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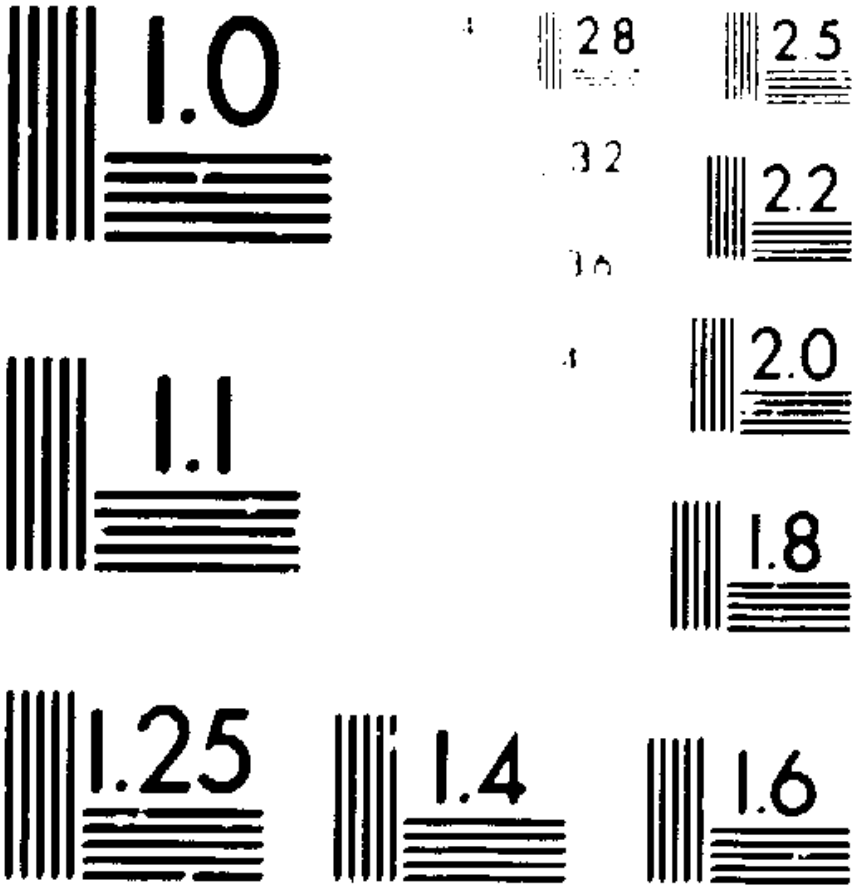

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Leather Products Industry

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THE PRESENT SITUATION, CONSTRAINTS AND PROSPECTS FOR THE LEATHER AND LEATHER PRODUCTS INDUSTRY IN SUDAN *

Background paper for issue no. 1

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the UNIDO secretariat

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I. INTRODUCTION

1. One of the issues to be raised at the Third Consultation on the Leather and Leather Products Industry is concerned with measures to maximize the potential of the leather and leather products industry in developing countries. Issue paper no.1[1/] observes that most developing countries have the capacity to process hides and skins into leather and to manufacture leather products, but that much of this capacity is underutilized in qualitative and quantitative terms. The need for international co-operation to support national integrated development programmes is stressed, particularly with a view to increase the utilization of existing capacities.

2. This background paper is intended to lend substance to the issue by drawing upon the experience of Sudan, as an illustration of the existing constraints and potential benefits from improving the utilization of available supplies of hides and skins and tanning capacities. This paper is based upon information contained in a paper prepared for the Consultation by the Government of Sudan, and on a report[2/] prepared by Dr. Salah-ed-din Saleh, in connection with a UNIDO technical assistance project in Sudan, currently under implementation.

3. Although no developing country can be considered as a "typical" case, since the industry in each country has its individual characteristics, it is hoped that the present background paper will reflect certain common problems found in the leather and leather products industry in several developing countries, and enhance discussions on solutions for these problems.

4. The paper elaborates on four aspects of the industry in Sudan:

(i) The current raw material situation;

(ii) Existing industrial capacities in the leather and leather products industry and their performance;

1/ See "Issue No. 1: Measures to maximize the potential of the leather and leather products industry in developing countries" (ID/WG.411/5).

2/ All statistical and factual information presented in this paper is drawn from the report "Increasing the effectiveness of the public sector industries, Democratic Republic of Sudan" (DP/SUD/79/010, Nov. 1983).

(iii) An indication of the economic benefits which could accrue to the country from increased recovery and industrial processing of the available raw materials;

(iv) Measures which could improve industrial performance in the sector.

II. THE CURRENT RAW MATERIAL SITUATION

Raw material

5. FAO estimates the following livestock availability and slaughter for Sudan in 1982: 3/

Table I: Sudan: Livestock availability

	Population (1000 heads)	% of total developing Africa	Estimated hides and skins production (potential recovery) (1000 pieces)	Offtake rates in % (calculated)
Cattle	19,234	11.8	1,300	6.7
Goat	13,174	9.0	3,500	26.6
Sheep	18,547	12.0	4,900	26.4

6. It is apparent that Sudan has one of the largest animal resource bases in Africa. Animal slaughter takes place in about 150 abattoirs which are spread over the country. However, the abattoirs vary in quality. Two slaughter houses, those in Omdurman and Kedro, are considered to be of good quality, exercising supervision over meat quality and producing good raw hides and skins. These two slaughter houses account for about 30 % of total slaughter. In general, the other slaughter houses produce hides and skins with substantial post-mortem defects. The major part of the annual slaughter occurs on village slabs, and is conducted by unskilled village butchers.

7. Inherently, Sudanese hides and skins are of good grain and fine texture. However, pre- and post-mortem defects are common, and these downgrade the

3/ Source: FAO Statistical Compendium for Raw Hides and Skins, Leather and Leather Footwear, 1961-1982.

value of the raw material. Pre-mortem defects occur due to the nomadicpattern of agriculture, and to deficient animal husbandry practises. Putrefaction through defective curing, preservation and storage, especially damages caused by drying the hides and skins on the ground directly under the sun, contribute to the post-mortem depreciation of the potential value of raw hides and skins. A Hides and Skins Improvement Centre is operating under the Animal Resources Section of the Ministry of Agriculture but it has had considerable difficulties in improving hides and skins quality due to a scarcity of funds.

8. At the infrastructural level, the very land mass of the country combined with poor communication present an obstacle to the recovery and transportation of agricultural raw materials. As a consequence, firstly, it is estimated that over 50 % of the currently produced hides and skins originate from the Khartoum, Omdurman, Blue Nile, Gezira and White Nile Provinces alone, while the large herd concentration in the south of the country remains largely untapped. Secondly, there is a concentration of the more efficient abattoirs in the Khartoum region, and cattle for slaughter from outlying areas are moved on the hoof to Khartoum for slaughter, with consequent deterioration of meat yields and the quality of animal by-products. Thirdly, there is no organized system for the improvement of animal husbandry and slaughter in outlying abattoirs, with a resultant defective quality of hides and skins originating from rural areas. Finally, the very low offtake of cattle hides suggests underlying socio-economic constraints in the country affecting the production and consumption of meat, these constraints need to be studied and possible remedies sought.

9. At the commercial level, the trade in hides and skins is dominated by a few traders who have their own collection networks, stores and depots throughout the country, and they control the raw material prices. These traders enjoy virtually no restrictions on exports of raw stock. This results in unfavourable price conditions for raw material producers. Cattle hides are marked up by 25 % over the producer price, at the level of the merchant, and by 56 % over producer prices at the level of the exporter. For sheepskins the respective markups by merchants and exporters are 75 % and 250 %, and for goatskins they are about 39 % and 60 %. In part, these markups reflect costs of recovery by long chains of private collection networks. The difference between mean export prices and mean producer prices may also be inflated since the better grades of hides and skins are exported. The mechanised tanneries do not have an equivalent raw material collecting network.

Table II: Sudan: Utilization of potential production of hides and skins *

Commodity / Utilization	Cattle hides (1000 pieces)	%	Goatskins (1000 pieces)	%	Sheepskins (1000 pieces)	%
Exported raw **	300	23	1,000	29	2,500	51
Processed by pub. sector tanneries	less than 200	15	50	1	250	5
Processed in rural tanneries or wasted	800	62	2,450	70	2,150	44
Total production	1,300	100	3,500	100	4,900	100

* Source: FAO and UNIDO information.

** Unofficial information provided to UNIDO suggests that exports of raw hides are about 250,000 pieces/yr in addition to the officially reported exports.

10. The figures in table II indicate the approximate quantities of the utilization of hides and skins under each head. While it is difficult to ascertain the exact numbers, it can be concluded that:

(i) About one quarter of the cattlehides and goatskins and over half the sheepskins produced in the country are exported in their raw state. Raw hides are exported in the wet salted, and skins in the dry condition;

(ii) Only a small portion of the raw materials is processed in mechanised tanneries; and

(iii) Rural processing and wastage of raw materials account for between one half and two thirds of available raw materials. There is no available breakdown between raw hides and skins used in rural tanning and absolute wastage. However, it is apparent that a large part of this share of raw materials is not utilised to its optimal levels.

III. EXISTING INDUSTRIAL CAPACITIES IN THE SECTOR

The tanning industry

11. Sudan has three large mechanized tanneries, which are owned by the Government. Two of these are located in Khartoum, and one in Wad Medani. In addition, a small joint venture plant is installed at Port Sudan, for the processing and export of pickled sheepskins. As already noted, numerous small scale rural tanneries operate throughout the country, but these are not considered of great potential, since they have limited capacities with rudimentary processing techniques.

12. Table III and IV summarize installed capacities and production levels and the main performance characteristics of the public sector tanneries:

Table III: Tanning capacities and production levels *

Industrial unit	Installed capacity (pieces/annum)	Actual production (pieces/annum)	Cap. utilization
Khartoum Tannery	Hides: 90,000	60,000	66%
	Skins: 450,000	100,000	22%
White Nile Tannery	Hides: 180,000	45,000	25%
	Skins: 600,000	53,000	9%
El Gezira Tannery	Hides: 300,000	60-90,000	20-30%
	Skins: 750,000	100-150,000	15-20%
Total above three	Hides: 570,000	165-195,000	30% (approx.)
	Skins: 1,800,000	253-303,000	15% (approx.)

* The figures for "actual production" are rounded averages for the years 1980-83. In the case of the El Gezira Tannery, the fluctuation in production was too great to yield a meaningful average, hence ranges of production are indicated.

Table IV: Performance characteristics of public sector tanneries

Plant	Installed capacity (pieces/ annum)	Average cap.uti-lization	Total employ-ment	Labour productivity direct	Labour productivity total	Overhead/ production cost ratio*	Wage/ prod. cost ratio
Khartoum Tannery (1962)	90,000 hides 450,000 skins	66% 22%	470 persons	3.5ft^2/ hr	2.5ft^2/ hr	24%	36%
White Nile Tannery (1975)	180,000 hides 600,000 skins	25% 9%	338 persons	3.5ft^2/ hr	2.7ft^2/ hr	37.4%	37%
El Gezira Tannery (1976)	300,000 hides 750,000 skins	20-30% 15-20%	452 persons	3.2ft^2/ hr	2.5ft^2/ hr	16.7%	37%

* The overhead/production costs express costs of administration, depreciation on plant, interest payments on outstanding debt and "industrial costs", as a percentage of total costs.

13. The tanneries have been operating at low capacity utilization levels despite the fact that there seems to be considerable theoretical know-how in terms of trained personnel, and a part of the equipment installed in the tanneries is fairly modern. There are several reasons for the low capacity utilization, the most important being:

- An absence of shopfloor process management, which causes processing to be substandard;
- An absence of efficient machine maintenance, which has caused the equipment to be run down and/or used for the supply of spare parts for other equipment;
- A lack of marketing know-how for both domestic and export markets for both leather and tannery by-products;
- An inadequate infrastructure of the industry, especially with regard to the provision of raw hides and power, shortages of which have caused the industry to loose an average of sixty working days per plant per year, a deadloss in an already difficult situation;
- Financial difficulties caused by three constraints:

(i) The price structure for finished leather sold on the domestic market has been fixed by the government at a level which is less than the production costs for tanneries. In part the excess of production costs reflect unnecessarily high overheads and wages costs in all three tanneries, but in part it is a result of escalation in the prices of chemicals and other inputs, over which neither the tanneries nor the government can exercise any control. Given the present cost structure, the tanneries face financial disincentive for production for domestic markets, if profitability criteria are employed.

(ii) The employment levels, especially of indirect labour are excessively high, and this causes an equivalently high share of the wage bill in the tanneries' production costs. In the industrialized countries, for example, the share of the wage bill in production costs is not more than 10-15%.

(iii) The tanneries' situation with regard to outstanding bank credit further inflates production costs. The accumulated debt amounts to about 130 % of annual sales for the Khartoum Tannery and the White Nile Tannery. The accumulated debts for the El Gezira Tannery was not reported, but the situation here is not quite as acute as in the former case. In addition to resorting to bank borrowing to cover operating losses all the tanneries have to rely on commercial bank credit for working capital. Given the high wage bills of the tanneries, it is presumed that this aggravates the losses incurred.

The footwear sector

14. There are 29 officially registered shoe factories, which utilize various types of leather. The largest factory is the BATA Shoe Company, which operates as a joint venture between the government and BATA International.

15. Footwear manufacturing has been estimated at 16-18 million pairs/annum, broken down as follows:

Leather footwear	5-6 million pairs
Plastic shoes/sandals	5 million pairs
Canvas/rubber shoes	4 million pairs
Others	2-3 million pairs.

16. The BATA factory and the locally owned Larco Shoe Company are the only ones which operate industrial plants. All the other shoe manufacturing units are small scale units and are operated by rather inexperienced personnel. In addition to these 29 factories, there are numerous artisanal shoe makers and rural cobblers making simple shoes and sandals. The footwear industry is

entirely oriented to supplying the domestic market. A shortage of good quality upper leathers limits the quality of leather products to a low level. The incapability of tanneries to deliver sufficient quantities of any type of finished leather has forced the footwear industry to import leather substitutes in order to satisfy domestic market demand. Hence, any major development of the leather footwear sector should be undertaken only after the tanning industry is in a position to produce and supply sufficient quantities and quality of upper leather.

The leather goods sector

17. There are several small leather goods manufacturing units in the Khartoum-Omdurman area. However, these units produce at a primitive level, utilizing crocodile, snake and lizard skins, and to some extent, finished leather from sheep- and goatskins. There is no data available on production, types, articles, capacities and production costs of this sector.

Summary of the overall situation in Sudan

18. To summarize the overall situation in the country:

(i) The cattle population is a significant percentage of that of Africa. However, cattle offtake rates are considerably below those of Africa as a whole. The offtake rates for sheep and goat are also slightly below the African averages.

(ii) Much of the production of hides and skins are exported in the raw state.

(iii) Existing industrial processing capacity in tanning can transform about 45 % of available hides and about 20 % of available skins into leather. However, due to low capacity utilization rates, only about 15 % of available hides and 1-5 % of available skins are processed by the mechanized tanneries.

(iv) Industrial capacity in the manufacture of footwear is considerable, but it is constrained by the shortage of good quality upper leather in the domestic market. Consequently, it has had to rely partly on imported leather substitute materials to meet some of the domestic footwear demand.

19. It is clear that the main bottleneck for the development of the sector lies in the tanning industry. Before discussing possible remedies to the situation in the tanning industry, it may be useful to evaluate the potential benefits from enhanced tanning of hides and skins.

IV. POTENTIAL BENEFITS TO THE COUNTRY FROM INCREASED INDUSTRIAL PROCESSING

20. Table V presents a comparison of current offtake rates in Sudan and the rest of the world. It can be seen that Sudan's cattle hide offtake is about 35 % lower than that of the African average, for goat- and sheepskins it is 14 % and 13 % below the respective African average rates.

Table V: Comparative offtake rates of hides and skins (%) *

	World	Developed countries	Developing countries	Developing Africa	Sudan
Cattle	20.6	34.5	14.1	10.4	6.7
Goat	41.1	58.0	40.2	30.8	26.6
Sheep	38.6	42.0	35.7	30.2	26.4

* Source: FAO World Statistical Compendium for Raw Hides and Skins, Leather and Leather Footwear 1961-82.

Cattle hides

21. In order to obtain crude estimates of the gross benefits to the economy of Sudan from improving the situation in the sector, this paper makes a hypothetical calculation of the value at average annual dollar prices[4/] for 1982-83, of the utilized hides, should Sudan reach just the average African offtake rates. It is felt that with a co-ordinated effort the achievement of African offtake rates is a realistic target achievable over the not too distant future.

22. In order to make this calculation, the ensuing argument rests on the following assumptions:

(i) That cattle offtake increases from the present offtake of 6.7 % to the African average of 10.4 %. This would provide approximately 700,000 hides per annum in addition to the current availability.

4/ The rate of exchange applied is US$ 1.00 = £S 1.28.

(ii) Of the increased availability, 200,000 hides could be industrially processed to the wetblue stage to reach the tanneries' breakeven point, which is estimated at 70 % of capacity utilization, the balance (500,000 pieces/annum) would be available for export in the dry salted state.

(iii) That prices for the domestic market are approximately equal to those of the export market.

23. Under these assumptions, the valorization of the additional 700,000 hides available annually would be:

Table VI: Returns from processing 200,000 hides/annum

Gross returns/unit		Total returns/annum
Primary producer:	$ 5.62/piece	$ 1,124,000
Merchants (middlemen):	$ 1.40/piece	$ 280,000
Tanneries:	$ 8.92/piece	$ 1,784,000
Customs, taxes + transportation:	$ 5.31/piece	$ 1,062,000
Total: (FOB revenue)	$ 21.25/piece	$ 4,250,000

24. Similarly, the valorization of hides exported in the raw state would be:

Table VII: Returns form exporting 500,000 hides/annum (dry salted state)

Gross returns/unit		Total returns/annum
Primary producer:	$ 5.62/piece	$ 2,810,000
Merchants (middlemen):	$ 1.40/piece	$ 700,000
Exporters:	$ 1.76/piece	$ 880,000
Customs, taxes + transportation:	$ 2.93/piece	$ 1,465,000
Total: (FOB revenue)	$ 11.71/piece	$ 5,855,000

25. From tables VI and VII it can be seen that the gross potential benefit to Sudan from increasing its cattlehide offtake to the African average could be as much as US$ 10,105,000.

Goat- and sheepskins

26. The situation with regard to goat- and sheepskins offtake rates is not quite as acute as that of cattlehides. Yet, theoretical gross benefit calculations can be made on the following assumptions:

(i) That tanneries process an additional 950,000 skins/year, in order to achieve a 70 % utilization level;

(ii) That these quantities of goat- and sheepskins are obtainable through improved offtake and/or reduced wastage;

(iii) A ratio of 600,000 goatskins and 350,000 sheepskins is established, for purpose of ensuing calculation.

27. The calculations are made on two assumptions. The first alternative looks at the gross benefit if the above-mentioned quantity of skins would be exported in the wet blue state as opposed to being exported in the raw state. The second alternative evaluates the gross benefits on the assumption that the additional tanned skins are drawn from that part of total offtake that is wasted.

28. Under the first alternative, at current prices, the price difference between raw and wet blue skins is US$ 1.00/piece for goatskins and US$ 1.75/piece for sheepskins. If the previously specified quantity of skins were to be exported in the wetblue state, the gross benefit resulting would be US$ 1,212,000/annum.

29. Under the second alternative, the processing of wasted skins and the gross benefits would be as follows:

Table VIII: Gross benefits from tanning 950,000 wasted skins

	Goatskins (600,000/annum)		Sheepskins (350,000/annum)	
	Gross returns/unit	Total returns/ annum	Gross returns/unit	Total returns/ annum
Primary producer	$ 0.70/piece	$ 420,000	$ 0.75/piece	$ 262,500
Merchant	$ 0.27/piece	$ 162,000	$ 0.59/piece	$ 206,500
Tanneries	$ 0.91/piece	$ 546,000	$ 2.00/piece	$ 700,000
Customs etc.	$ 0.62/piece	$ 372,000	$ 1.13/piece	$ 395,500
FOB revenue	$ 2.5/piece	$1,500,000	$ 4.5/piece	$1,564,500

Gross revenue: Goat- and sheepskins = $3,064,500

30. The conclusions are self evident. If Sudan were to improve cattlehide offtake, and utilize the existing tanneries at their breakeven point, it would earn an additional gross revenue from the sector of as much as US$ 13,2 million/annum, of which $ 10.1 million could accrue from cattle hides and $ 3.1 million from goat- and sheepskins.

V. MEASURES TO IMPROVE THE PERFORMANCE OF THE SECTOR

Hides and skins

31. It is possible that a combined reactivation of the hides and skins collection and improvement activity as well as industrial revitalization would create greater demand in the rural economy. Conditions of greater competition may enhance producer prices, thereby ensuring greater economic return to the primary producer. The government would, of necessity, have to participate in the creation of the collection infrastructure by establishing collection depots, drying sheds, etc., as well as providing hides and skins improvement extension services. A further consequence of the present structure of internal trade in hides and skins is that the traders and exporters usually

have the choice of the better grades of raw material, leaving inferior qualities for domestic utilization. A more healthy tanning industry in the country may sustain the domestic processing of better grades of hides and skins.

32. These observations suggest the following areas for action:

(i) In the short run, there is a need to improve flaying practises in existing abattoirs in the rural areas;

(ii) Over the medium run, a carefully studied effort needs to be made for development of abattoirs in areas of high cattle population density, and in the establishment of a network of collection and preservation facilities for hides and skins;

(iii) An active programme geared to improve animal husbandry and livestock quality would yield long term benefits.

33. The financial resources for these actions would have to come from grants or long term concessional agricultural lending, since they primarily involve technical assistance activity to be undertaken on the part of the government, or they encompass investment in the basic infrastructure of the agricultural economy.

The tanning industry

34. Section III briefly reviews the installed tanning capacity and its utilization. This situation of low capacity utilization is a reflection of financial, technical, managerial and infrastructural constraints operating on the industrial units.

35. Measures to overcome these constraints will have to be discussed by potential collaborators, with the authorities concerned. However, for purposes of present discussion, some strategic areas for action may be identified. These may lead the way to an integrated rehabilitation programme for the leather and leather products industry in Sudan. These areas are as follows:

(a) The financial solvency of the tanneries needs to be re-established by rescheduling outstanding debts on a lower interest, long term basis;

(b) Technical machine balancing and machine repair needs to be undertaken;

(c) Provisions should be made to install stand-by electric generators in the plant, to avoid work flow interruptions due to power supply fluctuations;

(d) There is a need to secure the supply of long term capital for importation of chemicals and auxiliaries;

(e) A broad based co-operation at technical and managerial levels needs to be established to enhance human skills, tannery utilization levels and quality control standards.

36. It is concluded that with the appropriate governmental investment in the upstream infrastructure, and the operation of tanneries on an economically viable basis, the leather and leather products industry could contribute significant returns to the Sudanese economy.

VI. CONCLUSION

37. This paper has attempted to indicate the upstream and industrial constraints which inhibit the realization of a country's potential in the leather and leather products industry. Should the Consultation feel that a comprehensive sectoral development approach to the leather and leather products industry is feasible, UNIDO could support sectoral development programmes by assisting programme formulation and associated negotiations between individual developing countries and potential partners in co-operation.