Those factories produce only very little leather footwear mainly because good quality leather is not available in sufficient quantities. Bata is able to produce leather footwear as they have their own tannery. Bimzi is a leather goods factory producing travel goods and at present engaged in developing footballs to FTFA standards.

Existing infrastructure:

Leather Industry Association of Zambia has been formed.

TABLE 2**ZAMBIA TARGET AREA PHASE 1, (BEGINNING) 1989**

	CATTLE (TARGET- EASTERN)	CATTLE (TARGET- WESTERN)	GOAT+SHEEP (EAST+WEST)
livestock population	289,761	524,180	155,918
hides and skins production (1989)	2,531	8,273	
collection of hides and skins	4,468	2,162	
grades (%)			
i	10	10	
ii	15	15	
iii	25	25	
iv (incl. reject)	50	50	

TABLE 3

ZAMBIA TARGET AREA PHASE I (END)

	CATTLE HIDES (EAST)	CATTLE HIDES (WEST)
collection:		
1990	4,636	8,588
1991	2,576	10,336
grades (%)		
i	28	28
ii	40	40
iii	21	21
iv (incl. reject)	11	11

Staff strength in target area: (mostly part-time)

UNIDO contribution for hides and skins improvement-US\$ 174,195

Services of FAO international expert-5 m/m

Phase II of the project has been proposed in the same target area with a UNIDO contribution of US\$ 604,200 with the same objectives as in phase I. It is yet to be finalized.

While the estimated production of cattle hides in Zambia is 250,000, the collection in 1991 was 163,000 pcs; in 1992 it was 185,000 pcs and in 1993, it was 123,000 pieces. Skins recovered were 65,000 pcs in 1991; 60,000 pcs in 1992 and 56,000 pcs in 1993.

Glades in Chipata Hides Depot for cattle hides:

Grades	i	ii	iii	iv
1986	30	40	24	6
1989	47	34	15	4
1991	54	40	4	2
1992	51	39	8	2

6.2 Outputs and Results

Output 1-Policy guidelines and industrial strategy:

The national expert in conjunction with the international consultants collected all the material from the present legislation and based on that a regional document was prepared. The project also encouraged interaction between various members of hides, skins leather and leather-products industry in the country. This development culminated in the formation of a trade association called LIAZ. Some of the important recommendations made to the government were:

1. The government should take due notice of the work of the Leather Industry Association of Zambia and work closely with the association while formulating policy issues and development strategy for the sectoral development of the hides and skins and derived products industry.
2. The government and the industry were urged to improve the data collection and information base regarding livestock hides and skins, leather, footwear, and other leather goods sector.

3. UNIDO was requested to continue the assistance for the leather and allied industry in Zambia and the region and formulate a second phase of the project US/ZAM/88/100. This phase should continue the work in hides and skins improvement and increased emphasis should be placed on the development of value added products, especially footwear.
4. It was agreed that the revolving fund initiated by the UNIDO project US/ZAM/88/100 should be formalized. The government and the industry should consider suitable ways to expand the operation of the fund within the financial capabilities of the industrial sector concerned.

Output 2-Improved well-operating hides and skins scheme:

The main output under this head was the trained manpower and a re-organized extension system. The local counterparts were given one week training course and they attended the regional hides and skins seminars held in Bulawayo, Zimbabwe. With the assistance of the national expert and international expert, several training and demonstration workshops were conducted along with on-the-spot technical guidance in the target area. A total of 250 players were trained. The training and demonstrations were held in a model slaughterhouse combined with 2 drying sheds. About 3,000 instructional leaflets and posters on hides and skins improvement were distributed. In both target areas, medium size slaughterhouses were built or rehabilitated. The inputs as video projector, 2,700 sets of knives, 20 pulley blocks, 22 motorbikes and 2 pick-up vehicles enabled the project to reach remote areas and demonstrate correct techniques. The project kept constant liaison with other livestock projects. Their integrated areas of extension services and training were taken advantage of by the project organizing mobile courses directed at the farmers, butchers, agriculture and livestock extension officers etc. Assistance was given to the Natural Resources Development College, Lusaka in preparing syllabus for training in hides and skins improvement. Some of these trained students may be available for field-hire extension work.

Output 3-Improved Statistical Intelligence:

The need for improved gathering of statistical intelligence and dissemination was recognized from the outset. The decision-making process for the industry has definitely suffered from lack of important database. This extends from livestock population census through offtake recovery of hides and skins to semi-processed and finished leather and leather-goods production. To achieve this objective, an attempt was made by the project experts and simple formats were designed for collection of data in the target area. LIAZ also collaborated with the project to establish a data base. However, all the objectives were not yet achieved in achieving the objective.

Output 4-Improved quality and quantity of hides and skins:

Based on the data gathered in the target areas and comparing to the hide purchases made by the tanners, there was a marked increase in quality of hides collected in Zambia. In 1988, before the project implementation, 3,441 hides were collected in eastern province alone. This figure rose to 4,468 in 1990 after project implementation. In western province, the collection of 4,408 hides in 1988 rose to 10,336 in 1991. In western province alone the collection of hides has increased by 57% since the project started. Thus combining the year 1989/90 and 1990/91 for both provinces, an additional number of 13,495 hides were made available to the industry.

There had been an average increase of 70% in the sale price of cattle hides, which benefitted the primary producers. Due to transport problem and high cost of salt, the changeover in some places from salting to air drying has been effected successfully.

A grading system in the target area and other parts of the country was introduced in 1991 but was not supported by standards, definitions, specifications and legislation to regulate such trade. For the first time in Zambia, an objective exercise was carried out in the target area to determine the quality of hides in their performance during the course of tanning operations and this was considered a valuable experience. It revealed detailed, objective information on the quality of hides and skins supplied to the industry.

6.3 Project Achievements

1. Due to the concentrated efforts in the target area, collection has increased by 57% for hides in the western province and by 30% in the Eastern province during the project period.
2. As there had been an increase of 70 % in the sale price of cattle hides during the project period, the primary producer was benefitted by higher income.
3. The revolving fund for sustaining the hides and skins improvement work in Zambia had been created and the repayments by the industry was on schedule and the management of the fund was done by the Leather Association of Zambia. The Leather Association of Zambia was formed to protect the interests of the leather industry. The association had also suggested the collection of cess on exports to augment the finances of the revolving fund for the distant future.
4. A reporting format for the collection of statistical intelligence from the target area had been worked out, but report collection was still in the initial stages.
5. Through the project activities and continued efforts of LIAZ, the government was made more aware of the potential of the leather industry and formulated realistic policies and recommendations for promoting progress in the sector. The association had also successfully convinced the government the need to protect the tanning sector for a certain period of time by stopping export of raw hides and skins. Natural Resources Development College, Lusaka was preparing a syllabus for training of students in hides and skins improvement and these trained personnel will be available for future development work.
6. There were successful trials of adopting air drying of hides to replace the traditional wet salting technique.

6.4 Constraints

1. Though policy guidelines have been submitted, no positive action has been taken. Though awareness has been created to a certain level, the government has not yet given much importance to the leather sector in the National Development or Economic Recovery Programme.

2. Training of manpower and their placement as regular hides and skins improvement staff was necessary to sustain any development activity on a continuous long term basis.
3. As there was no regular staff, the collection of field data was difficult and so also the introduction of grading and incentive prices. These negative aspects need correction without delay. Legislative measures to introduce rules and regulations for the hides and skins sub-sector including the grading norms may not be delayed further.
4. There is a definite need to strengthen the system of collection of statistical intelligence reports from the field.

7. ZIMBABWE

7.1 Introduction

Zimbabwe, with a livestock population of about 6 million cattle and 3 million combined goat and sheep has a well organized commercial and communal sector. Large ranches with up-to 30,000 cattle were owned privately and by the State Cold Storage Corporation and in general, the quality of hides from these farms were very good. There were well mechanized tanneries and footwear manufacturers in the country to utilize all the available hides and skins locally. The collection of hides and skins was done by private trading companies with a collection network covering the whole country. A system of grading as applicable to the country was being practiced. Almost, all the hides and skins available in the country were utilized by the local tanners. In the rural areas, which produced about 20-25% of the hides, the recovery rate was only 50% and even less in case of sheep and goat skins which was estimated to be 1.5 million pieces. In general, the quality of hides and skins was much lower than those produced in the commercial sector.

The objective of the envisaged programme was to direct all the efforts to a selected target area where through proper demonstrations, training and with provision of necessary inputs and technical guidance, the quality and collection of hides and skins could be improved in a given period of time. Also, the aim was to upgrade the training facilities in Leather Institute of Zimbabwe which was already working in the field of hides and skins improvement.

The data related to the industry is given herein:

TABLE 1

	CATTLE COMMERCIAL	CATTLE COMMUNAL	SHEEP	GOAT
types and breeds	European breeds, but some cross breeding with indigenous breeds for ranches beef cattle for disease resistance	Indigenous Zebu and sanga type-Nkone, tuli, mashona, with some cross breeding with European to improve size and milk yield	hair sheep only	hybrid of the Transval boer goat and Indian and abyssinian strains
livestock population	2 million	3.8-4 million	.65 million	2.3 million
offtake rate %	15 to 20	1-3		
estimated production of hides and skins	500,000	250,000	1.5 million, goat and sheep combined	
collection of hides and skins	475,000	225,000	300,000 (combined)	

Grades of hides and skins:**TABLE 2**

	CATTLE	SHEEP	GOAT
wet salted: grades (%)			
1+2	70		
3+4	26		
reject	1.5		
dry salted: grades (%)			
1+2	50	85	76
3+4	43	11	22
reject	3	4	
Air dried: grades (%)			
1+2		74	65
3+4		22	32
reject			

Average Weight: hides-green: 25 kg and wet salted: 20 Kg in commercial sector; green: 20 kg and wet salted: 16 kg in communal sector.;green: 3-4 kg, dry salted: 2 kg and air dry: 1.5 kg

Average Area: 40 sq ft for commercial hides and 35 sq ft for communal hides.

Curing Methods: 95% of the hides in the commercial sector are wet salted and 5% dry salted and in the communal sector, 25% are wet salted and 75% dry salted. In sheep skins, 60% are dry salted and 40% are air dried and in goatskins, 65% are dry or~ salted and 35% air dried.

Existing slaughter facilities:

5 abattoirs of 500 cattle/day capacity; 12-15 municipal and private abattoirs of 50-100 cattle/day and 150 slaughter-slabs.

Type of Defects:

Defects are common with other African countries. The major defects are brand marks and grain scratches, flay cuts 15-20% and putrefaction 4% in the communal sector. In case of commercial sector, the defects are negligible and also their salting technique produced very good quality hides.

Tanning Capacity:

There are 5 tanneries with a capacity of 1,020,000 cattle hides a year. Most of the finished leathers are supplied to the local footwear and leather-goods manufacturers. A small quantity is exported as blue, crust and finished leather.

Leather Products:

There are 15 footwear units which are of small, medium and big sizes. Estimated footwear production per day is 59,750 pairs. 40% of production is leather upper. 10% of footwear production and some stitched uppers are exported.

There are a few leather-goods units, whose products sell well in South Africa and there is good scope for development of this sector.

Existing infrastructure:

The Leather Institute of Zimbabwe is the centre for various development activities of this sector. It is financed and supported by the leather sector industry, Cold Storage Corporation, Hides and Skins producers and traders. A system of collection of cess to support the Institute and other development activities already exists in the country. Apart from the Ministry of Agriculture and Ministry of Industry, the Footwear Manufacturers and Tanners Association is actively associated with the leather industry.

TABLE 3**ZIMBABWE TARGET AREA PHASE I (BEGINNING) 1989**

	CATTLE	SHEEP	GOAT
livestock population	1,100,000	225,000	270,000
collection of hides and skins	99,525	14,738	93,738
grades:			
wet salted:			
1+2	70		
3+4	28		
dry salted:			
1+2	49	75.5	84.3
3+4	43	21.5	11.7
air dried:			
1+2	27	65	74
3+4	58	32	22

TABLE 4

ZIMBABWE TARGET AREA PHASE I (1991)

	CATTLE	SHEEP	GOAT
collection of hides and skins	135,318		
grades:			
wet salted:			
1+2	75		
3+4	24		
dry salted:			
1+2	52	80	90
3+4	39	17	6
air dried:			
1+2	30	71	82
3+4	59	26	16

UNIDO Contribution for hides and skins improvement-US\$14,142.

Services of FAO international expert: nil m/m

The second phase of the project with a UNIDO contribution of US\$ 624,600 has been initiated to consolidate the results of Phase I target area and duplicate the efforts in a new target area.

7.2 Outputs and Results

Output 1-Improved policy guidelines and industrial strategy:

The national development strategy for the industry was set out in the LIZ constitution. This document laid down objectives for the industry and stipulated how LIZ should assist in their attainment. Throughout the project's life, the national expert had participated in regular LIZ and industry executive meetings at which current situations were discussed and appropriate decisions taken. Compatibility between the national and regional strategy was assured by close liaison between the national expert and the director of LIZ, who were alternate and member respectively of the PTA regional committee responsible for the leather sector. Thus, the clashing of national, regional or UNIDO policies was avoided.

Output 2-Improved, well operating national hides and skins improvement scheme:

More than 270 veterinary assistants and Agritex extension officers have undertaken five-day training courses at the LIZ covering all aspects of hides improvement. On their return to the field, they were expected to disseminate the lessons learned to the local people. Additionally, the national expert conducted regular hides improvement field demonstrations of approved techniques as part of a pilot application in the target area. The project supplied 1,000 ripping and fleshing knives and curing chemicals to artisans and, government AHC's. Provision of a project vehicle made the proper monitoring of both pilot project and performance of the veterinary assistants possible. A hides and skins improvement campaign was conducted in the target area during which the posters on hides and skins were displayed and distributed and video films were projected on the same subject. In general, there was good improvement in the quality of hides and skins in the target area.

Output 3-Improved statistical intelligence reports:

There was only limited activity under this output because of the inability of the Government Statistical Office to assist. There was no professional statistician at the LIZ where the national expert was based. However, with the assistance of a hide merchant in the target area, essential base data was obtained. Based on this, the national expert was preparing further format for collection of data. It was felt that during the early stages of statistical application, the guidance from a professional statistician would be helpful.

Output 4-Improved quality and quantity of hides and skins:

The statistical data baseline was not prepared and therefore, information extracted from the pilot project could not be linked as required by this output.

A realistic quality grading system was in operation in Zimbabwe and it was based on grading criteria formulated by the Cold Storage Commission. The Standards Association of Zimbabwe in liaison with the CSC and the national expert, published a specification setting out the parameters for quality assessment of hides and skins. Copies were sent both to UNIDO, Vienna and FAO, Rome.

Though a comprehensive incentive system was not worked out, certain ad-hoc incentives were offered to the butchers and primary producers and this had a beneficial effect on quality.

7.3 Project Achievements

1. In the target area, there was about 35% increase in the collection of cattle hides and about 11% in case of sheepskins and about 57% increase in case of goatskins during the first two years.
2. There had been an improvement in the quality of cattle hides to the extent of 3-5% increase in the top-grade hides. In case of skins also, there was an increase of about 5% in the top grades. Hide merchants in the target area reported a definite improvement in the quality of sheepskins. This had resulted in higher income for the primary producers which was however negated by the drought.
3. The expansion of the training facilities in LIZ has enhanced both the academic and technical training standards.
4. The revolving fund had been created and its operation was being managed by LIZ. Zimbabwe continued with the collection of development cess from the industry for sustaining the activities of LIZ and thereby the future hides and skins improvement programme.
5. Incentives were established for improving the quality of hides and skins. A major hide merchant in the country had agreed to pay slightly higher prices for hides and skins processed at Animal Health Centres and secondly the tanners in liaison with the national expert and LIZ and CSC agreed to pay a Z\$10 bonus to any hide without brand marks or only branded on the approved places. The results of these programmes are yet to be ascertained.

7.4 Constraints

1. The veterinary assistants and Agritex extension workers did not widely disseminate the hides improvement lessons learned at LIZ, partly because of lack of initiative and to a greater extent, because of a shortage of transport.
2. Collection of statistical data was not done for lack of official assistance. This needed some corrective action. There was no need to wait for an official project for collection of simple field data.
3. The hides and skins trade in Zimbabwe was not governed by legislation as in other countries in the region and this may be necessary for the future.
4. Sustained drought throughout the country, which was particularly severe in the target area, partly negated the efforts and achievements of the project.

Annex 1

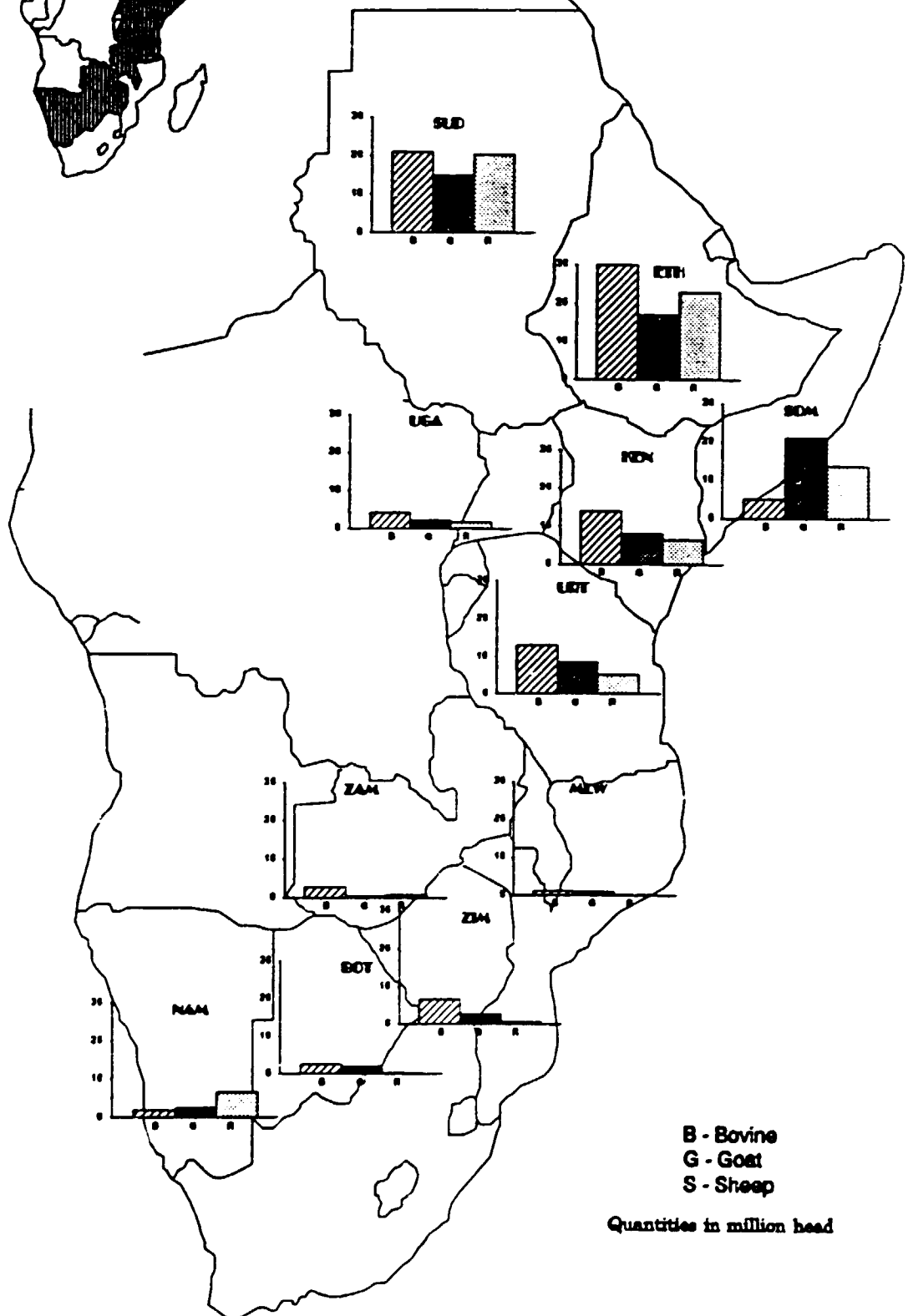
Countrywise UNIDO contribution for hides and skins component of project US/RAF/88/100 including cost of fielding international experts in US Dollars.

COUNTRY	UNIDO CONTRIBUTION
Ethiopia	279,763
Kenya	187,468
Malawi	56,707
Sudan	91,070
Tanzania	259,995
Zambia	174,195
Zimbabwe	14,142
Total	1,063,340

Note: The cost of fielding international H&S experts was US\$546,333.



US/RAF/92/200



Annex 3

Countrywise livestock population (heads in million) -whole country and target area.

COUNTRY	LIVESTOCK POPULATION- COUNTRY			LIVESTOCK POPULATION- TARGET AREA		
	cattle	sheep	goat	cattle	sheep	goat
Ethiopia	30.0	24.0	18.0	5.55	1.94	2.07
Kenya	11.7	8.3	9.6	0.18	.040	.020
Malawi	0.87	0.10	0.85	0.39	.032	0.46
Sudan	22.2	22.0	16.4	5.61	4.73	3.38
Tanzania	12.78	3.56	7.75	1.85	0.48	0.83
Zambia	3.2	.085	0.57	0.81	--	0.16
Zimbabwe	6.0	0.65	2.30	1.10	0.23	0.27
Region total	86.75	58.695	55.47	15.49	7.452	7.19

The target area had a share of 17.86% of cattle, 12.7% of sheep and 12.96% of goat population of the entire region.

Annex 4

Countrywise production of hides and skins in million pieces-(whole country and target area)

COUNTRY	WHOLE COUNTRY, HIDES & SKINS			TARGET AREA, HIDES & SKINS		
	cattle	sheep	goat	cattle	sheep	goat
Ethiopia	2.1	7.9	6.5	0.39	0.64	0.73
Kenya	1.5	2.5	2.0	0.16	0.056	0.055
Malawi	0.089	0.009	0.14	0.038	0.002	0.043
Sudan	1.72	5.50	4.40	0.349	0.94	0.022
Tanzania	1.80	0.98	2.01	0.15	0.072	0.21
Zambia	0.318	---	0.12	0.17	---	---
Zimbabwe	0.75	0.40	1.10	0.10	0.015	0.094
Region total	8.277	17.289	16.27	1.257	1.725	1.154

The target area had a share of 15.2% of cattle hides, 9.9% of sheepskins and 7.0% of goatskins of the entire region.

Annex 5

Project impact in the target area on collection of hides and skins in number of pieces.

1989-1992

country	category	collection at start Pcs	increase in collection (pcs)	% increase.
Ethiopia	cattlehides	153,303	-----	-----
	sheepskins	587,435	-----	-----
	goatskins	257,676	-----	-----
Kenya	cattlehides	114,786	50,038	43
	sheepskins	53,699	2,406	4
	goatskins	55,227	-----	----
Malawi	cattlehides	29,933	3,521	14
	sheepskins	2,142	568	26
	goatskins	20,780	3,380	16
Sudan	cattlehides	313,400	-----	-----
	sheepskins	846,000	-----	-----
	goatskins	431,700	-----	-----
Tanzania	cattlehides	91,556	9,155	10
	sheepskins	31,315	3,757	12
	goatskins	125,117	19,927	16
Zambia	cattlehides	6,630	6,282	95
	sheepskins	-----	-----	-----
	goatskins	-----	-----	-----
Zimbabwe	cattlehides	99,525	35,793	36
	sheepskins	14,738	1,291	9
	goatskins	93,738	49,785	53
Region total	cattlehides	805,133	104,789	13.0
	sheepskins	1,535,329	8,022	0.5
	goatskins	984,238	73,092	7.5

Annex 6

Project impact in the target area on quality of hides and skins, 1989-1992 (figures given as percentages)

country	category	first grade at start	first grade at end	increase in first grade
Ethiopia	cattlehides	50	51	1
	sheepskins	42	59	17
	goatskins	39	46	7
Kenya	cattlehides	27	37	10
	sheepskins	30	43	13
	goatskins	35	47	12
Malawi	cattlehides	25	36	11
	sheepskins	45	48	3
	goatskins	45	48	3
Sudan	cattlehides	10	60	50
	sheepskins	40	55	15
	goatskins	30	60	30
Tanzania	cattlehides	1	21	20
	sheepskins	10	25	15
	goatskins	10	25	15
Zambia	cattlehides	10	28	18
	sheepskins	--	--	--
	goatskins	--	--	--
Zimbabwe	cattlehides	70	75	5
	sheepskins	75	80	5
	goatskins	84	90	6

Annex 7

Countrywise annual monetary benefits due to increase in collection of hides and skins in target areas (1992)

country	category	increase in collection (pcs)	estimated value of increase in US dollars
Ethiopia	cattlehides	-----	-----
	sheepskins	-----	-----
	goatskins	-----	-----
Kenya	cattlehides	50,038	650,494
	sheepskins	2,406	4,812
	goatskins	-----	----- 655,306
Malawi	cattlehides	3,521	8,803
	sheepskins	568	115
	goatskins	3,380	675 9,593
Sudan	cattlehides	-----	-----
	sheepskins	-----	-----
	goatskins	-----	-----
Tanzania	cattlehides	9,155	91,550
	sheepskins	37,57	7,514
	goatskins	19,927	39,854 138,918
Zambia	cattlehides	6,282	75,384
	sheepskins	-----	-----
	goatskins	-----	----- 75,384
Zimbabwe	cattlehides	35,793	715,860
	sheepskins	1,291	2,582
	goatskins	49,785	99,570 818,012
Region total			1,697,213

Annex 8

Countrywise annual monetary benefits due to increase in quality grades of hides and skins in the target area (1992) in US dollars

country	category	% increase in first grade	total collection	Estimated value increase	sub-total
Ethiopia	cattlehides	1	117,087	1,464	50,715
	sheepskins	17	340,181	43,373	
	goatskins	7	167,957	5,788	
Kenya	cattlehides	10	164,824	53,568	59,519
	sheepskins	13	56,105	3,647	
	goatskins	12	38,405	2,304	
Malawi	cattlehides	11	29,454	2,025	2,065
	sheepskins	3	2,710	04	
	goatskins	3	24,160	36	
Sudan	cattlehides	50	313,400	313,400	409,228
	sheepskins	15	846,000	63,450	
	goatskins	30	431,700	32,378	
Tanzania	cattlehides	20	100,711	50,356	63,864
	sheepskins	15	35,072	2,630	
	goatskins	15	145,044	10,878	
Zambia	cattlehides	18	12,912	6,972	6,972
	sheepskins	--	-----	-----	
	goatskins	--	-----	-----	
Zimbabwe	cattlehides	5	135,318	33,830	38,537
	sheepskins	5	16,029	401	
	goatskins	6	143,523	4,306	
region total					630,900 (US\$)

Annex 9

Revolving Fund (R.F.O) countrywise UNIDO inputs in US Dollars and expected annual payback expressed in US Dollars as on July 1995

country	UNIDO inputs in US dollars	Expected annual payback in US Dollars
Ethiopia	427,704	1,380
Kenya	611,948	32,637
Malawi	637,212	14,042
Sudan	171,809	2,771
Tanzania	682,487	62,960
Zambia	643,252	13,807
Zimbabwe	524,410	31,591
Total	3,698,822	159,188

Annex 10a

Revolving Fund (R.F.O.) details of countrywise payback

country	name of the industry	year of agreement	number of installments	instalment amount	total
Ethiopia	Awash Tannery	1989	--	-----	-----
	Modjo Tannery	1989	--	-----	-----
	Dire Tannery	1989	40	Br.2126	Br.85,024
	Anbessa Shoe factory	1989	--	-----	-----
					sub-total: Br.85,024
Kenya	Alpharama	1992	40	K.Sh. 41,601	1,664,064
	Blutan	1992	40	K.Sh. 26,651	1,006,049
	Nalina Ltd	1992	40	K.sh. 15,313	612,537
	Pachar Holdings	1992	40	K.Sh. 4,403	176,260
	Kitale Tannery	1993	40	K.Sh.352,63	14,105,203
	Sagana Tannery			0	Subtotal,Ksh. 17,624,115
Malawi	Superior Leather Co Ltd	1993	20	MK. 15,860	Mk. 317,201
	Liwonde Tannery	1993	40	Mk. 38,905	" 1,556,201
					Subtotal,MK. 1,873,402
Sudan	Sata Footwear Ltd	1991	40	LS. 9,025	360,999
	Salim Tannery	1993	40	LS. 356,148	14,245,900
					Subtotal,LS. 14,606,899

Annex-10b

Revolving Fund (R.F.O.) details of countrywise payback.

country	name of the industry	year of agreement	number of installments	instalment amount	total
Tanzania	Afro Leather Ind.Ltd:	1993	32	Sh.1,937,945	62,014,228
	Shaw Industries:	1993	20	Si. 343,096	6,861,920
	Africa Trade dev.(T) ltd:	1993	12	Sh.5,644,312	67,731,750
	PM Tito's:	1995	12	Sh. 275,166	3,301,997
					Subtotal,TSh. 139,909,895
Zambia	Kamara ShoesLtd:	1991	32	Kw.166,621	5,331,875
	Bata Tannery:	1992	40	Kw.790,913	31,636,520
	Asaria Tannery:	1992	40	Kw. 76,206	3,048,248
	Copperbelt Shoes:	1993	6	Kw.533,610	3,201,661
	Bimzi Ltd:	1993	2	Kw.432,040	864,080
	Kambe Tannery:	1994	8	Kw.917,258	7,338,062
					Subtotal,Kw. 51,420,446
Zimbabwe	Belmont Leather:	1991	40	Z\$.23,929	Z\$. 957,160
	Imponente Tannery:	1991	40	Z\$.41,622	Z\$.1,664,895 ubtotal Z\$. 2,622,052

Annex 11

Revolving Fund (R.F.O.) repayment- Status in some countries:

country	currency	reference date	bank balance	exchange rate against US\$, July/95
Kenya	Shilling	March 1993	1,641,528.25	55
Sudan	Pound	March 1993	149,274.97	527
Zambia	Kwacha	Dec 1994	14,000,000	845
Zimbabwe	Dollar	Dec 1994	2,054,148	8.3

Annex 12

Countrywise training of extension officers and artisans

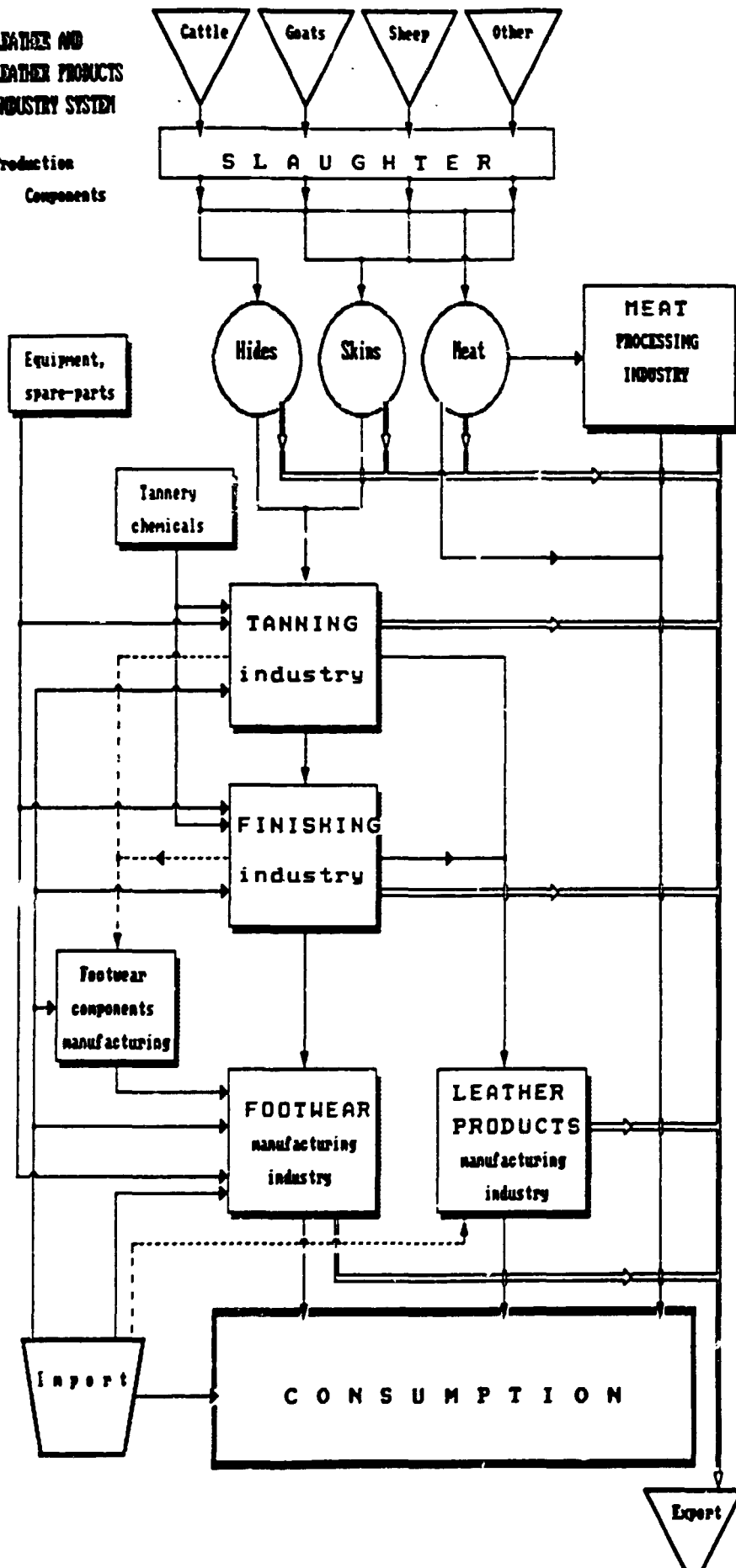
country	number of extension officers trained	number of artisans trained
Ethiopia	70	60
Kenya	n.a.	20
Malawi	34	397
Sudan	85	115
Tanzania	50	80
Zambia	44	250
Zimbabwe	270	n.a.
Region Total	553	922

Annex 13

Hides and Skins , Countrywise capacity utilization of tanneries

country	feasible capacity (1)	capacity utilization(2)	un-utilized capacity(3)	Estimated H&S production(4)	H&S not reaching tanneries (4-2)
Ethiopia					
hides	1,260,000	900,000	360,000	2,100,000	1,200,000
skins	3,000,000	10,400,000	2,600,000	14,400,000	4,000,000
Kenya					
hides	3,310,000	1,700,000	1,610,000	1,500,000	-----
skins	8,310,000	3,700,000	4,610,000	4,500,000	800,000
Malawi					
hides	60,000	60,000	-----	89,000	29,000
skins	-----	-----	-----	230,000	230,000
Sudan					
hides	800,000	450,000	350,000	1,720,000	1,270,000
skins	7,700,000	4,475,000	3,225,000	9,900,000	5,425,000
Tanzania					
hides	1,240,000	200,000	1,040,000	1,800,000	1,600,000
skins	2,000,000	1,400,000	600,000	2,990,000	1,590,000
Zambia					
hides	450,000	275,000	175,000	318,000	43,000
skins	-----	-----	-----	210,000	210,000
Zimbabwe					
hides	1,020,000	750,000	270,000	750,000	-----
skins	1,000,000	640,000	360,000	1,500,000	860,000

(The above is based on 1992 estimates only obtained from the files and documents of project US/RAF/88/100. Hides and skins not reaching tanneries also include export of raw hides and skins)

LEATHERS AND
LEATHER PRODUCTS
INDUSTRY SYSTEMProduction
Components

Purchasing	P
Price	O
Standards	L
	I
	C
	E
	S

Tariffs	P
Export	O
Import	L
For. exch.	I
Taxes	C
	E
	S

Export	P
Import	O
Exch. rate	L
Taxes	I
	C
	E
	S

Subsidies	P
Prices	O
Taxes	L
	I
	C
	E
	S

Forecast of Bovine Hide Production

