

APPENDIX-E

LEATHER INDUSTRY

E. LEATHER INDUSTRY

Table of Contents

1. OVERVIEW OF LEATHER INDUSTRY.....	E-1
1.1 Structure	E -1
1.2 Production and Inputs	E -4
1.3 Products and Markets.....	E -11
1.4 Technology and R & D	E -14
1.5 Skilled Manpower and Training.....	E-17
1.6 Environmental Protection	E -20
1.7 Productivity and Profitability.....	E -22
 2. STRENGTH AND WEAKNESSES	E -24
2.1 Strengths.....	E -24
2.2 Weaknesses	E -24
2.3 Value Addition	E -25
2.4 Constraints	E -26
2.5 Factors of Profitability	E -28
2.6 Industrial Clustering.....	E-29
 3. MASTER PLAN FOR LEATHER INDUSTRY	E-33
3.1 Framework and Strategies.....	E-33
3.2 Promising Markets and Products	E-35
3.3 Technology Upgrading and Quality Control.....	E-37
3.4 Manpower Development.....	E-39
3.5 Environmental Protection	E-40
3.6 Financial and Institutional Arrangements	E-40
 4. ACTION PROGRAM (2000-2004).....	E-43

E. MASTER PLAN FOR TARGET INDUSTRIES

1. OVERVIEW OF THE LEATHER INDUSTRY

This study was based on visits to a selected number of leather enterprises followed up with discussions with leather industry associations, manufacturing companies and relevant public sector institutions in the industrial sector. Most of the data reported in this study was obtained from a questionnaire survey covering 50 leather enterprises.

The leather industry, which the world over is traditional by nature, is very labour-intensive with many craft processes involving manual working. In the past 35 years, the level of mechanization of the process has increased along with a scientific approach resulting in specific technological processes being developed for each product.

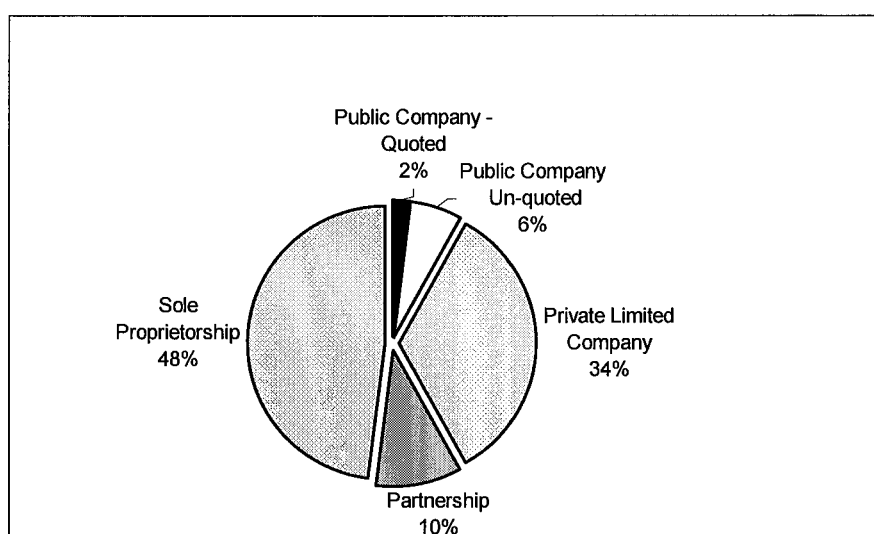
1.1 Structure

The 50 enterprises selected for the survey represent the diverse manufacturing activities as well as the range of size and operations in the industry; and therefore the survey information could be considered to reflect the status of the industry.

A classification of the types of enterprises obtained from the survey as shown below, indicates that 58% ie. over half the enterprises are sole proprietorships and partnerships, while only 42% are operating as companies.

Types of Enterprises

Enterprise Classification	No of Enterprises	Distribution %	No of Enterprises with Foreign Ownership
Public Company – Quoted	1	2%	1
Public Company - Un-quoted	3	6%	1
Private Limited Company	17	34%	4
Partnership	5	10%	-
Sole Proprietorship	24	48%	-
Total	50	100%	6



Six of the companies have a foreign share holding and an analysis of the proportion of foreign share capital in these six enterprises is as follows:

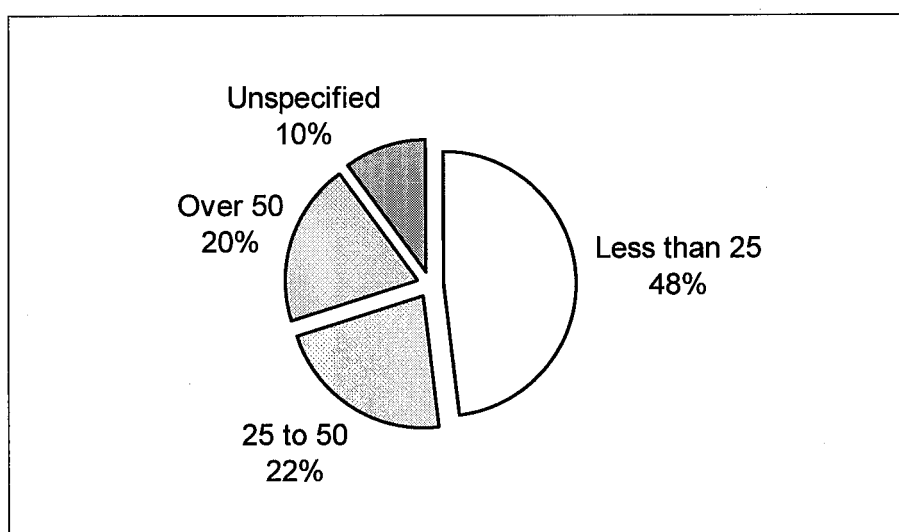
Analysis of Foreign Ownership

Classification of Foreign Ownership	Number of Enterprises
No Foreign Ownership	44
Foreign ownership of 15%	1
Foreign ownership of 50%	2
Foreign ownership of 80%	2
Fully Foreign owned 100%	1
Total	50

A classification of the enterprises by size was done using the survey data on number of employees, paid up capital and sales volume. Taking into consideration the characteristics of this industry in Sri Lanka, it was decided that enterprises with less than 25 employees could be classified as Small; 25 to 50 as Medium; and over 50 as Large. The distribution of the enterprises under these categories is shown below.

Size of Enterprises based on Number of Employees

Size of Enterprise	Employment Range	Number of Enterprises	Size Proportion
Small	Less than 25	24	48%
Medium	25 to 50	11	22%
Large	Over 50	10	20%
	Unspecified	5	10%
Total		50	100%



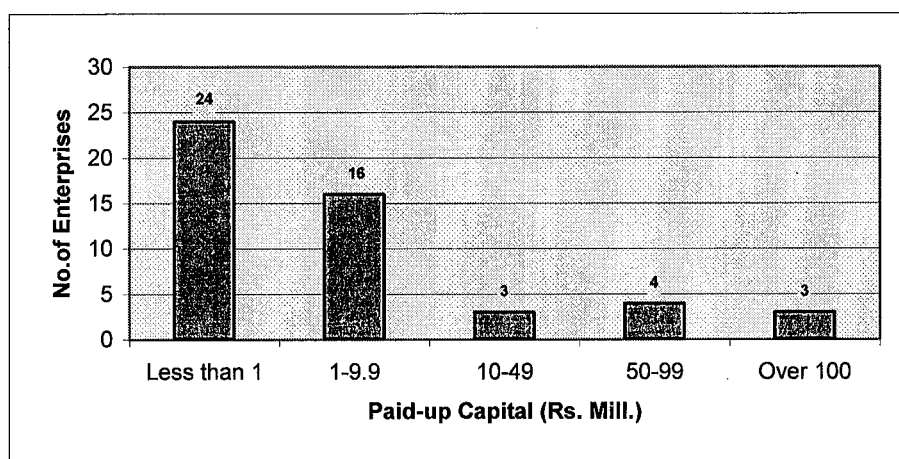
On this basis it is seen that 70% of the enterprises are small and medium industries (SMI), while only 10 enterprises could be considered as large, each with over 50 employees which is 10% of the enterprises surveyed.

Analysis of the paid-up capital of the enterprises below shows that 80% of the enterprises have a paid-up capital each of less than Rs. 10.00 million, with this 80% having only 11 per cent of the total paid-up capital of all the enterprises; whilst 6% of the enterprises have 44% of the paid-up capital.

Analysis of Paid-up Capital

Paid-up Capital value range Rs. Million	Number of Enterprises	Total (Mn) Paid-up Capital per value range Rs. Million	Proportion of Paid-up Capital per value range Rs. Million	Proportion of of Enterprises per value range
Less than 1	24	12	1%	48%
1-9.9	16	88	10%	32%
10-49	3	87	10%	6%
50-99	4	300	35%	8%
Over 100	3	375	44%	6%
Total	50	862	100%	100%

These data clearly indicate that the leather industry in Sri Lanka is dominated by small manufacturing units and enterprises which comprise over 80% of the enterprises surveyed, while only 15-20% of the enterprises can be considered as large accounting for 79% of the paid-up capital and each of these having over 50 employees.



The survey also provided information on the year of establishment of the enterprises. These are summarized in the Table below, and it indicates that 46 percent of the enterprises were established over 10 years ago with an overall average of 17 years. Therefore the average year of starting activities of the 50 enterprises according to this analysis is 1982.

Year of Establishment

Age (Years)	No. of Enterprises	Age Proportion
Less than 5	16	32%
5-10	11	22%
10-15	7	14%
Over 15	16	32%
Total	50	100%

1.2 Production and Inputs

Production and Sales

The Leather industry in Sri Lanka consists of three types of manufacturing activities:

- Leather Manufacture
- Footwear Manufacture
- Manufacture of other Leather Goods

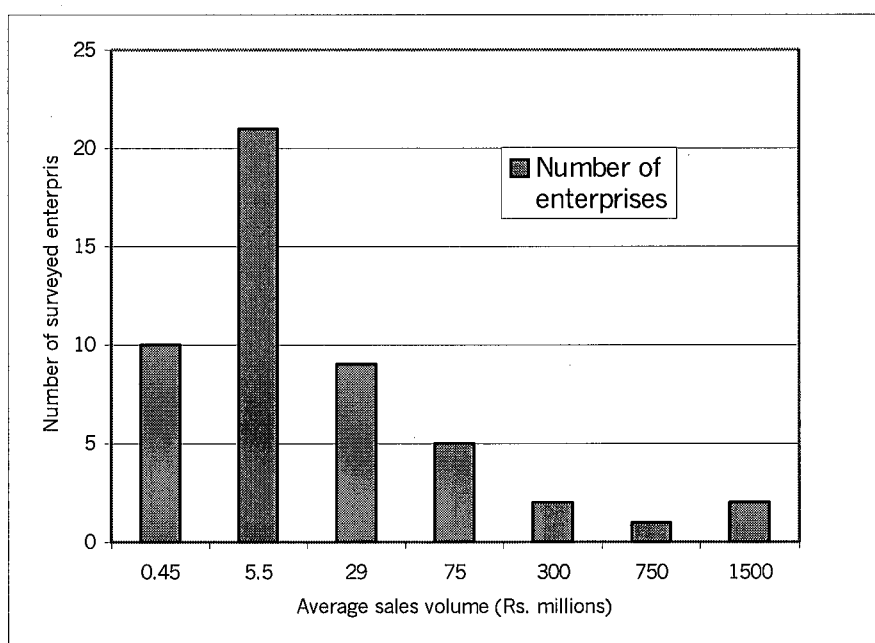
The Sri Lankan tanning sector is roughly equivalent to a single medium size tannery in European or US terms. Quantities of raw material available daily total 43.1 tons. Currently the Central Environmental Authority has set the limit on the quantity which can be processed at 28 tons which is the 1991 capacity level, as no proper system has been designed nor set up to

cope with the level of environmental pollution which emanates from the industry. The Environmental Protection License is the means by which this restriction is enforced until pollution control methods are set up in the sector.

The intended relocation of the tanning sector to Bata Atha in the South of the island will remove the current volume constraints because of the dedicated and specialised waste water treatment facilities to be provided there. This will provide an immediate expansion opportunity to the industry of 15 tons daily or over 50% on their current levels of input to processing. Businesses are already gearing-up to grasp this opportunity in the plans being laid for their new facilities due on stream in 2001. This being a clustered manufacturing activity it will result in costs being shared. Compared with other areas, the ability for other work downstream, adding value and creating jobs, will show that the return on investment placed here will be more cost effective perhaps than in some other sub-sectors in terms of jobs created.

The reported total sale for 1998 from the survey was Rs. 5,106 million (US \$ 72 Million). Of this, the sales volume of 31 enterprises (ie. 62%) were less than Rs. 10 million, and only 5 enterprises (ie. 10%) had sales over Rs. 100 million. This is seen in the following graph.

Size Distribution of Enterprises by Sales Volume



This analysis of the average sales volume also indicates what was evident from the earlier mentioned data that the vast majority of the industry is at the “small” end of “small to

medium” scale industries, the level of activity in many cases being one of a cottage industry. This is also confirmed by the observations made by the consultants on their visits to the enterprises.

The survey was able to obtain information only of the six main products manufactured by each of the enterprises. From this the values of the main products manufactured by all the enterprises were analyzed; the results are shown in the table below.

Values of Main Products Produced

Description	Quantity	Value (Rs. Mill.)
Executive Bags	8,000	11.200
Gents shoes	101,690	32.918
Leather Boots	258,231	155.110
Leather chrome	4,482,700	151.308
Leather footwear	60,000	39
Leather Veg.	599,988	48.464
Leather Work Gloves	140,000	49
Plastic Heels	120,000	6.235
Sandals & Slippers	3,455,555	16.231
Slippers	167,700	22.907
Total	9,393,864	532.373

These items grouped under the three main types of manufacturing activities of the industry is as follows:

Type of Manufacturing Activities

	Output Volume	Value (Rs. million)	%
Leather Manufacture	5,082,688 pieces	199.772	37.9
Footwear Manufacture	4,043,176 pairs	266.166	50.6
Leather Goods	148,000 articles	60.200	11.5
Total		526.138	100.0

This represents only 10.4% of the total sales value of Rs. 5,106 million mentioned earlier.

Raw Materials

Daily availability of hides and skins to the tanners is as follows:

- Cow Hides 2000
- Buffalo Hides 1000
- Goat Skins 1800 (Source: Sri Lanka Association of Tanners)

The table below shows that the livestock is distributed in many parts of the country, thus indicating a potential to develop the leather industry in other parts of the country unlike at present where the industry is mainly concentrated in the Western Province.

Up-country hides are generally judged by the tanners as being of better quality than those from the lowland provinces and the dry zone, because they exhibit less damage due to branding and better preservation (therefore more useable area).

Sri Lankan hides from domestic stock, present a potential quality advantage over the hides from India, because they are not taken from breeds with large pronounced humps on the backs. During mechanical processing, the humps cause area loss due to machine damage.

ANALYSIS OF LIVESTOCK STATISTICS - SRI LANKA											
	1997				1998				1997	1998	
PROVINCE/DISTRICT	CATTLE	BUFF	GOAT	CATTLE	BUFF	GOAT		SHEEP			
	AREA TOTALS										
Colombo	23300	14000	6400	23300	13100	6100					
Gampaha	51600	21800	17900	51700	22200	16900		100		100	
Kalutara	40900	31000	15700	40800	29900	14600					
Western P	115800	66800	40000	115800	65200	37600		100		100	
Kandy	56900	21300	30200	57000	21000	29800		100			
Matale	43900	26500	13200	50000	25700	13900					
Nuwara Eliya	51000	5500	16200	51600	5600	14500		200		200	
Central P	151800	63300	59600	158600	52300	58200		300		200	
Galle	28000	12600	8100	27100	12800	7300					
Matara	32900	11200	3500	32700	10700	3900					
Hambantota	75000	59300	15100	78800	59900	15500					
Southern P	135900	83100	26700	138600	83400	26700					
Jaffna	57000		35300	58300		38700		3700		3800	
Kilinochchi	17300	1400	14100	17300	1400	14100		3200		3200	
Mannar	50300	4700	9600	50300	4700	9800					
Vauniya	28300	900	5800	26700	1000	5300					
Mulaitivu	39400	6300	11300	39400	6300	11300		300		300	
Northern P	152300	13300	76300	152000	13400	79200		7200		7400	
Kurunegela	202500	152000	57100	198000	142700	58500		1100		2000	
Puttalam	84800	20000	51900	88100	20400	52600		1200		1400	
N Westn P	267300	172000	109000	285100	163100	111100		2300		3400	
Anuradhapura	143500	86500	40500	147100	84500	42700		700		500	
Polonnaruwa	46300	44400	12700	47700	41600	14200					
N Centrl P	169600	130900	63200	164600	126100	56900		700		500	
Badulla	77400	8400	20300	80800	8300	20300				100	
Monaragala	63200	29600	6000	62500	25000	4900					
Uva P	140600	38000	26300	143300	33300	25200				100	
Ratnapura	36000	16500	34500	36200	16000	31700					
Kegalle	24300	16500	23900	24100	16300	22300					
Sabaragamo	60300	33000	58400	60300	32300	54000					
Mahawela H	15300	6400	4500	15400	6500	4300					
Batticaloa	118399	59600	31300	121800	52700	31800					
Ampara	89000	34600	12600	96900	38800	12900					
Trincomalee	81400	43800	22800	77900	47900	21400				100	
Eastern P	289700	129000	66700	295600	139400	66100				100	
TOTALS	1503500	719400	516200	1588100	708500	515000	10600			11800	

Source: Department of Animal Production and Husbandry

Other required raw materials are imported and the enterprises have stated that they import on average 18% of their material inputs, which include the following.

- Almost all the chemicals required for tanning, re-tanning, dyeing, fat-liquoring and finishing. The only volume chemicals available from local sources are salt and lime.
- Lasts for the shoemakers.
- Stiffening materials, adhesives and sewing threads.

Hide and Quality Problems

Hide quality will pose a major limiting factor in the future unless measures are taken to control the resource more effectively. This may be the most difficult, but most fruitful way to develop the industry. The consequence of not evolving effective controls in hide production is likely to have far reaching impact on forward linkages within the industry.

The current situation is that the basic raw material (hide or skin) is under utilised and heavily devalued by the treatment the animal receives before and after slaughter. The intrinsic value of the material is so low that it currently sells in the wet-salted state for Rs. 22/- per kilo on average. This when converted to US \$ for international comparison amounts to US \$ 0.31 per kilo in Sri Lanka which compares very badly with the corresponding price for wet-salted bovine in the UK which is £0.9 per kilo; equivalent to US \$ 1.44. The major reason for this is that the quality of raw material in Sri Lanka is generally very poor, and therefore offers plenty of scope for improvement.

There is also an opportunity to improve the concept of value down the supply chain, by assigning a higher price to better quality material which will provide better earnings down the line for farmers who use beneficial husbandry methods. This concept is championed by the tanners, shoemakers and leather goods manufacturers, and has been the subject of general discussion with the Department of Animal Production and Health in Kandy.

During the life of the animals, the ownership is identified with brands. These are often very extensive in terms of surface area covered, causing pain and distress to the animal and reducing the leather-making potential of the hide. Legislation exists within the Animals Act to control the size and location of the brands, but it is not enforced among the farmers by the District Veterinary Officers of the Department of Animal Production and Health.

The second major quality issue arises from the method of removal of the hide from the carcass at the abattoir where the flaying techniques currently used cause deep cuts in the hide, which are widespread in nature often causing holes. The level of operative training of flayers needs to be improved as a matter of priority. The damage caused by branding and flaying often extends to 40% of the total area of the hide, rendering this area virtually useless as far as leather making potential is concerned

The fineness of grain and aesthetic quality of the leather from indigenous Sri Lankan hide would lend itself to premium grade products and high selling prices if the desired improvements can be made. It will be necessary to bring all parties concerned to the table to thoroughly explore the improvement opportunities. With the assistance of outside agencies, they would discover how both the quality message and improvement in value and earnings can be driven down the supply chain to the hide merchants, abattoirs and even the farmers. The cost of such assistance would be provided for by the increase in useable area through the reduction of faults.

Unit selling prices of products need not be affected by this, only to say that if manufacturers rejected just 20% of the leather they buy, they could make twice as many articles. This relationship was graphically demonstrated on the many factory visits.

It is not currently profitable for the majority of tanners in Sri Lanka to work on imported materials, due to the current level of technology in use, which would in turn reduce rather than enhance the value of any production. Furthermore, because the imported "Wet Blue" leather is expensive and considering the current selling price of the local product on the home market, it would not be a viable alternative. Only if the quality of workmanship was of much higher standards, would the tanners stand a chance of making a profit on an exercise such as this. Most of the industry is currently quite a long way from such a situation.

If it were possible to secure foreign orders, it may then be possible to carry the cost as long as the area yield is optimized. Any company seeking to augment its production by using imported material should be advised first to ensure that high technical capabilities exist in their company to enable it to run this as a profitable line.

Religion and the Meat Industry

Meat as a form of dietary protein in Sri Lanka is not a big industry because of the relative high level of vegetarianism in the population. It is not easy to see from the census of animals, slaughter rates, etc in the Table below, if there is an upward trend in the consumption of meat,

which would fit in with the profile of a recently developed country. Although the provisional figures for cattle show an increase between 1997 and 1998 the slaughtered numbers were down, so it is unsafe to speculate on this data.

The production of hides and skins is inextricably linked to the meat industry, because in leather terms, other than “exotic” products, animals are not bred for their skins. We must then consider the influence eating habits have on the trade because the hide or skin is only a by-product, at least that is the view of the butchers. There is the potential however for the hide in the form of leather goods, to be higher in ultimate value than the meat which is understood by all to be the primary product. A concept which the cattle breeders and butchers would do well to embrace.

Indigenous Stock and Changes over a 10 Year Period

Type	1988	1997	1998*
Cattle			
Population (000)	1,788	1,579	1,599
Slaughtered	163	187	183
%	9.1	11.8	11.4
Buffaloes			
Population (000)	963	726	721
Slaughtered	n.a	n.a	n.a
Sheep & Goats			
Sheep (000)	28	11	12
Goats (000)	510	521	519
Slaughtered	104	96	80
%	19.3	18.1	15.1
Pigs			
Population (000)	95	80	76
Slaughtered	21	30	16
%	22.1	37.5	21.1

* denotes provisional figure only

Source: Central Bank of Sri Lanka

The majority Sinhalese population whose religion is Buddhism, prefer to distance themselves from the abattoir as it does not fit well with their religious belief that it is sinful to kill animals, although many eat meat. The work involved in producing meat for human consumption is generally undertaken by Muslims, a minority community many of whom are also related closely with the tanning industry.

The suggestion that careful study is needed of the methods and practices involved in animal husbandry and slaughtering from a legislative and control point of view is anathema to the authorities and Government Departments. They prefer not to deal directly with the mechanics of death, and frequently the subject is pushed down the agenda. While the control and regulation of the slaughtering practices of Muslims by Buddhists could heighten sectarian differences, there are some serious implications attached to not acting to improve the current situation. This is also a sensitive issue in terms of animal welfare and public health. It is seen that these two subjects therefore override the interests of the tanners for a higher quality raw material.

1.3 Products and Markets

Promising products

The aesthetic potential of the Sri Lankan leather lends itself to envision the development of a thriving premium leather goods industry producing a variety of articles. A diagram indicating the range of articles that could be manufactured in Sri Lanka is at Annex 1.

The markets to pursue are the short run, high quality (luxury) labels where the intrinsic appearance of the leather is the main attraction, because of its elegance. Products in this portion of the market carry the highest prices and the best margins. Customers in this sphere of activity also demand a first-rate service in all aspects. The geographical locations to target in terms of marketing these are those markets with high disposable income and a thriving demand for luxury items. USA, EU, Middle East and Japan should figure prominently.

For this it is proposed that the industry move away from the present priority of manufacturing leather for footwear. This will allow a leaning towards the leather goods markets likely to pay the best prices for products of improved quality. New product development lead times will be months or years depending on the relationship with the potential customer and the specifications of the product.

It will be important to start this development cycle as soon as possible. It will then be possible to realise the best prices for the best products. It is not unreasonable to imagine that this will result in a leather price rise of 50% and ensure a sustained quality improvement. This will enable both branches of the industry to gain a better return on higher quality domestic leather.

If the tanning sector is ultimately successful in moving towards supplying for this type of leather goods, the opportunity may have to be explored to import more from Indian low-end leather producers for footwear. As time goes on and the tanners of the island develop enhanced lines, improved methods and increasingly, full-grain products, the “quality race” with India could be one of the driving forces of initiatives within factories. Sri Lankan tanners need to identify, widen and exploit the quality gap to succeed in this issue.

In discussions during the visits to the enterprises, some small businessmen were surprisingly aware of the market potential that their company had. They were ready to exploit it and needed to know how the government would be making it easier for them to expand and develop, more so perhaps than some of the managers of large companies. These are the true entrepreneurs of the industry and should be encouraged by the offer of a positive incentive package.

Though many developing countries have entered into arrangements with high profile brand manufacturers for working imported leather these will not provide the same level of contribution as upgrading of the indigenous industry. (Applying the principle that it is always better to make the most of what you have, rather than offer a substantial slice of the commercial prospect to an outsider.) Alliances of this nature provide a platform to grow skills, and can be a quick route to reducing unemployment, but will not be likely to make the sustained contribution that a strong home-grown industry can.

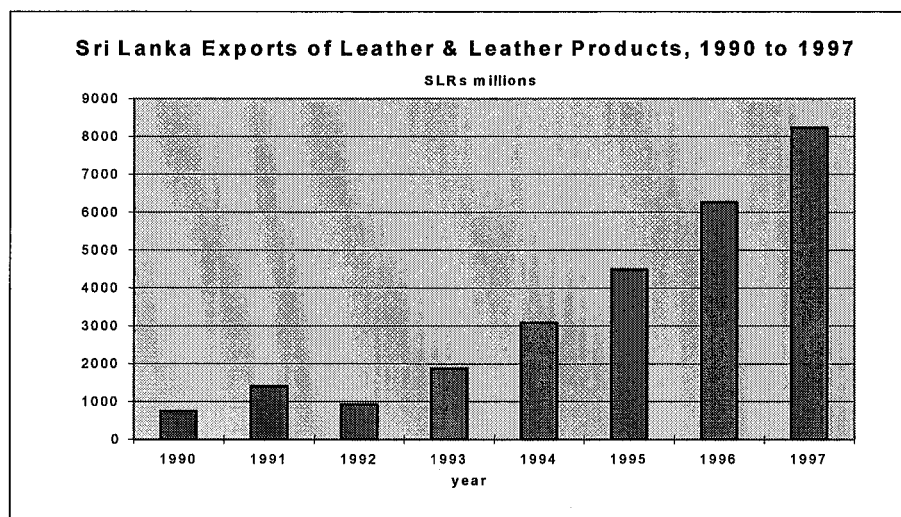
The “World-Class” “international brands” are notoriously fickle in the way they select partners in developing areas of the world. The Sri Lankan sub sector cannot currently offer the knowledge base or levels of skill necessary to attract this sort of relationship, so would have to resort to financial incentives or some kind of governmental financial support.

Exports

The Sri Lankan industry is largely geared to serving the local market and the tourist trade as the present poorly developed quality of indigenous leather and leather goods manufactured is reducing the appeal of the product in the international markets.

If the key issues raised in this report regarding the sector and the support it requires can be effectively addressed, there is every reason to expect that the foreign earnings from the industry will show a corresponding and proportional increase.

Despite existing constraints, the exports of leather and leather goods have been increasing steadily from less than Rs. 2,000 million in 1993 to over Rs. 8,000 million in 1997, as seen from the following graph. However, these exports are not mainly from the indigenous leather nor from the traditional “small sector” which dominates the industry in terms of numbers of manufacturing units.



Source: Export Development Board

This increase in exports is attributable mainly to the expansion of the export oriented BOI companies in this sector. The high figure is also due to the fact that it includes a large proportion of part processed, rough-tanned and crust leather. One of the three BOI enterprises in the sub-sector, Korea – Ceylon Footwear also exports shoes using leather mixed with synthetic materials and canvas, while also producing a few all leather lines for the export markets. Three other footwear companies with BOI status also use leather as a raw material, a large percentage of which is imported. One other BOI company manufactures leather clothing and jackets utilizing exclusively imported material, while another foreign owned company exports leather work gloves made of imported material.

The survey also ascertained the industry’s perceptions of the level of competition from other countries both in the local and foreign markets. The analysis shown below details the anticipations of the industry regarding the origin of competition in the new millennium.

Perception of Level of Competition from Other Countries

(number of mentions of each country as a competitor).

Country	in year 2000	Country	in year 2010
India	34	India (and SAARC)	40
Thailand	25	China	33
China	19	Thailand	22
Bangladesh	5	Bangladesh	6
Indonesia	5	Indonesia	6
Italy	4	Pakistan	5
		Italy	4
		Vietnam	4

Source: UNIDO Survey, 2000

As can be seen, the general feeling is that the influence of Thailand will decrease, but China's importance will figure more highly. The main threat is still likely to be India, the nearest neighbour with an enormous industry by comparison, which still has to realise its true potential. India is currently a net importer of leather and opportunities here for products of a quality not available locally should be high on the list of targets. This would be a good area to exploit in developing a larger export market.

1.4 Technology and R&D

Level of Technology and its Characteristics

In the technical area, weaknesses exist in the level and quality of measurements taken for QC and QA functions in the enterprises visited. All the activities of the sub-sector are labour intensive and complex in nature so there needs to be a raising of general awareness of the controlling factors in the process. Therefore there is a definite need for a program establishing best practice techniques, reducing senseless manufacturing damage, boosting the value of the product whether or not the raw material can be improved with time. The managers of the larger enterprises are well aware of this and appear unable to tackle the problem without outside help.

This is exemplified by the low level of understanding of the processes involved in many cases and failure to grasp the degree of "performance" that the customer may require from the finished article and how leather can contribute to this. The level of sophistication of processing observed was also variable, some companies still making leather in holes in the ground by very traditional methods; while others, particularly companies handling a higher volume showing reasonable levels of mechanization of the processing techniques.

The current situation in many cases is one where it is not known which factors are out of control, because nothing is measured. Similarly, very few enterprises were observed to keep adequate records of process work with critical information recorded. If there is to be an improvement in the general quality of production, there will have to be a substantial improvement in the level of process management. The sort of equipment that would help immediately would be those in the table below:

List of Essential Equipment

Water Meters Avoidance of waste.	How much is being used?
Accurate Weighscales Avoidance of waste.	Necessary to apply just the required quantity to do the job. Is the level of wastage of leather in terms of trimmings and shavings known? Control of solid waste will be fundamental to the new approach.
Thermometers Avoidance of waste.	Are correct conditions being met for optimal chemical applications, absorption's, penetration, fixation?
pH Meters Avoidance of waste.	Are correct conditions being met for optimal chemical applications, absorptions, penetration, fixation?
Clocks and Timers Regularity of control.	Are process reactions being allowed sufficient time to occur, is this application regular in every case. Is machine productivity consistent?
Hydrometers Avoidance of waste.	Are correct conditions being met for optimal chemical applications, absorptions, penetration, fixation?

Machinery

The sample of 50 enterprises surveyed has reported a total of 889 pieces of machinery with a total value of Rs. 455.8 million. 40 of the enterprises, or 80% of the enterprises each have machinery of a value of less than Rs. 5.0 million while in 6 enterprises the value of machinery is over Rs. 15 million each as seen in the following Table. However, the values reported are closer to replacement cost than their current worth and it is clear that the depreciation with respect to time has been ignored.

However, the values reported are closer to replacement cost than their current worth and it is clear that the depreciation with respect to time has been ignored.

Distribution of Value of Machinery

Value of Machinery Rs. Mill.	Number of Enterprises	Total value of Machinery Rs. Mill	Proportion
Less than 5	40	29.88	7%
5 – 15	4	30.66	7%
15 – 25	2	39.20	9%
More than 25	4	356.05	78%
Total	50	455.79	

Source: UNIDO Survey 2000

A total of 78% of the machinery asset value (356 Mn) is shared among 4 enterprises.

Analysis of Age of Machinery

Age Range of Machinery (Years)	Number of Enterprises	Proportion
Less than 5	18	36%
5 - 8	15	30%
8 - 12	11	22%
More than 12	6	12%
Total	50	100%

Source: UNIDO Survey 2000

An analysis of the age of this machinery indicates that in 34% of the enterprises surveyed the machinery is over 8 years old. It is therefore evident that some plants are relatively old and from the visits it was observed that it may be more cost effective to bring in second-hand plant (which are more advanced than some of the manual operations now performed), recondition them in local engineering outfits and market it to the tanners and shoe/leather goods manufacturers.

Also providing assistance to import a range of simple electro-mechanical plant as used in factories in other parts of the world for the past 30 years will be sufficient in most cases to make a significant upgrade. Only in exceptional cases will there be a need to replace an existing machine with a more modern version. The main consideration must be that the plant can be easily supported and maintained by local resources.

There exists an ability in a number of small engineering companies to recondition and market used equipment brought from US, Europe or elsewhere, replacing what are commonly manual operations when used and adjusted correctly, these could give first rate results. In the next

stage of evolution of the industry, these machines can be upgraded or replaced when the knowledge of the operations and the skill levels have evolved to a suitable level and the industry demands higher productivity as well as the quality assured. By such time, the improvements detailed in this report will have resulted in viable commercial enterprises which will be able to plan and finance their own future development.

Research and Development

In the survey a surprising number of leather enterprises (38) reported conducting R&D activities. Of these, 34 provided data which reveal an average staffing of 3.5 R&D personnel per such enterprise, and average annual expenditures of 834,370 rupees (approximately US\$11,920). Two enterprises boasted ISO 9001 ratings, and one had ISO 9002.

Although these enterprises in the survey claimed some R&D activity in-house, the general level of technology observed during the visits would suggest that many enterprises are focused on producing cheaper versions of another's product rather than innovating with their own designs and product lines. This perpetuates a down market perspective on enterprise activities, when the exact opposite is what would bring improvement.

Provision of suitable R&D facilities for future requirements are difficult to envisage on a company by company basis because many of them are so small. The down time involved and the cost of plant required is likely to make provision prohibitive for small companies. This problem would be removed if facilities could be provided by IDB perhaps and time bought or allocated to the customer at break-even rates. This facility could perhaps run in parallel with the testing and standards centre already mentioned. Thus it will be able to provide up to date facilities without senseless duplication.

1.5 Skilled Manpower and Training

The total manpower structure of the 50 enterprises surveyed is shown below. From this it is seen that of the entire workforce in the sub-sector, 78.9% is direct labour and 21.1% perform indirect functions, almost half of this in "middle management". Also a significant feature is there being less than 2% of technicians and engineers. Even if some of the middle management are technically competent, it reflects an observation made in the visits that only a select few persons in the enterprises know the critical aspects of the job, and are thus able to exercise effective technical supervision.

Manpower/Employee Structure

	Number Enterprises reporting	Total Number of workers	Proportion
Unskilled workers	41	846	18.2%
Skilled workers	50	2805	60.6%
Technicians	18	55	1.1%
Supervisory Grades	30	132	2.8%
Engineer or designer	13	25	0.5%
Middle Management	24	425	9.2%
Senior Management	37	78	1.7%
Sales and marketing	29	187	4.0%
From Labour contractor	5	76	1.6%
Total	50	4,629	100.0%

Source: UNIDO Survey 2000

The industry needs to be able to create a promotional structure whereby there is always another level to aspire to in progressive steps. When the enterprise is very small as some we visited, the owner/manager directs all aspects of the operation whether technical, production control or managerial.

With regard to the larger companies, where supervisor and managers need to possess a level of vocational qualification, the development of a career path for persons entering the business would be an advantage. A level of vocational qualification could be envisaged for a "Supervisor/Junior Manager" grade, that would encompass attitude to quality and basic problem solving techniques. Further down the organisational structure, the development of core skills with particular reference to mechanical operations and how they influence quality is also needed.

The major shortcomings in the area of process control and other related technical aspects during manufacture were mentioned earlier. Therefore the need for effective training in these areas for all levels was clearly seen. Training is required to ensure that the manufacturing processes are correctly controlled. It requires that the people most directly involved with the job at hand know the critical aspects of the operation whether it be leather dyeing or stitching a buckle on to a bag.

The level of QC visible in all but a few factories was very basic if indeed any at all. Most manufacturers thought it was the correct procedure for the customer to complain about any problems rather than ensuring quality within the factory. Any structured training efforts in regard to QA should address the shortcomings identified in the basic measurement of the job.

There needs to be a movement to identify how things are measured and how those measurements contribute to improved consistency of product. This approach must be a fundamental part of training at all level. Then the people involved at shop floor level will start to understand that in any manufacturing process, the degree of attention to detail will determine the quality and consistency of the output. At the moment, few enterprises have identified this need and the requirement of training and orientation to this approach.

The survey also ascertained the future training needs as perceived by the enterprises; and an analysis of their responses to this in the survey is in the table below:

Training Needs Ranked by Skills Required

	Number Enterprises reporting	Total Number of "yes" answers	Average *
e. Designers (styling or re-styling)	33	257	7.8
b. Quality controllers, technicians	40	308	7.7
d. Pattern makers	26	197	7.6
a. Production Supervisors	31	211	6.8
I. Others (please specify)	14	87	6.2
c. Training instructors	5	29	5.8
f. CAD Pattern developers	10	58	5.8
h. Production planners/cost analysis	26	146	5.6
g. Methods and time study officers	18	89	4.9

* Reporting enterprises gave 9 points for their most needed training from the above groups, 8 points for the second most needed etc. So a high average score indicates a relatively more important need.

Source: UNIDO Survey 2000

The top three areas identified clearly show that the industry is aware of its own shortcomings in these areas. It would be reasonable to suggest that from effective training and experience in these 3 categories, the quality and capacity of employee would be enhanced. This provides a useful insight to the direction that the industry feels it should move. Training is a fundamental requirement to providing the industry with the tools to progress, and it is an on-going priority, not just in terms of quantity, but in terms of quality as well.

41 of the leather enterprises reported training 1,007 workers during the past two years (i.e. 22 percent of all workers). External courses were attended by workers from 37 enterprises, while 15 said that they organized training internally. It would be natural to question the nature and

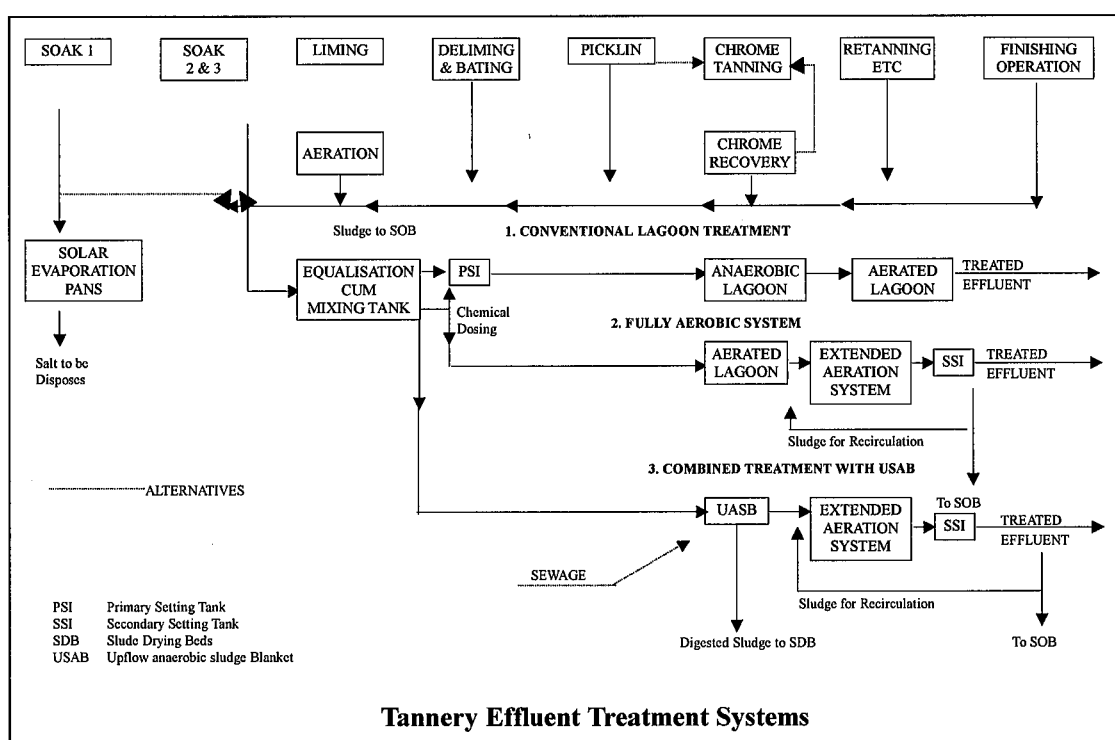
effectiveness of this training, and to propose that it be provided “up to a standard” rather than “down to a level”.

The level of on the job training is currently low. It is not sufficiently structured to provide a solid understanding of the level of metrology and QA necessary to perform the tasks consistently. For the industry to progress, a more structured approach will be required.

1.6 Environmental Protection

The protection of the environment is a high priority, sensitive issue in any leather making / leather using scenario. Currently the tanners of Colombo are preparing to move to a dedicated business park at Bata Atha in the south of the island. Until then there is a ceiling on the amount of raw material they can process. This facility now at implementation stage under a UNIDO project in association with NORAD, MID and SLAT, will be equipped with effluent treatment plant to modern design, capable of handling all of the critical pollutants, and treating the waste water from the processes to Central Environmental Agency standards.

A flow chart of the Tannery Effluent Treatment Systems to be installed at the Bata Atha Complex is shown below:



The major concern observed during the visits to the enterprises was the level of solid waste left from the tanneries, shoe factories and manufacture of other articles. In many cases, this had been left outside, dumped on a neighbouring plot of land, unsightly and accumulating over time. The people involved with this practice did not appear to be concerned about the way they were operating.

Clearly, in a re-aligned industry, this factor will have to come under more effective control. The proposed upward drive in quality will help to reduce this level of solid waste production by making more of the leather suitable for use, but there must be an enforceable method to put the responsibility back on the polluter to act responsibly in this matter, sending trimmings and scrap for carefully managed land-fill, or alternate use.

Conspicuous testimony to the attitude of the industry currently towards environmental issues is the fact that so few enterprises offered an answer to questions in the environmental costs section of the survey. Only 10 companies out of the 50 which took part in the survey admitted to waste disposal costs of a general nature, 6 to costs associated with solid waste and only 3 to costs accompanying a responsibility for liquid waste streams.

A more detailed question in the survey to identify how much knowledge the sub-sector has on its environmental impact was slightly better responded to; and the information provided is as follows:

Reported Environmental Problems

Chemical agent	Number of mentions	Human impact	Environmental impact
Adhesives	2	Too strong fumes	TDS COD BOD, air pollution
Ammonium		Irritates	
Basic Chrome sulfide	5	Bad odour, burns	
Basic Chrome sulphate	6	Contamination, bad odour, corrosive	Contaminates water
Basyntan		Strong smell	Unsightly deposits
Fats	1		
Lime	2	Corrosive	
P U Adhesive	1	Suffocation	TDS COD BOD, salinity
Salt	5	Bad odour	
Sodium Chloride			
Solid proteins	2	(Petts)	Salinity of water
Solvents MEK	3	Inhaling fumes	Dirty landscape
Wattle Extract	1		BOD

Source: UNIDO Survey 2000

The poor level of reply to this section in the survey was also disappointing, (only 28 entries from 50 enterprises, each of whom should be able to find at least 3 pollutants in their process). A much higher rate of answers returned on this issue was envisaged, leading to the belief that the sub-sector is generally under-educated or unconcerned about the environmental impact of their actions. It is clear that any training, education or technology transfer should strongly feature the issues arising from this.

1.7 Productivity and Profitability

The current situation allows a two-tier perception of quality to exist. This must be defeated if there is to be sustained improvement. There should be no difference between the standard of workmanship for domestic goods or export goods, in short only the best work should be acceptable, because any less will not be cost-efficient. There may need to be effort put into re-examination of factory discipline as a formal control tool, so that consistently poor work results in no job ultimately.

The single greatest boost to both productivity and profitability would be from the direction of raw materials improvement along the lines detailed above. Though the issues of public health and welfare may supersede the leather sector, if the machinery of the Government can be focussed on the major issues the resulting spin-off will give an improvement of high quality of a substantial degree. This will impact the useable area yield of leather available from the existing stock, enabling the output of leather goods to increase, without causing an increase in raw materials consumption or escalation in production costs.

The potential for a true productivity, profitability and efficiency improvement is immediately evident on inspection of the current standard of leather in the system. If in conjunction with this, the skills of the manufacturers can be improved avoiding production faults, substantial increase in the value of the entire industry can be forecast. A model for explaining this effect would look similar to this:

**Incidence of Problems Contributing to Poor Performance
and Targets to Set for Improvement Over the Next 10 Years.**

	2000	2005	2010
Manufacturing damage	30%	2%	2%
Flaying damage	40%	5%	2%
Branding damage	40%	15%	2%
Finished leather waste	60%	15%	5%

Source: UNIDO Estimates

As quality becomes a watch-word in the industry, the value added at all levels of production improves, allowing better prices to evolve from improved efficiency of conversion into commercial product. This will allow the distribution of some of the extra earnings throughout the supply chain. The value of the raw material by its improved quality, will demand a better price than is currently the case. The industry throughout its structure recognises that this potential exists.

It would not be unreasonable to consider that the earnings value of the sector could be improved to 300% of current levels using measures such as these.

2. STRENGTHS AND WEAKNESSES

2.1 Strengths

The current status of the Leather Industry depicts the expansion which occurred in the last two decades, after the economic liberalization in the late 70's. This is indicative of certain inherent strengths, which unfortunately have not been fully exploited, due to the absence of a coherent policy for the development of the industry.

Some of the strengths can be identified as follows:

- The prevailing low price structure of raw hides (within a closed market-due to a protective export levy) when compared to the price pattern in the global trade in raw hides.
- As the growth and development of the industry in quantitative and qualitative terms will be largely determined by supply constraints, the prevailing poor quality of raw hides with scope for improvement is a potential growth factor as any improvement in the processing and utilisation of raw hides could lead to higher productivity, improved quality and increased profitability.
- The planned re-location of the tanneries to a new location in the south at Bata-atha will modernise the industry along with the promotion of environmental protection measures enabling the industry to overcome current capacity limitations (presently imposed on environmental considerations).
- The natural fineness of the grain and aesthetic quality of the leather from indigenous hides could lend itself to premium grade products.
- The focus of foreign buyers on Sri Lankan Leather products (small leather goods and travel bags) is linked to the country's tourist trade, considered as a growth sector.

2.2 Weaknesses

Commonly identifiable weaknesses, from the survey analysis, and observations made during visits to enterprises can be summarized as follows:

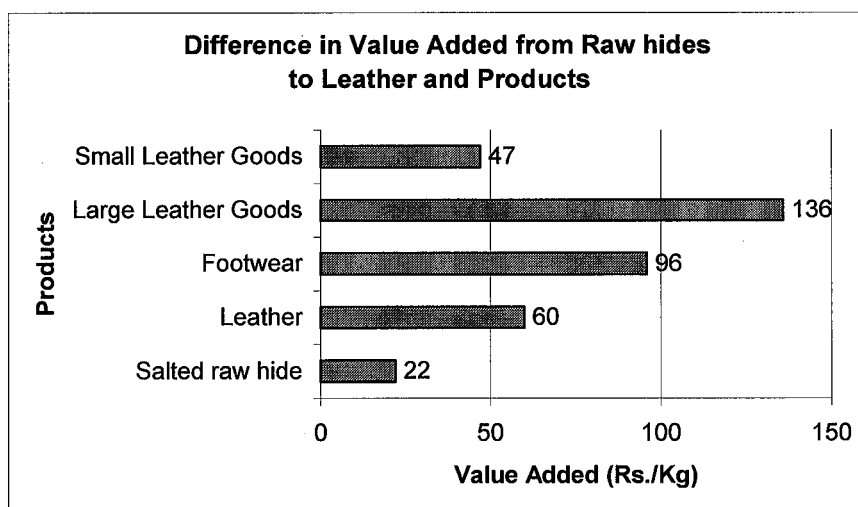
- The small size of the industry in an international context operating under free market conditions affects its overall competitiveness.
- Absence of consistent government policy on animal protection (bovine and ovine) and

husbandry methods, with particular relevance to the chain of activities from branding to slaughter and post-slaughter practices, resulting in downgrading of the hides, the basic raw material of the industry.

- The low level of technical and technological applications as evidenced by the lack of focus on measurements for Quality Control (QC) and Quality Assurance (QA) at all stages in the production process.
- By international standards the industry is under capitalised. It is also under mechanised at all stages of the manufacturing process. Most of the plant and machinery now in operation are too old resulting in poor yields, low quality and low productivity levels.
- Lack of basic know-how of plant maintenance also contributes to this situation.
- Lack of necessary skill development within the industry. Most of the manufacturing units visited are not concentrating on specific products and do not show any specialisation in product lines (which is essential for the industry to be competitive), but are involved in manufacturing a range of products, including ancillary products, which are best outsourced.

2.3 Value Addition

Considering the low price of raw hides, in relation to the prevailing prices of various leather products, the rates of value addition should be significant, though there were no reliable figure emerging from the survey to determine this, due to the fact that units of measurement for various types of products have not been differentiated. However, value addition in this industry (from raw hides to finished products) estimated in a previous study is as follows:



The fact remains that value addition could be greatly enhanced provided that waste is eliminated at all stages in the production process and improvements made to increase area yield and optimise the utilization percentages of the raw material.

2.4 Constraints

Visits to enterprises, service institutions, and interaction with investors helped to identify some of the major constraints. The problems and constraints indicated by the enterprises in their response to the survey questionnaire are as follow:

Problems and Constraints of Leather Enterprises

	Big problem	Some problem
Poor factory operations & process	3	18
Poor factory equipment	11	19
Labour relations	3	4
Labour costs	6	23
Lack of skilled labour	10	15
Access to finance	18	17
Environmental regulations	6	11
Irregular supply or quality of material inputs	20	17
Government regulations	7	19
Access to technology	6	27
Lack of Government Incentives	18	18
Inadequate government support	20	17
Dependency on sub-contracting	3	4
Access to markets	8	20
Increasing competition from overseas producers	23	16
Political and ethnic instability in Sri Lanka	21	11
Others(please specify)	6	1

Source: UNIDO Survey 2000

The survey feedback on problems associated within the industry focuses heavily on the inadequacy in governmental initiative and support. In relation to “raw material related” problems (sourcing and availability) there has been a convergence of views and an urgent need for remedial measures.

Further examination of these responses along with the observations made during visits the main constraints appear to be the following:

- The most serious constraint identified by 37 of the 50 enterprises is the irregular supply and quality of raw hide. It appears that no organized attempt has been made to solve this problem. Even certain measures existing in the 1970's such as the appointment of a hides and skins Development Officer in the then department of agriculture has been discontinued. Though regulations regarding branding of animals do exist in the statute books, enforcement is in the breach or completely lacking.
- However, the constraint imposed by recently enforced environmental regulations on the Tannery sub-sector has been adequately addressed in the Tannery re-location project. However unless the road network is also improved the distance between the new location and Colombo- the commercial centre, will again pose a problem.
- One of the major problems for most manufacturing industries in Sri Lanka, more so for the SMI is the difficulty of having access to finance at concessionary rates. In the responses to the survey 18 indicated this as a big problem.

The survey assessed the requirements of this and the replies can be considered to provide a broad estimate of the industry's expectations or future needs of borrowing: (a) from Public sources as Development Banks or special credit schemes generally at concessionary terms for long periods assumed to be for capital investment and (b). from commercial Banks at normal commercial rates as working capital.

The following tables give the estimates of the future financing needs of the enterprises, which is on indication of the funding needed.

Estimated Future Borrowing Requirements –Public/Govt Loans

Value of Borrowings Rs. Million	Number of Enterprises	Total estimated Borrowings Rs.Million	% of Enterprises
Nil	2	0	4%
Less than 1	21	10.5	42%
1 to 5	16	48	32%
5 to 10	5	37.5	10%
10 to 30	5	100	10%
Over 30	1	40	2%
Total	50	236	

Source: UNIDO Survey 2000

Estimated Requirement for Future Borrowings – Commercial Loans

Value of Borrowings Rs.Million	Number of Enterprises	Total estimated Borrowings Rs.Million	% of Enterprises
Nil	10	0	20%
Less than 1	22	11	44%
1 to 5	11	33	22%
5 to 10	3	22.5	6%
10 to 30	3	60	6%
Over 30	1	40	2%
Total	50	166.5	100%

Source: UNIDO Survey 2000

From this, it is seen that the industry estimates of funding needs of the former to be a total of around Rs. 236 million, with 42% of the enterprises each needing less than 1 million, while 32% of the enterprises seem to need between Rs 1-5 million. This pattern of investment needs is characteristic of SMI. This seems to be similar in the case of the requirements of commercial loans expectations.

While the need to facilitate access to funding also ranks high, all factors other than the fall out from ethnic instability, rank lower down in order of priority.

2.5 Factors of Profitability

Ranking high among factors for profitability is the quality of raw hides, with 37 of the 50 enterprises surveyed, starting that “irregular supply and quality of material inputs” is a major problem. Absence of any plans in the short or long term to overcome this is squarely placed on lack of government initiative (Average of 37 enterprises have made the point in the survey). However it is also evident that much damage is caused to the material during processing due to two other main reasons; low level of skills and inadequate technological and technical inputs.

As the single most important factor for profitability in the Leather products industry, is the quality and yield and optimum utilization (cutting value) of a unit of leather purchased, strategies aimed at raw hide improvement, skill development and technological inputs would yield rich dividends.

Remedial measures designed to make improvements in raw hide production, would necessarily take a long period of time to have any impact on the industry.

In such a situation a short term solution would be to encourage the importation of raw hides or wet- blue (semi- processed hides); though elsewhere in this report it has been mentioned that the current level of technology would not justify the use of imported raw hides as this material is quite expensive in the global market. Therefore skill development and raising mechanical applications to a much higher level than currently prevailing should precede such an undertaking.

2.6 Industrial Clustering

Present Situation and Interest

Many companies employing manual methods are setting a low ceiling on the limits to their activities by remaining small. The advantage of working from home though, has had some effect on the contribution to costs through trimming of overheads. With comparatively low outgoings, there is no great pressure to maximize the value of the goods being made.

Much of the sector relies on cottage style industry and needs assistance to get organized. Examples of this are taken from observations made by the visiting consultants.

Example 1: Vegetable Tanner

One company visited was processing salted hides to the crust veg-tan state and fleshing by hand at a rate of 5 per hour. This traditional method if replaced by mechanical fleshing at a rate of 130 per hour will bring about a productivity increase of over 2500% . Associated with this is an increase in the consistency of the material, better penetration of tanning agents and higher quality. He clearly does not need a whole machine to himself to achieve this but his product would benefit in value terms if he could buy time from someone else.

Example 2: Safety Glove Manufacturer

Another company visited was taking in chrome leather flesh splits to work into gloves but had no means to control the substance of the product as it went into his process. The result of this was that due to the variable thickness of the leather he was working, the uptake of his fat liquor had been uneven, his chemical offer was high, indicating some wastage of material, all producing wide variability in the quality and feel of the product

to be sewn. This company needs access to spare capacity on a splitting machine, although the owner of the company did not know how to arrange this. It is likely that any hire or rental charge he may incur would be offset by the reduction in chemicals wastage, and the increase in uniformity of the end product, the glove. Also these improvements would be enough to secure a price rise by virtue of the better quality achieved.

Example 3: Footwear Manufacturer

The third indication of the needs of the small enterprise is a company employing 6 people including members of the owner's family. Making shoes exclusively for DSI, the owner stated that demand was high and he could up-scale his enterprise from 25 to 100 pairs per day immediately, with potential for much more if he could keep up his quality, but not from out of his front room. He showed us plans that he had had professionally drawn for a factory which would fulfil this opportunity, but had not been able to get a loan to develop because he had no credit history. Again the potential for expansion and improvement exists. The extra pairage would allow for improved, more efficient methods which lead to more consistent quality and enhanced earnings. The extra machinery requirement could be satisfied by absorbing another company with a shorter order book and complementary equipment.

Constraints to Clustering

The prevailing fragmented nature of the structure and the absence of a collaborative approach, is by itself an impediment. With every enterprise attempting to do what is being done by the others, particularly in the footwear and leather goods sub- sector, a major change in focus is necessary. Persuading like enterprises to come together for mutual support may be a problem because they are often producing for the same markets.

Turning this concept of competition into co-operation and mutual support may need the MID to get involved directly, again through the "Small Business Bureau" mentioned later.

Potential Linkages

Only 13 leather enterprises in the survey reported sub-contracting some of their production activity. Of these, 9 sub-contracted less than 10 percent of their total production, while the other 4 sub-contracted between 26-50 percent. Most (8/13) said that they planned to increase the share sub-contracted in the future.

Through the Tanners association (SLAT), the leather manufacturing part of the sub-sector is being brought together at Bata-Atha, it is suggested that the associations representing the footwear and leather goods manufactures should also form a large confederation to try to unify the approach to consolidation within their part of the sub-sector. The main functions that this would perform would be:

- Communication with their members
- High quality information on financial assistance
- Help with the practicalities forming Alliances and Partnerships
- Legal advice
- How to get training on preparation of a formal business plan
- How to access tailored training for their expanding firms
- Representation of the needs of their members in key issues.

Direct contact between Government Departments and the Associations should be encouraged so that the member companies can have access to quality information relating to their trade, by the most direct route. This could be done through the “Small Business Bureau” proposed for the MID.

The table below gives an indication of the regularity of the sales linkages especially in regard to foreign buyer. Particularly in regard to the leather goods produced, there is an established linkage with the Tourist Industry. Some foreign buyers have through tourist channels set up captive production units. Ample potential lies in this direction too.

Regularity of Sales Linkages

	Regular buyers	Irregular buyers	Total	Reporting enterprises
Domestic sales	66	34	=100%	47
Export sales	80	20	=100%	18

Note: “irregular” buyers were defined as new buyers from that enterprise, or others which place orders infrequently.

Source: UNIDO Survey 2000

As discussed the leather sector need to up grade its equipment making and machine maintenance skills. There are in Sri Lanka many machine tool workshops capable of servicing these requirements, even to the extent of fabricating certain simple prices of machinery.

The supply of leather items for use in certain types of machinery and equipment, as in the textile industry is yet another area in which the leather industry would establish a mutually beneficial link.

3. MASTER PLAN FOR THE LEATHER INDUSTRY

3.1 Framework and Strategies

Vision

The Sri Lankan leather sector though small in size and in investment terms, offers sufficient potential for reckoning as a growth area. Its current status provides a springboard for rapid improvement and growth through the formulation and implementation of the required government policies for the development of the industry and for the strengthening and expansion of the manufacturing enterprises in the sector.

The three main manufacturing activities associated with the industry, namely, tanning of hides and skins, manufacture of footwear and leather goods are distinct activities using the same raw material.

Though its impact on the economy is presently small, there is considerable scope for increased contribution by the footwear and leather goods manufacturers by producing primarily for the export markets. During the past two decades more investment has taken place in the sector, but its development has been haphazard and lacking in clear direction. This has resulted in the available resources not being optimally utilized along with the accumulation of sector related problems.

The best approach to upgrade the industry would be through quality improvement starting with raw hides down the line to finished goods. These would provide increased productivity and profitability for the entire industry.

Though raw hides rank very low in the Sri Lankan commodity market (due to protective export levy) its potential contribution by way of value addition is very high. It is that factor which should be exploited in formulating a vision for the leather industry.

“To earn for itself a place in the niche market for high value articles of leather aiming for up-grading of the raw material at base and leading to the manufacture of innovative technically enhanced quality products”.

Targets

In keeping with above outlined vision the development of the industry should be geared to achieve the following targets:

- (i) Achieve a reduction in damages to the raw hides and skins by the percentages mentioned below, both at pre-slaughter and post-slaughter stages, thus giving a real economic value to a product now considered as a by-product of the meat producing industry.

	Current	2004	2010
Manufacturing damage	30%	2%	2%
Flaying damage	40%	5%	2%
Branding damage	40%	15%	2%
Finished leather waste	60%	15%	5%

This should result in increasing the value down the supply chain by assigning higher prices to better quality products at the end of the chain and also better earning for farmers who apply beneficiary husbandry methods.

- (ii) Increase the total tanning capacity in the country including the leather complex at Bata-Atha by 50% so that by 2004 the tanning capacity would be 50 tons/day and by 2010 with better husbandry methods and availability of hides to 60 tons per day.
- (iii) After the commissioning and operation of Bata-Atha for the tannery industry to set up close to its vicinity an industrial park for footwear/ leather goods industry by 2004.
- (iv) To achieve the manufacture of high quality leather products to at least 20% of the total production to serve the upper end of the market by 2004; and to 40% of the total production by 2010, using better indigenous leather and improved manufacturing techniques. Any shortfalls in the raw material requirements for the footwear industry could be supplemented with imports of leather of appropriate quality.
- (v) To achieve high levels of skill development and improved technology to enable the industry to attain the above outlined quality and performance standards.

Basic Strategies

The basic strategies to achieve the above targets should include both government policies and programs for the promotion and development of the industry, and corresponding measures for strengthening of enterprises and technology improvement by the industry.

- (i) Introduce necessary policies and regulations along with enforcement of such regulations for animal protection and husbandry methods, and for improved abattoir practices with particular relevance to pre-slaughter and post-slaughter practices.

- (ii) Conduct an awareness and promotion program among farmers and animal breeders in association with the Department of Animal Production and Health (DAPH) with a view to protecting the hide in the live animal. This to be combined with a system of incentive to ensure better returns to the farmers.
- (iii) DAPH to set up a pilot abattoir for purposes of demonstrating proper methods of slaughter and flaying of hides and skins to eliminate damage to the raw hide. This be linked with a scheme of financial support to the Provincial Council to modernise and upgrade abattoirs in their areas.
- (iv) To review the existing training facilities for the leather industry presently functioning under different agencies and Ministries and to establish a industry specific “Skill Development Co-ordination Agency” (SDCA) under MID to co-ordinate the effective use of the facilities and resources of training within the different public sector organisations.
- (v) Establish a “Leather Industry Development Centre” (LIDC) under public-private institutional arrangement operated jointly by the IDB (of the MID) and the Industry Associations by the expansion and strengthening of the present leather related Skill Development Unit under the IDB.

This centre to be equipped with the required machinery and instrumentation to:

- conduct regular leather design and skill development programs;
- demonstrate critical leather manufacturing processes so as to improve QC and QA in the industry;
- possess facilities and know-how for testing, setting standards in the leather manufacturing processes and for quality certification of leather products.

3.2 Promising Markets and Products

Selection of Targeted Products

Leather is a unique and versatile material, which is durable in use and confers an air of luxury and elegance to the products made from it. The aesthetic potential of the Sri Lankan leather lends itself very easily to imagine a thriving premium leather goods industry in:

- Waist belts, Equestrian products, Luggage and cases, Shoe Uppers
- Small leather goods (bags, purses, wallets, mobile phone covers).

It will be necessary to look in the first instance for products which are not highly specified in terms of technical performance, because the industry needs to grow these skills. The markets to pursue are the short run, high quality (luxury) labels where the intrinsic appearance of the leather is the main attraction, because of its elegance.

Because of the current high incidence of surface damage in Sri Lankan hides there should be a move to attract embossed, antiqued and other aesthetically complex rather than technically demanding products. As the manufacturers abilities to make high performance products improves, the sub-sector will attract more "branded" customers and be able to compete with international competition much better.

The aim in increasing the appeal of Sri Lankan leather products in the marketplace should be directed at developing processes for full grain leathers rather than corrected grain types. Full grain leathers have higher aesthetic appeal and usually carry a much higher price. Full market potential for full grain products is never satisfied in quality markets and makers of goods always need another reliable source of leather, because this type of material is only generated from the top 40% of hides selected for quality (even on European hides). Of the extra output which comes from the expansion of the tanner's production, the best portion of the hides should be developed into full grain production. This may initially only be 5-10% of the total, due to current quality problems but because of the different style of the applications and disciplines necessary to build such a product range, it will be important to get started on this straight away.

Basic Strategies for Marketing

To develop a platform for sustained growth in the industry, there will have to be a substantial up-market drive. Full grain products generally have a shorter production cycle than the corresponding corrected grain partners, this gives an instant advantage in margin because the objective is to enhance the quality of the grain, not obliterate it. They are cheaper to make and faster but require keen attention to detail. Many international "name" designers who exhibit at all of the major fashion events worldwide use leather and leather products.

It should be possible to appeal to the "novelty-value" for the minority, high value goods which are designed, marketed and used by the people who are always looking for a novel material to work with. "Asian-ethnic influences" in the product designs and collections are frequently a strong feature.

The best way to identify the opportunities initially would be for a consortium of key representatives at the top levels in the industry to visit the fashion weeks in New York, London, Paris and Milan to compile a short list of the designers who are actively interested in and using leather, and then mount a promotional exercise among them.

Once the niche market has been established, the manufacturers can focus on how to exploit the potential available. The aim must be to raise the profile of Sri Lankan leather goods on the international stage, by performing short-run, specialist products service which Indian tanners and goods manufacturers will not be interested in, or able to provide. External technical assistance is always available to perfect the products from the design phase up to full production and the return on activities such as this is much higher than for standard “domestic quality” corrected grain shoe upper leather.

3.3 Technology Upgrading and Quality Control

The need to upgrade the technical processes and to improve quality control is clearly evident. If there is to be an improvement in the general quality of production, there will have to be a substantial improvement in the level of process management. The current situation in many cases is one where it is not known which factors are out of control, because nothing is measured. Similarly, very few enterprises were observed to keep adequate records of process work with critical information recorded. This is exemplified by the low level of understanding of the processes involved in many cases and a failure to grasp the degree of “performance” that the customer may require from the finished article and how leather can contribute to this.

Weaknesses also exist in the level and quality of measurements taken for QC and QA functions in the industry. The indigenous Sri Lankan leathers and associated products are not currently achieving their potential commercially, largely due to poor processing techniques and lack of know-how and quality control. Therefore there is a definite need for a program establishing best practice techniques, reducing senseless manufacturing damage, boosting the value of the product whether or not the raw material can be improved with time. The managers of the larger enterprises are well aware of this and appear unable to tackle the production without outside assistance.

It was also found that as most of the machinery are out-dated and need replacement, as elaborated in the earlier section. A proposal to bring in second hand plant from Europe (which are more advanced than some of the manual operations now performed) as a cost-effective

option was suggested. In view of this a review of the effectiveness of all machinery should be undertaken to establish which plant needs updating in line with the potential increase in value of the industry.

Because of the size of the leather manufacturing sub-sector related to the capacities of some common mechanical operations, more than a handful of machines of some types in the country, would cause a massive over-provision of productive capacity. A consolidation of the sub-sector would seem to be the best way forward. Companies with common features can come together, each bringing complementary plant and skills to the union.

There will be no scope for most enterprises to attempt to do the full range of processing of either hide to leather or leather to goods. Most will not be able to afford to mechanize, so the focus must be on specialization and co-operation. Similar in style if not scale to the Italian model in the districts of Santa Croce and Arzignano, where one company will be specialist dyers, the next finishers, next embossers etc. The MID could perform a function facilitating the integration of complementary businesses, matching spare capacities with needs, similar to an industrial marriage bureau or "Small Business Bureau". The resulting partnerships will be more able to exploit opportunities, possibly merge thoroughly and present more solid business plans when it comes to applying for development loans. Alliances and partnerships, even take-overs will be the way forward for most small firms.

In order to verify the physical and chemical attributes of the product it would be helpful to set up a establishment, which could perform various testing procedures to international standards. As development of products worthy of the international markets is the ultimate aim, obtaining assistance of an outside agency for setting up such a standards accreditation process would be required.

It may be beneficial to have a formal audit performed in each tannery aimed at identifying the nature of the fundamental improvements possible in each case. This would have to be done on an individual basis or supported collectively through an organisation such as the tanner's association as SLAT. An international agency with expertise in leather processing and best practice methods could also be engaged for this purpose.

3.4 Manpower Development

The need for effective training in the areas of process control and related technical areas for all levels was clearly seen. Training is required to ensure that the manufacturing processes are correctly controlled. It requires that the people most directly involved with the job at hand know the critical aspects of the operation.

The level of on the job training is currently low. It is not sufficiently structured to provide a solid understanding of the level of metrology and QA necessary to perform the tasks consistently. For the industry to progress a more structured training approach will be required.

The current training courses available to shoemakers at the IDB are a good indication of the positive attitude of MID but the future demands a much more broad-brush approach, with more disciplines covered. There is much more scope for IDB involvement in this with perhaps a number of external partners to provide "train the trainer" assistance perhaps under contractual agreements, allowing the industry to take responsibility for itself.

Therefore it is essential to have a thorough review of all of the training activities in the sub-sector, and then to formulate a unified, coherent future training plan. The standards of training made available at all levels would have to be closely monitored for both quality and consistency. The aim must be to provide people with optimum performance capabilities, in the shortest practical time.

The IDB has set up a skilled development and Training Centre where technology transfer and upgrading is attempted on a small scale. A similar attempt should be made in the area of leather manufacture as well and all would gain from the quality improvements and technical advances achieved.

Establish a skill-centre for leather manufacture similar in concept to the one for the shoe manufacturers run by the IDB for the know-how and access to mechanised processing. The cost of training, imparted at this centre could be partially funded by selling production capacity on an hourly basis for the enterprises that do not have access to the machines in their own factories (but have had personnel trained in the use of the machines in the centre).

3.5 Environmental Protection

Protection of the environment is a high priority, sensitive issue in any leather making / leather using scenario. Currently the tanners of Colombo are preparing to move to a dedicated business park at Bata Atha in the south of the island as mentioned earlier. Until then there is a ceiling on the amount of raw material they can process. This facility at the implementation stage under a UNIDO project in association with NORAD, MID and SLAT, will be equipped with effluent treatment plant to modern design, capable of handling all of the critical pollutants, and treating the waste water from the processes to Central Environmental Agency satisfaction.

Other measures which should be investigated to reduce environmental impact on the sub-sector would be:

- Setting up a pilot plant for leather board at Bata Atha where all of the leather waste could be turned into a useful product which will not have to be imported by shoemakers. With the natural resource of latex resin in the country, it should be quite a cost-effective side activity for the industry.
- Another angle to consider would be a biogas plant at the Bata Atha site, which would provide fuel for heating water or generating power, reducing the running costs of the site.
- In relation to the level of waste associated with badly flayed and branded cattle, the prospect of hide-trimmings for dog-chew production should be investigated. This process is very simple, the most expensive phase usually being the drying. In Sri Lanka this can be organized cheaply under ambient conditions (as can be seen in other tropical countries) and the worst affected sections of hide which will not be suitable for manufacture in to articles, can be removed early in the process and dealt with by an alternative method. This will produce a product with commercial value instead of an environmental embarrassment, saving money in conversion to leather that would ultimately finish up as land-fill.

3.6 Financial and Institutional Arrangements

Government assistance of a direct financial nature should be carefully targeted at measures designed to help the industry to restructure itself. There will inevitably be a re-adjustment of the sector naturally depending on how the proposed measures are taken up by the sub-sector, this can be supported and encouraged by MID policy.

The assistance in financial terms that would be required to facilitate this forecast growth, would take three forms:

- Because so much of the materials input to the leather and footwear sector is imported, remove import tariff barriers for leather chemicals and specific processing machinery and tools.
- Provide easier access to loans of low interest long-term nature for improving existing factories. To be granted following the presentation of a sound business plan that shows good utilisation of plant and machinery purchased. Verify that any alliances included in the plan are firm and formal, before granting assistance.
- Provide easier access to venture capital for the true keen entrepreneurs, perhaps with support in terms of courses on how to formulate and present a business plan. Many of these people have the potential to become significant employers, but currently lack the ability to move out of their front rooms into dedicated factory space. Financial institutions also have shown a reticence in lending to companies involved in leather-related activities. It has been explained that the tanning sector has had an effective drought in ability to raise loans for development, but this seems to have been interpreted with a wider scope than first intended. If the intention of the Government is to promote growth in this sub-sector, it will be necessary to reverse the understanding of the institutions.

Inevitably, the business environment being dynamic in nature, sub-sector companies will be subject to commercial pressures. Takeovers, mergers and co-operative alliances must be accommodated as a natural part of the re-structuring process within the industry. It would be a benefit to all concerned if the level of bureaucracy in all of these aspects could be reduced to a practical minimum, providing the industry with an improved route to rationalization and rebirth. Under the auspices of the IDB, partnerships and co-operative links could be formed through a "Small Business Bureau" aimed at fitting abilities and capacities together with wants and needs. The resulting mutual support will provide stronger companies, better able to develop and grow.

Underpinning the whole financial support exercise, there would have to be a small business capital administration team to co-ordinate reception of proposals, investigation of the companies business plans and supporting claims for allocation of funds. Due to the modest size of the industry, it should only take a small team of people focused to do this, ensuring that risk is minimized and deserving plans only receive the support.

In order to overcome the problems of sourcing capital funds, some of the leather enterprises should go public. None of the leather enterprises large and medium are now quoted in the stock exchange except Korea Ceylon Footwear Manufacturing Co. and Bata Shoe Co. The leather sector could do well to go forward in this direction and vie for public support; for which purpose the larger companies should undertake re-structuring and modernization programs. Even mergers and takeovers amongst the medium and small units would be a step in the right direction.

4. ACTION PROGRAM (2000– 2004)

- (i) Set up a Joint Committee with MID, DAPH, SLEDB, SLAT participation to discuss implementation of raw hide improvement measures;
- (ii) DAPH to initiate a program for creating awareness in hide improvement and setting up a pilot abattoir;
- (iii) MID to set up the required institutional arrangements in consultation with the industry to organise the Small Business Bureau (SBB);
- (iv) Review and adjust import duties on selected key inputs to the sub-sector;
- (v) Review all organisations in the public sector offering training programs and facilities to the leather sector with a view to developing a coherent forward plan for training;
- (vi) Set up the organisational structure required to install the proposed the Skill Development and Coordination Agency;
- (vii) Enhance the capabilities of the IDB Leather Development Centre to accommodate the needs of the entire industry with private sector participation, diversifying its activities to include design and skill development, and demonstration facilities for improvement in QC and QA;
- (viii) Initiate an audit of the tannery sector with a view to ascertain requirements of the industry with regard to technical inputs and financial requirements for the relocation and modernisation program at the Bata Atha Complex;
- (ix) Set up an Advisory Panel to provide guidance for the forming of associations, partnerships and mergers that will be part of the restructuring and consolidation of the industry;
- (x) MID to interact with financial institutions to provide for the capital requirements of the industry. For this purpose set in place arrangements to support loan facilities and subsidized technical services from external agencies. S.B.B. to function as a catalyst in this program;
- (xi) The industry association to establish technical support centre with R&D facilities, measurement and testing facilities, and to foster attainment of standards associated with quality improvement;

- (xii) For the industry to move into the proposed niche market, the SLEDB in association with the industry to strengthen its market intelligence and export promotion program relating to leather products.

COMPONENTS OF THE LEATHER SECTOR

