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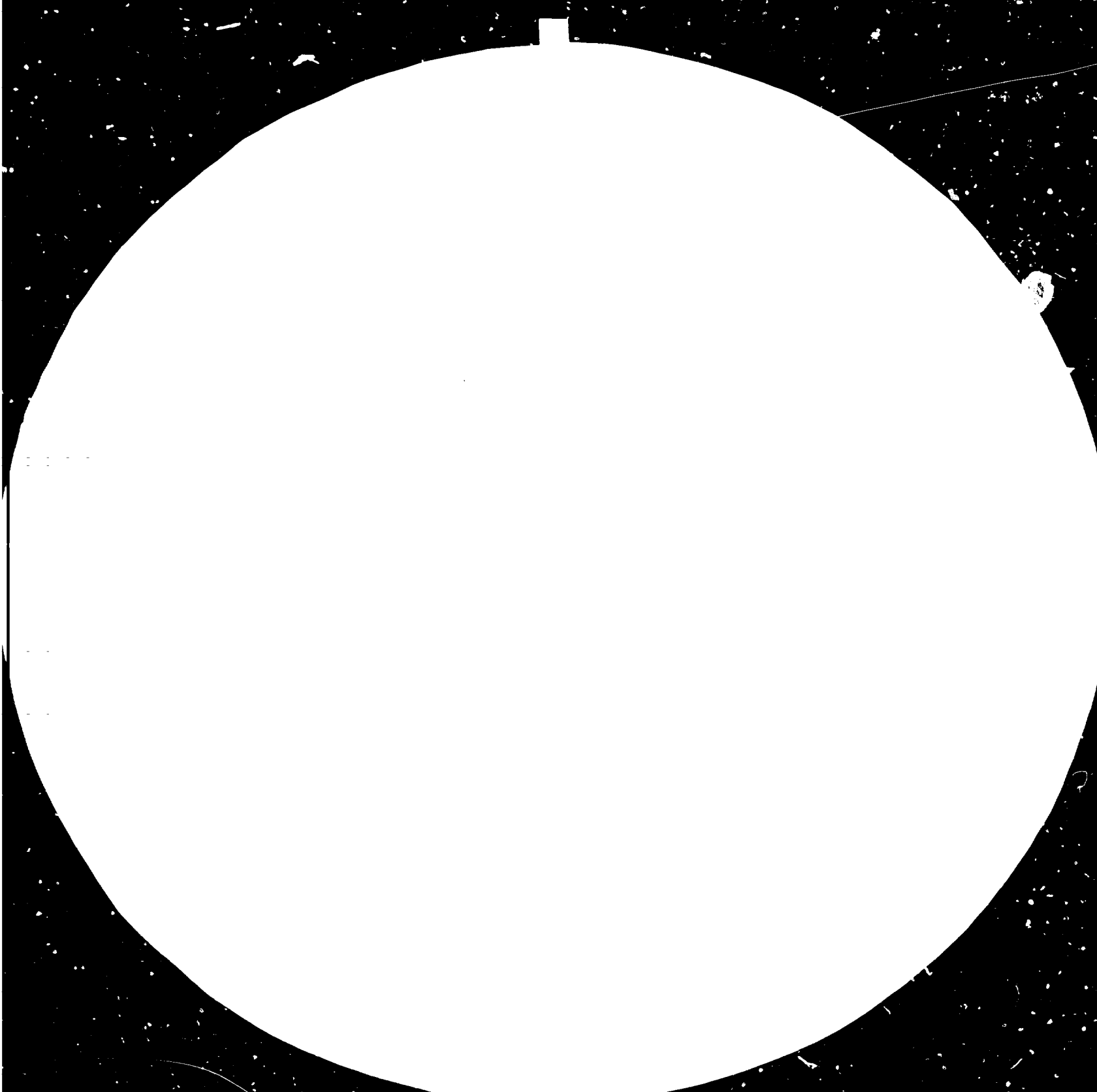

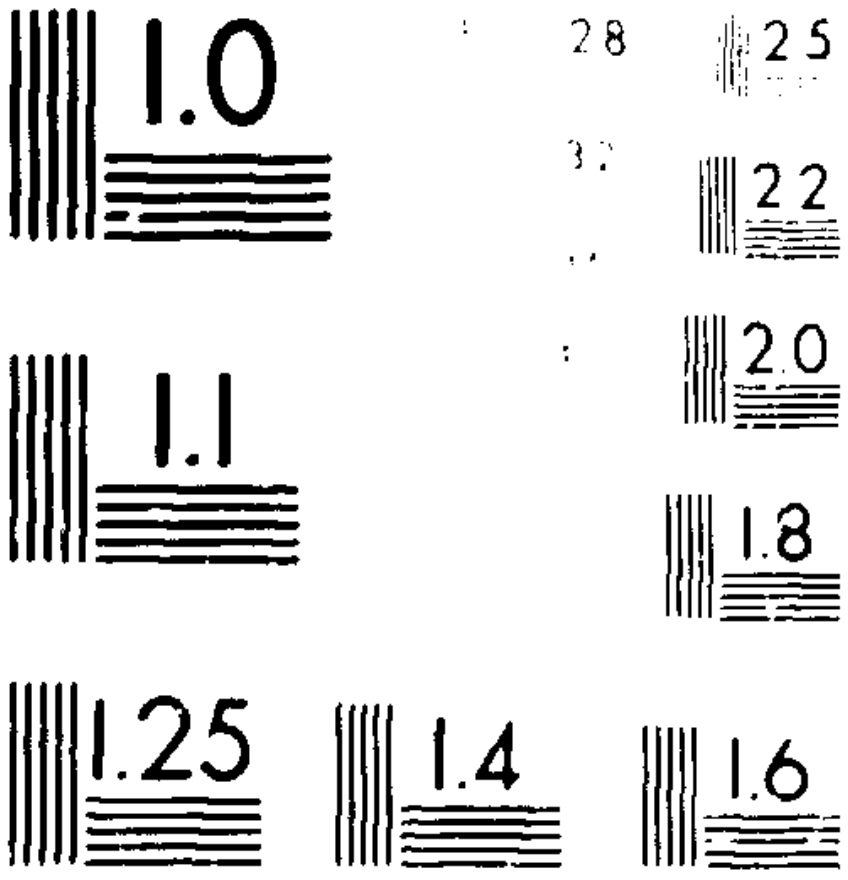
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REGIONAL SURVEY ON ASIA *

by

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CONTENTS

INTRODUCTION

1. Asia is perhaps the most diverse continent in the world. In a survey of any region of the world, cognizance has to be taken of the raw material resources existing in this region compared to the world resources and the exploitation of this raw material to its logical end. With a large human and livestock population, Asia's general scope for expansion of livestock and the production of hides and skins is negligible. Different ethnic and religious groups place social constraints in many parts of the region, which affect productivity in the off-take of the raw material from either slaughtered or fallen animals. In many parts of Asia the skin of the animal is eaten with the meat, consequently it is not available for tanning.

2. In the leather industry, the logical end of utilization of raw material is in ultimate manufacture of leather footwear or leather products. As data on leather products is limited, the conclusion of the present survey have been restricted on to potential leather and footwear production. The export and import figures of hides and skins, leather and footwear have been analysed wherever available, to draw conclusions as to which countries of Asia still have residual raw material resources that have not been tapped for either higher manufacturing value added production or for exports.

3. The tanning, footwear and leather products industries in the majority of the Asian countries are still in the small scale sector and in the case of the Indian sub-continent, most of the activity involved lies in the decentralised cottage scale sector. Available official data, therefore, in many instances suffers from a lack of a methodology for collection of dispersed data by the countries concerned. The availability of such data even if it were not totally accurate, would certainly help in projecting the trends in the industry.

4. There is a necessity for selected countrywise studies by experts in each identified country who could present a profile of that country's leather industry under the following headings:

(a) Total livestock population in terms of cattle, sheep and goat;

(b) Total hides available in terms of slaughtered and fallen animals;

(c) The availability of tanning chemicals and leather auxiliaries;

(d) The total installed tanning capacity and its utilization in terms of:

(i) vegetable tanning
(ii) chrome tanning.

(e) Production capacity for leather products broken down in terms of:

(i) footwear and components
(ii) leather garments
(iii) leather goods.

(f) The percentage utilization of installed capacity unit-wise or industry-wise;

(g) Reasons for under utilization:

(i) lack of raw material
(ii) lack of finance
(iii) constraints on obtaining imported chemicals, finishing auxiliaries and machinery spares due to shortage of foreign exchange.

(h) Needs for know-how;

(i) Need for improvements in management.

5. Only if answers to the above questions can be obtained in detail can justice be done at the unit level for making viability studies. Such a study would necessarily focus on the number of tanneries and shoe or leather goods units in existence in a particular country of Asia. The scope for further improvement of these tanneries with international co-operation could be assessed, and the needs for balancing and modernization of existing capacities, or creation of additional capacities could be subject to a cost-benefit evaluation.

6. The present paper reviews the overall situation in Asia, with the objective of being able to identify the countries in the region where international co-operation could result in mutual benefits for both the developed and the developing country.

PART I: TRENDS IN PRODUCTION AND TRADE

Hides and skins

7. There has been a substantial change in global trade flows of hides and skins over the last 25 years. Massive exports of raw material by developing

countries have ended. Until 1978, South America and South Asia were the largest raw material exporting areas, but now they fully utilize their indigenous hides and skins, at least to the level of leather. In addition, the transformation of domestically processed leather into leather products is increasing.

8. Projections of future trade in hides and skins foresee little change, since

(a) world production in the major types of raw material will increase only modestly;

(b) developing countries with significant raw material supplies completed the transition to domestic utilization. Tanning capacity in most of these countries is often greater than available hide and skin supply within the country or in contiguous areas.

9. In summary, some of the developing regions of the world once regarded as major surplus producing and exporting areas have completed the transition to internal utilization of hides and skins. This is especially true of South and South East Asia and China.

10. The years 1977 to 1982 have seen more and more of raw material resources of Asian countries converted into finished leather and leather products and also into components such as shoe uppers etc., for export. In some instances the trade pattern has radically changed, with hide producing countries who were previously net exporters of raw materials becoming net importers of raw materials.

11. Table 1 shows that Asia possesses 37.3 % of the world's cattle population, 31.5 % of the world's sheep population and 60.8 % of the world's goat and kid population. It must be noted that numbers of slaughtered animals, per se, cannot be equated with hide or skin production. The most glaring example of this is found in India, where cattle are not bred or raised for meat, but are a unique socio-religious institution. Bovine hides and skins are almost entirely obtained from fallen animals with mortality due to natural causes (age), disease and starvation. Consequently the ratio of bovine hides and skins produced to animal number is approximately 10 % as compared with off-take rates of 35-40 % from beef herds in developed countries.

Table 1: Ratio of slaughter to livestock numbers in Asia in 1982 *

(million heads)

BOVINE	Numbers	Slaughter	Percentage
World	1348.5	275.2	20.4
Asia Market Economies	420.6	59.8	11.8
Asia CPE	82.7	12.9	15.6
Asia Total	503.3	72.7	14.4
%share of Asia	37.3	26.4	
SHEEP AND LAMB			
World	1157.7	434.8	37.6
Asia Market Economies	244.1	117.1	48.0
Asia CPE	124.5	31.4	25.2
Asia Total	368.6	148.5	40.3
%share of Asia	31.8	34.2	
GOAT AND KIDS			
World	472.8	191.7	40.5
Asia Market Economies	203.8	100.8	49.5
Asia CPE	83.5	25.6	30.7
Asia Total	287.3	126.4	44.0
%share of Asia	60.8	65.9	
PIGS (Figures available for 1977 only)			
World	613	601.5	98.1
Asia	22	30.0	136.4
Asia CPE	185	120.0	64.9
Asia Total	207	150.0	72.5
%share of Asia	33.8	24.9	

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

12. Of the world's population of 150 million buffaloes, 95 % are in Asia of which 76 % are in South East Asia. Since it is considered that buffaloes are better suited as draft animals for small scale agriculture, they are retained as long as they can provide energy for a plough or cart, and the off-take rate is extremely low.

13. Appraisal of the world sheep and goat stock does not involve problems of the same order as the cattle population. There is wide dispersion of the existing herds among small producers, farmers and family units. Sheep are raised for meat and wool and production trends of sheep- and goatskins may be affected by the demand for, and the prices of meat and wool. Production of goats is far less dependent on meat since most goats are raised for family subsistence.

14. While sheep are efficient converters of grass to animal protein and are not crop destructive, they require more care and attention than any other livestock species. Goats, on the other hand, are born with a survival instinct, but are inimical to virtually all vegetation or foliage. Government policy in India, for example, has sought to discourage goat breeding because these animals, unless confined, denude land and forests.

15. Pigs are becoming a quantitatively important and cheap source of world raw material supply and the raw material potential of the world's population of 650 million pigs cannot be ignored.

16. Cattle hides are the major raw material of the leather Industry and represent 70 % of its output. Sheep and goat skins comprise most of the balance. Pig skins provide a supply potential which is still far from being utilized. Cattle hide supply has been and remains the most vital issue to the leather and leather products industries. Cattle herds and sheep flocks in the developed regions plus South America represent 62 % of the world's raw material resources for production of leather.

17. In most developing areas other than South America, livestock productivity in terms of hide and skin yield is extremely low in comparison with output in developed countries. Shortcomings in animal husbandry, slaughter methods and recovery from fallen animals are responsible for this.

18. Prospects for supply growth are dim owing to lack of adequate pastureland (which is a pre-requisite to cattle production) shortage of animal feed and fodder, non-productive and primitive methods of animal husbandry and the rising contention of human food and animal feed for arable land. It may be mentioned here that minor changes in sheep and goat numbers will not affect the basic leather supply equation.

19. Hope for the future rests mainly on improvement and more effective use of existing resources, including better methods of raising livestock, of flaying, curing, recovery, storing and transport of hides and skins. Only then would potential supply of hides and skins be translated into effective supply. Unless this primary task is undertaken and accomplished, development objectives aimed at leather and leather products output have reached practical limits.

General production trends - area wise

20. Comparison of leather production in developing regions over a ten year period shows extreme concentration both in regional output and the recorded increase.

Table 2: Comparisons in potential production of leather, 1970-82 *

Year Commodity region	1970 (mnft^2)	% share of world production	1982 (est) (mnft^2)	% share of world production	Average annual growth rate (%)
BOVINE LIGHT LEATHER					
All developing regions	2413.3	38.0	3535.1	43.6	3.9
Latin America	991.6	15.6	1491.3	18.4	4.2
Far East	821.8	12.9	1217.3	15.0	4.0
SHEEP AND GOAT LEATHER					
All developing regions	929.3	30.4	1353.6	42.1	3.8
Latin America	124.5	4.4	176.4	5.5	3.5
Far East	398.2	14.4	568.5	17.7	3.6
TOTAL LIGHT LEATHER					
All developing regions	3342.6	36.3	4888.7	43.2	3.8
Latin America	1116.1	12.1	1667.7	14.7	4.1
Far East	1220.0	13.3	1785.8	15.8	3.9

* Source: FAO, op.cit.

21. In light bovine leather, Latin America and the Far East accounted for about 80 % of increased potential of the entire group of developing countries, and about 50 % of the gain in potential production sheep and goat leather. Estimates of UNIDO country consultants indicate an even greater relative gain in Latin America and the Far East. The ensuing paragraphs sketch some of the main subregional trends in Asia.

Near East

22. Although the region has a long tradition of artisanal skill in leather manufacture, development has been inhibited by inadequate raw material, lack of transportation from raw material sources to tanning centres and the absence of supporting crafts or industries.

23. A number of comparatively modern tanneries serve domestic requirements, and must import part of their raw material needs for that purpose. For example, tanneries and sheep skin processing plants in Iran absorb almost all of the country's hide and skin supply. As pickled sheep skins are a major export item, largely to garment leather tanneries in Western Europe and the United States, it is very unlikely that pickled skin exports will be supplanted by tanned or finished leather because buyer requirements are too varied and specific to the end use.

24. Iran's sheep flock mainly composed of hair sheep is the third largest in the world. Skins from this crossbreed are more finely textured than woolled sheep and are highly valued for garment leather, more so because of its convenient size of around 8 sq.ft. per piece.

Far East

25. India, the main producer, prohibits the export of raw hides and skins and annually processes approximately 31 million cattle and buffalo hides, 23 million sheep skins and 50 million goatsksins to "finished" leather for domestic consumption and exports. The cottage industry and large scale modern tanning are interlocked in a unique relationship.

26. The tanning industries of Pakistan and Bangladesh are smaller versions of the Indian st ucture with similar restrictions on raw material exports and a blend of cottage scale and modern plants. Available hide and skin supply in both countries is fully utilized. Exports absorb the better grades of leather, both rough-tanned and finished, and are the major objective of government support.

27. In the Philippines and Indonesia, leather production utilizes all the available domestic raw material supply. The growth of raw materials supply has been outstripped by rapid expansion of tanning capacity. The supply problem is particularly acute in the Philippines, where livestock numbers are extremely low in ratio to population. Thailand has moved progressively since 1970 from the export of raw hides and skins to production of wet blue, crust and finished leather. Here, too, however, domestic supply falls short of rated tanning capacity by a wide margin, a condition aggravated by conditions in former adjacent import sources, the Lao People's Democratic Republic, Democratic Kampuchea and Burma.

28. The Republic of Korea and the Taiwan Province of China are anomalies to the general development trend in the region since domestic raw material supply in both of them is scant, and the leather industry depends almost entirely on imported hides. With respect to the Republic of Korea, it has been reported that there is capacity to process over 7 million hides a year, but this level has never been reached and at present high raw material prices and depressed market conditions are forcing the tanneries to run at about 60 % of their capacity.

29. Most of the Korean and Taiwanese leather output is consumed in the production of shoes, garments and leather goods for export. Reports from the Republic of Korea in June 1978 highlight the problems to which leather and leather products industries are exposed in the absence of a domestic raw material base.

People's Republic of China

30. The major obstacle to an extraordinary expansion of leather output in China is the ubiquitous problem of raw material supply. Existing tanneries consume all the available hide and skin supply with the exception of small exports of goat skins. Plants are mechanized, although lacking more recently developed refinements and innovations. Foreign machines are often used as models and duplicated in China.

31. Chemical and technical expertise is first-rate and ancillary industries produce almost all the tanning materials, chemicals and supplies required by the tanneries. Hide and skins supply in China, in ratio to population, is probably the lowest in the world.

32. Cattlehides are small, about 20 sq.ft. or half the size of hides in West Europe or North America and the quality is poor. The conditions of sheep and goat skins are superior to hides but pig skins show grain damage and butcher's defects. Due to the volume of demand, the developments in China's markets are a matter of intense interest for the global leather industry, due to the impact they may have on global trade in this sector.

Asia: Production and trade trends

Hides and skins

33. Table 3 shows the production of hides and skins in Asia in relation to that of the world. Whilst Asia has over 36 % of the world's livestock population, due to low productivity the hide yield (in pieces) is only around 26 %. In respect of sheep and lamb skins as well as goat and kid skins, Asia's share of available skins is around 34 % and 65 %, respectively. It would therefore not be out of place to say that any international co-operation should first look at the better utilization of the available goat and sheep skins.

34. Table 4 shows the world production of leather and Asia's share as a percentage of the total world production. The region's share in world production of heavy leather made out of bovine hides is 26.8 % and for light leather out of bovine hides it is 23.3 %. On the other hand, Asia's share of goat and sheep skin leather is 31 % or nearly a third of the world's production of this commodity. The total quantitative production of leather in terms of area is approximately 2885.5 million sq.ft. which presents a good base for the production of leather footwear, leather garments and leather products. Tables 5 and 6 present the exports of hides and skins in terms of value and volume. It is quite apparent from these figures that Asia, though hardly exporting any bovine raw material, is till a substantial exporter to the world of goat and kid skins and also, to an extent, sheep skins.

Table 3: Production of hides and skins

1977-1982*

(In million pieces)

BOVINE	1977	1978	1979	1980	1981 (PREL)	1982 (EST.)
World	282.0	282.2	274.0	271.2	275.2	275.2
Asia	55.5	56.6	57.7	59.1	60.4	59.8
Asia CPE	11.4	11.9	12.4	12.3	12.9	12.9
Asia Total	66.9	68.5	70.1	71.4	73.3	72.7
Asia as % of world	23.7	24.2	25.6	26.3	26.6	26.4
SHEEP & LAMBSKINS						
World	403.6	413.4	415.1	432.4	441.1	434.8
Asia	104.0	107.7	114.2	116.5	120.1	117.1
Asia CPE	29.7	30.8	30.9	31.2	31.5	31.4
Asia Total	133.7	138.5	145.1	147.7	151.6	148.5
Asia as % of world	33.1	33.5	34.9	34.2	34.4	34.2
GOAT & KID SKINS						
World	173.2	181.2	185.1	187.4	193.5	191.7
Asia	89.8	94.6	97.1	98.8	102.5	100.8
Asia CPE	22.3	23.1	23.6	24.8	25.2	25.6
Asia Total	112.1	117.7	120.7	123.6	127.7	126.4
Asia as % of world	64.7	64.9	65.2	65.9	66.0	65.9

* Source: FAO, op.cit

Table 4: Production of leather*

	1977	1978	1979	1980	1981 (PREL)	1982 (EST)
BOVINE - Heavy Leather - Thousand tons						
World	544.3	550.9	575.8	504.3	505.5	496.6
Asia	102.6	99.6	94.2	95.9	98.0	95.5
Asian CPE	36.2	36.0	36.2	37.4	36.9	37.8
Asia Total	138.8	135.6	130.4	133.3	134.9	133.3
Asia as % of world	25.5	24.6	25.3	26.4	26.7	26.8
BOVINE - Light Leather - Million Square Feet						
World	7894.6	8247.7	8193.8	7862.2	8078.9	8102.1
Asia	1404.8	1436.9	1383.1	1397.2	1454.8	1456.5
Asian CPE	350.0	392.6	390.9	426.1	422.5	432.0
Asia Total	1754.8	1829.5	1774.0	1823.3	1877.3	1888.5
Asia as % of world	22.2	22.2	21.7	23.2	23.2	23.3
SHEEP & GOATS - Light leather - Million square feet						
World	2974.8	3106.5	3202.3	3033.3	3128.6	3245.1
Asia	733.3	770.0	783.4	810.8	817.9	812.0
Asian CPE	178.6	179.3	173.7	184.1	184.0	185.0
Asia Total	911.9	949.3	957.1	994.9	1001.9	997.0
Asia as % of world	30.7	30.6	29.9	32.8	32.0	31.0

* Source: FAO, op.cit

Table 5: Exports - Hides and skins

1977-82 (Value)*

(In million U.S. $)

BOVINE	1977	1978	1979	1980	1981 (PREL)	1982 (EST)
World	1508.4	1862.1	2761.8	1930.1	1785.3	1934.6
Near East	19.1	13.8	11.5	11.4	12.0	11.7
Far East	20.6	24.2	36.3	25.7	22.6	21.8
Asian CPE *	1.6	2.0	3.5	2.8	2.7	1.3
Asia's %share of world	2.7	2.1	1.9	2.1	2.1	1.8

* Primarily Mongolia

SHEEP & LAMBSKINS						
World	420.4	434.0	513.9	535.5	405.4	346.2
Near East	55.7	56.4	63.6	54.1	52.2	49.4
Far East	2.7	3.1	3.5	4.3	4.7	2.2
Asian CPE	-	-	-	-	-	-
Asia Total	58.4	59.5	67.1	58.4	56.9	51.6
Asia's %share of world	13.9	13.7	13.1	10.9	14.0	14.9

GOAT & KID SKINS						
World	102.3	122.3	168.4	128.7	134.6	128.7
Near East	45.5	48.9	58.3	43.0	44.0	39.0
Far East	8.3	9.3	13.0	11.7	10.8	10.3
Asian CPE	10.0	13.3	21.0	19.5	24.0	28.0
Asia Total	63.8	71.5	92.3	74.2	78.8	77.3
Asia's %share of world	62.4	58.5	54.8	57.7	58.5	60.1

* Source: FAO, op.cit

Table 6: Exports - Hides and skins (Volume)*

(Thousand tons)

BOVINE Wet salted weight	1977	1978	1979	1980	1981 (PREL)	1982 (EST)
World	1606.5	1672.7	1611.4	1486.7	1592.2	1593.1
Asia	48.1	38.5	36.2	36.7	36.9	36.1
Asian CPE	2.1	2.2	2.3	2.4	2.4	1.8
Asia Total	50.2	40.7	38.5	39.1	39.3	37.9
Asia's %share of world	3.1	2.4	2.4	2.6	2.5	2.4
SHEEPSKINS AND LAMBSKINS - Dry weight						
World	156.5	151.9	151.4	153.9	159.8	155.8
Asia	34.3	34.2	31.3	29.8	28.3	25.2
Asian CPE	0.3	0.3	0.4	0.4	0.4	0.3
Asia's %share of world	22.1	22.7	20.9	19.6	18.0	16.4
GOATSKINS AND KID SKINS - Dry weight						
World	30.2	33.7	34.8	29.8	31.9	28.9
Asia	16.9	16.8	17.2	15.0	14.9	13.0
Asian CPE	2.0	2.5	3.0	3.0	4.0	4.5
Asia Total	18.9	19.3	20.2	18.0	18.9	17.5
Asia's %share of world	62.6	57.3	58.0	60.4	59.2	60.6

* Source: FAO, op.cit

35. Table 7 presents the volume of imports of hides and skins, and shows that Asia imports 19.2 % of the world's exportable bovine hides, 11 % of sheep and lamb skins and 21.6 % of goat and kid skins.

36. Comparing exports and imports of hides and skins in tables 6 and 7 one may conclude that Asia is a net importer of 16.8 % of the world's bovine hides whereas it is a net exporter of 6.6 % of the world's lamb and sheep skins and 40.4 % of the world's goat and kid skins.

Leather

37. Tables 7 and 8 present the imports and exports of leather. Asia hardly imports any bovine heavy leather, its share being only3.2 % of the world import trade. However, in light bovine leather, it has a share of 43 % of the international leather trade. This is a result of the fact that many Asian countries who do not have a bovine raw material base are importing finished leather for production of leather manufactures for export. Some of these figures include third country exports, primarily through Hong Kong and Singapore who export finished leather manufactured in China and other South East Asian countries. In respect of light leather from sheep and goat Asia's participation in imports is negligible - around 7.2 %.

38. Looking at the exports of leather in table 10, it is found that Asia's share of international bovine heavy leather exports is 8.2 % principally representing the export of sole leather. This is largely an inter-regional trade such as export from India to Iran, etc.

39. Export of bovine light leather at 18.1 % of world exports, though small, shows a potential availability of finished leather supply in the region, for manufacture of leather products.

40. Going to light leather from sheep and goat, volume exports at 44.1 % show a substantial untapped potential for the utilization of these in the region for manufacture into leather products such as high fashion ladies garments and shoes, sophisticated leather goods, fashion and leisure gloves, sports and golf gloves, etc.

Leather footwear

41. Table 11 shows the production of leather footwear in Asia. It can be seen that the largest footwear producing countries are India, China, the Republic of Korea, Pakistan, Thailand and Iran. Hong Kong produces around 3 million pairs per year for export and the Taiwan Province of China has a substantial production which is not mentioned in the statistical data.

42. From table 12 it can be seen that Asia's exports of footwear as a percentage of that of the world's exports has remained between 4 and 6.5 % over the past five years, which is a negligible figure. Further when comparing table 12 with table 13 one finds that the value obtained by Asian footwear exports is about 50 % of the value of world footwear exports since Asia's share of the quantity of world exports is twice its share of the value of world exports. Apart from this, Asia still has an import of around 2.5 million pairs which primarily comes into countries like Singapore, Hong Kong and Japan, mostly to cover the high fashion ends of these countries' markets.

Table 7: Hides and skins - Imports (Volume)*

(Thousand tons)

BOVINE (wet salted weight	1977	1978	1979	1980	1981 (PREL)	1982 (EST)
World	1577.1	1633.2	1527.9	1481.9	1582.0	1598.6
Asia	187.6	203.5	145.4	151.3	249.3	254.5
Asian CPE	36.7	52.7	45.0	53.8	52.0	52.0
Asia Total	224.3	256.2	190.4	205.1	301.3	306.5
Asia's %share of world	14.2	15.7	12.5	13.8	19.0	19.2
SHEEP SKINS & LAMB SKINS (Dry weight)						
World	150.3	153.3	164.1	135.6	145.0	143.9
Asian CPE	-	..	-	-	-	-
Asia Total	18.0	19.2	18.8	18.8	17.1	15.9
Asia's %share of world	12.0	12.5	11.5	13.9	11.8	11.0
GOATSKINS & KID SKINS (Dry weight)						
World	31.3	37.5	42.0	28.9	29.1	28.2
Asian CPE	-	-	-	-	-	-
Near East	6.4	6.1	6.2	6.1	6.6	6.1
Far East	0.1	0.2	0.2	0.1	0.0	0.0
Asia Total	6.5	6.3	6.4	6.2	6.6	6.1
Asia's %share of world	20.8	16.8	15.2	21.5	22.7	21.6

* Source: FAO, op. cit

Table 8: Imports of leather (Volume)*

	1977	1978	1979	1980	1981	1982
HEAVY LEATHER - Bovine - Thousand tons						
World	43.3	45.9	48.1	44.4	43.2	49.5
Asia	1.6	1.7	1.4	1.4	1.4	1.4
Asian CPE	0.1	0.1	0.2	0.1	0.2	0.2
Asia Total	1.7	1.8	1.6	1.5	1.6	1.6
Asia's %share of world	3.9	3.9	3.3	3.4	3.7	3.2
LIGHT LEATHER - Bovine - Million square feet						
World	1682.4	1737.2	1954.9	1714.0	2075.2	2095.7
Asia	448.6	554.5	572.1	547.4	874.8	820.7
Asian CPE	44.0	45.8	50.0	70.0	70.0	80.0
Asia Total	492.6	600.3	622.1	617.4	944.8	900.7
Asia's %share of world	29.3	34.6	31.8	36.0	45.5	43.0
LIGHT LEATHER - SHEEP & GOATS - Million square feet						
World	797.2	930.6	1080.5	873.2	936.9	956.7
Asia	42.1	28.9	49.1	33.5	56.8	56.0
Asian CPE	2.5	6.2	11.1	12.0	15.0	13.0
Asia Total	44.6	35.1	60.2	45.5	71.8	69.0
Asia's %share of world	5.6	3.8	5.6	5.2	7.7	7.2

* Source: FAO, op. cit

Table 9: Exports of leather (Volume)*

	1977	1978	1979	1980	1981	1982
HEAVY LEATHER - Bovine - Thousand tons						
World	36.4	36.0	42.3	44.8	46.6	47.5
Asia	0.7	0.9	3.0	3.0	3.3	3.1
Asian CPE	0.2	0.5	0.7	0.8	0.8	0.8
Asia Total	0.9	1.4	3.7	3.8	4.1	3.9
Asia's %share of world	2.5	3.9	8.7	8.5	8.8	8.2
LIGHT LEATHER - Bovine - Million square feet						
World	1698.1	1747.0	1906.1	1898.3	2000.9	2124.4
Asia	209.7	237.8	301.2	322.0	347.5	379.7
Asian CPE	9.0	7.0	3.8	6.0	5.0	5.0
Asia Total	218.7	244.8	305.0	328.0	352.5	384.7
Asia's %share of world	12.9	14.0	16.0	17.2	17.6	18.1
LIGHT LEATHER - SHEEP & GOATS - Million square feet						
World	901.0	962.2	1081.3	975.5	1005.8	1003.2
Asia	384.2	451.4	450.6	442.3	452.5	442.7
Asian CPE	-	-	-	-	-	-
Asia Total	384.2	451.1	450.6	442.3	452.5	442.7
Asia's %share of world	42.6	46.9	41.7	45.3	45.0	41.1

* Source: FAO, op. cit

Table 10: Exports of leather (Value)*

(Figures in Million US $)

	1977	1978	1979	1980	1981 (PREL)	1982 (EST.)
HEAVY LEATHER - Bovine						
World	155.1	138.2	205.4	199.1	184.5	195.9
Asia	2.2	2.3	11.4	11.0	12.2	12.1
Asian CPE	0.6	2.2	5.9	6.2	6.0	6.1
Asia Total	2.8	4.5	17.3	17.2	18.2	18.2
%share of world	1.8	3.3	8.4	8.6	9.9	9.3
LIGHT LEATHER - Bovine						
World	1256.8	1505.3	2152.6	2012.9	1996.0	2230.2
Asia	136.8	161.7	282.6	279.2	272.2	276.9
Asian CPE	4.5	3.7	3.6	4.8	4.3	4.4
Asia Total	141.3	165.4	286.2	284.0	276.5	281.3
%share of world	11.2	11.0	13.3	14.1	13.9	12.6
LIGHT LEATHER SHEEP & GOATS						
World	648.2	807.8	1258.9	1156.0	1119.8	1111.4
Asia Total	260.8	344.2	544.5	540.1	533.1	524.5
Asian CPE	-	-	-	-	-	-
%share of world	40.2	42.6	43.3	46.7	47.6	47.2

* Source: FAO, op. cit

Table 11: Production of leather footwear in Asia *

(In million pairs)

	1977	1978	1979	1980	1981	1982
World	3244.8	3248.8	3459.1	3427.3	3478.1	3455.6
Near East (i)	112.1	124.4	130.3	129.1	128.8	126.2
Far East(ii) excluding India	108.6	113.7	117.1	120.7	124 4	122.3
India	258.0	260.0	270.0	280.0	285.0	285.0
Korea Rep	29.2	30.0	31.0	32.0	33.0	33.0
Pakistan	39.5	40.0	40.0	40.0	40.0	39.0
Thailand	9.7	10.0	11.0	12.0	13.0	12.0
Iran	30.0	35.0	35.0	35.0	33.0	30.0
Turkey	35.0	40.0	46.0	45.0	45.0	46.0
Asian CPE	115.6	118.5	159.5	204.4	212.1	222.1
Asia Total	594.3	616.6	676.9	734.2	750.3	755.6
Asia's % share of world	18.3	19.0	19.6	21.4	21.6	21.9

Table 12: Exports of leather footwear (Value) *

(Million US $)

	1977	1978	1979	1980	1981	1982
World	4754.1	5942.7	7470.9	8018.3	7537.3	6934.3
Asia *	129.6	174.0	225.2	238.0	336.5	333.0
India	22.7	26.4	36.0	37.5	40.0	41.0
Korea Rep.	68.1	90.7	113.8	106.0	173.3	180.0
China	53.0	64.4	103.6	104.0	109.0	118.0
Asia Total	182.6	238.4	328.8	342.0	445.5	451.0
%share of world	3.8	4.0	4.4	4.3	5.9	6.5

* Source: FAO, op. cit

Table 13: Imports of leather footwear (Volume)*

(In million pairs)

	1977	1978	1979	1980	1981	1982
World	554.2	554.7	606.7	599.9	620.5	672.7
Asia Total	5.7	10.6	7.6	15.0	17.1	16.8
Asian CPE	-	-	-	-	-	-
%share of world	1.0	1.9	1.2	2.5	2.8	2.5

Exports of leather footwear (Volume)*

(In million pairs)

World	538.0	580.2	630.6	595.0	625.9	645.9
Asia *	29.3	30.8	36.6	36.9	48.5	47.0
India	10.4	9.1	12.5	12.5	12.5	12.0
Korea Rep.	11.4	11.5	11.5	10.3	18.4	18.0
China	19.4	19.7	24.9	25.0	26.0	28.0
Asia Total	48.7	50.5	61.5	61.9	74.5	75.0
%share of World	9.0	8.7	9.8	10.4	11.9	11.6

* Inclusive of India and Korea

* Source: FAO, op. cit

Potentials for development

43. Table 14 summarizes the theoretical production of leather if all potential available hides (cattle and buffaloe) and skins (goat and sheep) were tanned. In table 14, a distinction has also been made between large, intermediate and small producers and details of countrywise exports of hides and skins, leather, leather footwear and production of leather footwear have been presented. From this it is possible to assess how much of the exported material could be retained and utilized for vertically integrated products, thereby increasing export earnings.

44. Generally speaking, the ten countries classified in the large producer group have a basic raw material resource and leather producing capability but lack a matching leather footwear and leather products industry. Japan and Iran utilise their entire raw material availability and in fact, are importers of raw hides and skins. The rest of the countries in the group have a large potential reservoir of finished leather, which through international co-operation could be converted into selected products for export.

45. In the intermediate group of countries, Thailand, Philippines and Republic of Korea import raw materials as they have a shortfall in domestically available raw materials. These countries also have a lesser restriction with regard to foreign investments, than some of the large producer countries of the previous group. It is therefore possible for a country like Thailand or Korea to import wet blue hides for the manufacture of leather products with co-operation from abroad.

46. In the small producer group of countries, the potential for utilizing the available leather producing capacity for export is limited, as their meagre production can only be utilized domestically. International co-operation contemplated for this group should be in the sphere of transfer of technology, know-how, management and marketing for development of the leather and footwear industry for their domestic markets.

47. Nepal could be watched as an experiment in international co-operation for evaluation and others to follow if current experiment of Chinese, FRG and Nepalese co-operation is successful.

Table 14: Countrywise potential leather production and production of footwear (estimated) and estimated exports of hides and skins, leather and leather footwear for 1982*

Country	Theoretical Potential Leather Production. (Mill.sq.ft)	Exports of Light Leather(Bovine) (Mill.sq.ft)	Exports of Light leather Sheep & Goats. (Mill sq.ft)	Production of Leather shoes (Mill.prs)	Export of Leather shoes (Mill prs)	Exports of Bovine Hide (Wet salted weight) (Thou.tones)	Exports of sheep & Lambskins (Dry weight) (Thou.tones)	Exports of Goatskins & Kidskins (Dry weight) (Thou.tones)
	1.	2.	3.	4.	5.	6.	7.	8.
LARGE								
1. India	900.0	135.0	310.0	285.0	12.0	-	-	-
2. China (excl. pig skins)	518.4	5.0	-	220.0	28.0	-	-	4.5
3. Pakistan	222.3	20.0	70.0	39.0	0.7	-	0.1	-
4. Iran	156.1	-	-	30.0	-	0.1	10.0	5.0
5. Bangladesh	103.3	55.0	30.0	4.0	-	-	-	-
6. Afghanistan	70.5	2.7	8.5	10.0	-	13.5	1.4	0.3
7. Mongolia	64.8	-	-	2.1	-	1.5	0.3	-
8. Indonesia	64.1	0.4	7.5	8.0	0.1	0.4	0.2	1.0
9. Japan	60.7	-	2.6	41.0	1.3	0.1	-	-
INTERMEDIATE								
10. Syria	48.21	1.0	7.0	1.3	0.1	0.4	0.1	-
11. Thailand	33.0	9.0	0.1	12.0	2.0	0.5	-	-
12. Iraq	32.9	-	-	3.0	-	0.2	1.4	0.4
13. Phillippines	26.8	-	-	7.0	3.0	-	-	-
14. Yemen Arab Rep.	25.6	-	-	-	-	1.2	0.6	2.5
15. Burma	24.7	-	-	4.0	-	0.1	-	0.1
16. Korea Rep(South)	18.0	4.2	2.0	33.0	13.0	-	-	-
17. Vietnam	17.5							
18. Saudi Arabia	15.9			0.5		0.3	0.5	0.4
19. Nepal	13.0			0.5		10.1	0.3	0.6
SMALL								
20. Korea DR(North)	8.2							
21. Kuwait	5.9							
22. Yemen Democratic	5.8					0.2	0.3	0.4
23. Cyprus	5.4			5.0	3.5		0.1	0.1
24. Lebanon	5.4					0.1	6.0	1.6
25. Srilanka	5.0			5.0	1.0	0.8		
26. Laos	5.0			0.5		0.1		
27. Isreal	4.8							
28. Jordan	4.4							
29. Dem.Kampuchea	4.3					0.3		
30. Malaysia	4.1			3.0		0.9		
31. United Arab Emirates	3.06							
32. Oman	1.36							
33. Bhutan	0.26							

* Source: FAO, op. cit.

Production of tanning chemicals, footwear auxiliaries and machinery

Tanning chemicals

48. The basic chemicals required for tanning are lime and sodium sulphide in the beam house, Amonium Chloride, Sulphuric Acid and salt for pickling, Bi-chromate or basic chrome sulphate for the actual chrome tanning, sodium bicarbonate for neutralising, sulphonated fish, neatsfoot or natural oils along with natural or synthetic oils for fat liquoring, syntans and dyestuffs, syntans being used for retanning, uniform dyeing and finishing. Leather finishes are either casein based synthetic resin binder based or nitrocellulose or polyurethane based.

49. Looking at Asia, Japan, China and India are countries which are largely self-sufficient in the majority of chemicals required for the tanning industry. India has the added advantage of the availability of chrome ores which are the basic tanning ingredient. The aforementioned countries could well become suppliers of chrome tanning salts of Asia if inter-regional planning, and co-operation is accepted by the Asian countries.

50. Malaysia and Thailand have a cheap resource of palm oil and could very well become the suppliers of sulphonated palm oil for fat liquors for the Asian tanning industry. With the growing shortage and the high prices today of tallow, neatsfoot oil and fish oil, the use of cheap palm oil for fat liquor manufacture could place them in the international map.

51. Both Japan and India have a large dyestuff industry catering to the textile industry and would have no difficulty in supplying dyestuffs to the whole region if called for. The same would apply to synthetic tannages. As far as vegetable tanning extracts are concerned, barring India there is no cultivation and leaching of bark producing extracts. India has a small production of wattle extract which is insufficient for its own use. However, both India and Borneo have large resources of Mangrove and with some modification Mangrove extract could be used for vegetable tanning if the demand for vegetable extracts reappear once again.

52. There is a dearth of a specialized leather finish manufacture in Asia but recently with Stahl putting up a factory in Singapore and others looking at the Taiwan Province of China, this problem could be resolved.

53. As far as footwear auxiliary production is converned, both Taiwan and the Republic of Korea have a wll developed footwear industry and it should be possible to expand it to cater to the whole region's requirements of shoe components units soles etc. Rubber based components could be manufactured in Malaysia, Thailand, Sri Lanka and Indonesia.

54. With regard to footwear and tanning machinery, basic machinery is available in India, the Taiwan Province of China, Republic of Korea, and sophisticated machinery is also available in Japan and Republic of Korea.

Analysis of major constraints

55. Since developing Asia is comprised of NIC's like South Korea, the Province of Taiwan, India, etc. as well as LDC's like Nepal and Bangladesh, problems vary from country to country within the region.

56. Bangladesh possesses a large resource of raw hides and skins which have yet to be exploited in terms of the country evolving from being a supplier of wet blue and crust material to becoming a manufacturer and exporter of finished leather and leather products. Bangladesh lacks chemicals and auxiliaries, plant and machinery and requisite industrial know-how for vertically integrating its leather production with leather products.

57. India, on the other hand, possessses one of the largest availability of hides and skins, and over the years, has transformed itself from an exporter of basic raw material to that of a supplier of finished leather, sub-components of leather footwear and leather products. Whilst India has a captive manufacture of all types of leather chemicals and auxiliaries it still has to import some sophisticated finishing auxiliaries, although these have to bear very high rates of import duty, thereby defeating the purpose of the use of such material for sophisticated and competitive export production. India is a good example of how a developing Asian country, during a period of recession, has been able to keep a steady rate of export earnings from the leather industry by structurally changing the pattern of manufacture to higher manufacturing value added products for export.

58. In view of the fact that the tanning capacity of India is used at a rate of 35 % of installed capacity only, wet blue leather as well as raw hides are

importable without payment of any duty. The plan is to follow the example of other South-East Asian countries like the Republic of Korea and other South-East Asian manufacturers and develop a further $ 400 million worth of export by importing raw wet blue hides from developed countries and converting them into products for export.

59. Thailand and the Philippines are the two striking examples where the developmentfrom raw material suppliers to product exporters have led to a situation where these countries are now deficient in raw hides and skins and are importing their requirements from Australia, New Zealand and the United States.

60. South Korea has an infrastructure for tanning and shoe machinery manufacture, as well as the manufacture of most of the chemicals required, and is endowed with fairly uptodate know-how and management techniques. This has resulted in the country becoming one of the largest Asian exporters of shoes to the developed world, though it is deficient in the basic raw material.

61. Nepal deserves a mention as with German collaboration and Chinese funding a large tannery has been put up in Hetauda for utilizing buffalo and cow hides. This scheme, the product of international co-operation, is worth evaluation on the basis of results.

62. Amongst the countries listed as the smaller producers the total quantity of hides and skins available is so small that it does not deserve any special mention with regard to its constraints. No chemical or tanning and shoe machinery unit would be economically viable in this group of countries and therefore such a development has been absent. Each of these countries desirous of putting up a tanning industry should have feasibility studies made before embarking on ambitious schemes.

Problems with regard to the domestic economic conjuncture

63. The common problem with all the Asian countries barring Japan is that of finding both local and foreign finance. The majority of these countries require large infrastructural investment, primarily in respect of setting up a balanced capacity for manufacturing finished leather and then footwear and leather products, and utilising domestically available raw material

resources. Unlike contemporary growth industries such as synthetic fibres, petro-chemicals etc. the leather industry has grown as a decentralized small scale industry throughout Asia with a scattering of a few larger units. With growing transport costs and high labour costs in the developed countries, it is now a real prospect that hide and skin producing countries will ultimately be able to convert their raw materials into all types of leather products. In these circumstances, it is necessary for the governments of the countries in Asia to prepare comprehensive plans of development for their leather, leather footwear and leather goods industries. Until and unless such plans are devised, it will not be possible to evaluate the total requirements of funds and to apportion the local and the foreign component.

64. Countries like Nepal and Afghanistan which are land locked, have a logistic problem in respect of imported chemicals and auxiliaries as well as plant and machinery which can only be overcome by co-operation with neighbouring countries.

65. One of the major problems in Asia is that of the low yield of hides and skins per dead or slaughtered animal. This is due to the lack of good recovery linkages between rural and urban areas. A substantial portion of hides and skins suffer decay prior to arrival at the selling points. For example, it is estimated that in India alone, the loss in terms of hides and by-products recovery is of the order of 100 million dollars per annum. The various countries in Asia should, unless already done, build in to their agricultural plans the concept of live-stock development and replacement as well as the preservation and recovery of hides and skins and animal by-products. Due to Asia's vast population, there is little scope for feeding a larger cattle population than exists at the moment. The only alternative therefore of maximising existing cattle wealth is to improve on the productivity of hides/skins and by-products. Another aspect that is sadly lacking in most of the Asian countries is training and educational facilities for creating leather and shoe technologists as well as artisans. It would not be out of place to mention here that the establishment of regional training centres totally devoted to the lather footwear and leather products industry would go a long way in helping solve the manpower development problem. The same would apply for the strengthening of research and development institutes and designing centres.

Problems imposed in major export markets

66. To understand the problems imposed in the major export markets one must first be familiar with the present situation in the export trade. Over the past three years the world has been reeling under a recession to the extent that the world raw material availability in terms of hides and skins is today sufficient for the leather and leather products industry, compared to the situation in 1977-78 when an unprecedented price rise took place, due to apparently short supplies, which could not cover global demand.

67. At present, developed countries find it cheaper to use their domestic raw material than to import raw material from developing countries, thereby blocking up their capital. The motivation to buy crust or tanned leather from developing countries also has largely diminished for the same reason. However, Asia's large cheap labour force allows it to be competitive when it comes to products such as shoe uppers, finished footwear, leather goods, etc. The developed countries, with rising unemployment, are tending to be more and more protectionist, and as a result the problem of marketing has assumed a major proportion today.

68. Despite the present conjuncture, raw material supply will be the dominant problem of developing nations as well as developed regions in times to come. Countries favoured by adequate available supply will be able to sustain output of leather products and exploit potentials in foreign trade.

69. An indication of the problems generated by changing circumstances of raw material supply, surfaced during th early months of 1979. Hide importers in the Republic of Korea, mainly tanners, were unable to accept delivery of a large quantity of imported hides, reportedly more than 700,000 of which were already unloaded and on the piers of ports in the Republic of Korea.

70. Presumably, factors responsible were lack of working capital, non-availability of bank financing and dislocation of the cost structureof leather products due to record hide prices. Default on this scale, though unprecedented in world hide trade, will continue if the present recession continues unabated.

71. It has previously been indicated that the Republic of Korea and Hong Kong accounted for more than 50 per cent, in value, of all leather product exports by developing countries. Both countries as well as the Province of Taiwan are the most exposed of all developing areas to raw material difficulties since their domestic supplies are inadequate. At best, therefore, it seems certain that the growth of recent years in leather product output and export marketing will be suspended. Reduction in output by raw material supply deficient countries is probable. Types of goods which will be affected are leather shoes, garments and handbags. A possible straw in the wind is given by the U.S. shoe import statistics for the first half of 1979. In that period, shipments from Italy rose to 53.8 million pairs compared with 29.2 million in the like months of 1978. Conversely, arrivals from the Republic of Korea were some 4 million pairs less than permitted under the U.S. Orderly Marketing Agreement with that country. Raw material supply limitations will constrain significant production growth in other Asian countries.

72. However, there is a feasible and distinct possibility for the diversion of output from domestic consumption and export of leather to export marketing of leather products. India, Pakistan, Thailand, Bangladesh and Sri Lanka have increased their export of leather products during the last six years.

73. In addition to raw material supplies, the export prospects for leather products will be affected by trade barriers in the developed countries. Concrete steps have already been taken by several developed countries to restrain imports of footwear and other leather products. Australia, Canada and Sweden imposed footwear import quotas; the U.S. sought the same end through Orderly Marketing Agreements with several developing countries. Under these agreements, the exporting nations bound themselves to hold annual exports to the U.S. within stated limits. Inevitably, other exporting countries were affected due to the intensification of competition for non-restricted market outlets.

74. Non-tariff barriers to trade in hides and skins, leather and leather products have been noted as clear instances of debilitating trade restriction. At this point, a brief review of comparative tariff rates will clarify the extent to which import duties are nominal or imposed to foster or protect domestic industry.

75. Table 15 includes the principal countries involved in hide, leather and footwear trade, the major trade categories in the sector. Although for the sake of simplicity, rates are not given for other leather products, the table defines the tariff policy of the countries listed. It should also be noted that the developed countries are committed to the General System of Preferences, of which almost all developing countries are beneficiaries.

Table 15: Tariff rates - hides, leather and footwear
(per cent)

Country	Hides	Leather	Footwear
Argentina	10	10	55
Australia	free	0.15	free - 22.5
Brazil	120	160	170
Canada	free	7.5-12.5	25
European Community	free	8	8
India	free	60	100
Japan	free	20	10-30
Republic of Korea	30	40	60
Mexico	free	10-20	10-40
United States	free	5	free - 20

76. With the exception of Japan, the duties of the developed countries can be characterized as low or nominal and they are MFN rates applicable to developed and developing countries alike with the GSP benefit granted only to developing countries.

77. Tariff rates imposed by Japan are somewhat pointless since the country maintains a rigorous quota system under which only the most miniscule quantities of leather and leather products in developing countries can be imported. Duty rates by all the developed countries are now subject to further reduction under the multilateral trade agreement endorsed by GATT signatories April 1979.

78. The record of trade development in leather and leather products, as well as the tariffs listed above, support the conclusion that import duties of the developed nations, except Japan, are not a barrier to trade, but that NTB's which are far more difficult to tabulate and quantify, are the principle instrument for trade restriction and protection against structural change.

79. Apart from growing protectionism that comes in the way of developing countries marketing in developed countries, there is always a question of high transport costs due to the fact that the leather and leather products industry, which caters to the needs of fashion, require a short transit time for goods. This, at times, forces developing countries to use air transport where the cost of air freight in many instances makes the CIF value unremunerative whilst the FOB rate may be quite competitive internationally.

80. A further constraint is the long sailing time when sending leather footwear or non-fashion finished leather by sea. Transport through different climatic zones sometimes give rise to fungus and mildew which causes purchaser claims and creates a lack of confidence and supplier creditability.

Review of measures for international co-operation

81. Developments in 1978 and 1979 have cleared the stage for a new approach to the problems of the entire leather sector from hides and skins to finished products. Misconceptions and illusions spawned during the last two decades have been succeeded by forced recognition of hard facts. Raw material supply is finite; expansion in output and trade cannot be taken for granted; increasing and improving raw material resources is the common concern of all countries. Against this changed background, international co-operation need not be a vague ideal. It can be a practical and profitable undertaking grounded in realistic self interest of all leather producing and consuming nations.

Review of measures of co-operation at the regional and inter-regional levels

Policies and developmental measures adopted within ESCAP and other inter-governmental bodies:

82. Whilst certain studies have been made by ESCAP of the possibilities of setting up leather products industries in ESCAP countries and various

governments of the Asian countries themselves have also made studies for developing the leather footwear and leather products industry, the impact of such development has only been in the Philippines, Thailand, and to a small extent, in Malaysia.

83. Purely on the commercial side, Japan has been setting up Golf and Base Ball gloving factories in Indonesia and there is great scope for Japanese collaboration in countries like India, Pakistan and Bangladesh which have some of the finest goat- and sheepskins to offer for the production of sports and fashion gloves. Since international co-operation in leather has been identified as one of the subjects UNIDO could deal with effectively, it may not be out of place to initiate inter-regional discussions amongst the ESCAP countries by organising meetings at ESCAP on similar lines as is being done at UNIDO.

84. The environment for inter-regional co-operation is, on balance, favourable. India, for example, allows 100 % export oriented units with 100 % foreign capital. The investment promotion board in Thailand has identified a 1500 hides a day tannery for wet blue production and three 1000 hides a day finishing units for foreign collaboration and investment. Lucrative tax reliefs are given and industrial loans for infrastructural development is available.

Measures of regional co-operation with the industry, especially with respect to tanning chemicals and footwear auxiliaries:

85. There should be every possibility of regional co-operation within the industry in Asia with respect to tanning chemicals and footwear auxiliaries. Whilst most of the Asian countries lack production capacities which could sustain the manufacture of basic tanning chemicals and leather auxiliaries, the consolidated production of the Asian countries could make chemical and footwear auxiliary products viable and worthwhile.

86. The present difficulty is that barring Japan, no other country within Asia is really competitive in the manufacture of various tanning chemicals. To cite an example, the minimum economic unit for the production of Sodium bi-chromate is over 20,000 tonnes a year. Unfortunately, India which produces bichromate from its chrome ores does not possess any plant larger than 10,000 tonnes, and therefore is unable to compete against foreign manufacturers.

With inter-Asian co-operation and understanding that the countries of region could purchase bi-chromate from India, it would be possible to build a plant with the desired economies of scale to build India upto competition with the rest of the world.

87. As far as footwear auxiliari are concerned, there is no reason why all of Asia cannot buy their requirements of Texon Elastomeric Fibre Boards, unit soles, lasts, etc. from some of the existing manufacturers in the region as there are both proficient in manufacture and competitive in relation to the rest of the world. In Asia today there are two types of economy; the first is the free economy, where countries like Hong Kong, Singapore, Korea and the Province of Taiwan can buy anywhere in world in free foreign exchange.

88. The second category who have certain restrictions on import in order to protect their own industry can also purchase in foreign exchange but against import licences, as is the case of India, Bangladesh, Pakistan, etc. In certain countries like Nepal and Bangladesh, raw materials can also be imported against licences ear-marked on specific credit lines given to that country.

89. Regional co-operation can only be established if the Asian countries work within an Asian Clearing system or individual Asian countries enter into bi-lateral trade relations. This would enable each country to buy from the other on a clearing account, and, at the end of each year, either settle the difference in nominated currencies such as the Dollar or roll it on into the next year.

The interests, if any, of the industry in Asia in co-operating with the industry of other developing regions:

90. By and large the countries in Asia are developing or newly industrialized countries. Whilst there would be great interest among some of the newly industrialized countries to co-operate with the industries of the other developing regions and to share their experience, the biggest constraint would be finding the necessary finance for establishing such co-operation. To cite India as an example, due to its scarce foreign exchange reserves, the Government of India encourages joint ventures in kind, i.e. by supply of plant and machinery or building material rather than in cash with subscription of equity or working capital. The greatest disadvantage of such a system is the

inability of the Indian partner to come out with financial help if there is an over run and the joint venture partner needs cash, and not equipment to overcome it.

Main issues that could be raised at the Consultation

91. The leather industry has suffered in respect of its liquidity and cash flow due to the prevailing recession. The sale of leather footwear, both civil and industrial, has been badly hit as also have those of garments and leather goods. The volume business in all types of leather footwear, garments, leather goods and leather gloves are maintained primarily by cutting prices and distress selling. This unhealthy competition has resulted in bankruptcy and closure of many units over the past couple of years and what exists is far from healthy. It is against this background that the Third Consultation shall be discussing measures of international co-operation. Any attempt to ask for risk capital investments by developed countries in the developing countries would meet with little response, when industrial units in the developed countries themselves are hard pressed to obtain working funds and maintain their markets at a profitable level, leave alone increase their share.

92. It is also difficult, under the current circumstances, to conceive of the developed countries importing leather and leather products in order to help improve the utilisation of existing capacities in the developing countries. In addition to their own marketing problems and their burdens of finance, enterprises from developed countries would have to find both the markets and additional financial resources for ploughing into a developing country, without having the certainity of quick returns.

93. On these considerations, more modest and selected areas of discussion could be envisaged, such as:

(i) Identification and selection of the Asian countries like Bangladesh, Pakistan, India, China, Korea, etc. which have a potential of vertically integrating their leather footwear and leather products industry by international co-operation with developed countries.

(ii) Preparation of indepth on the spot studies of the selected Asian countries and preparation of profile studies at the unit level in respect of tanneries and shoe factories/leather products.

(iii) Preparation of detailed feasibility and viability studies of the selected units in Asian countries. Such feasibility studies should include the mode of financing between the developed and the developiong country and the methodology of covering both the external and internal finances necessary. The developed country partner should be presented with financing sources which are not onerous.

(iv) Studies should be made of the more successful export oriented industries in order to establish the reasons that enabled them to build a leather and footwear industry without in some cases having a sufficient raw material base. Critical appraisal of the applicability of such methods to the resource rich Asian countries and suggestions thereof.

(vi) Discussions on the type of collaboration or agreement between the developed and developing enterprises in line with the contractual agreements drawn up by UNIDO to ensure proper identification at unit level, for large, intermediate and small producer countries in Asia.

(vii) (a) Involvement of countries in Asia that are capable of offering international co-operation.

(b) Identification of the tanning materials, tanning machinery, footwear, auxiliaries and footwear/leather goods machinery for inter-regional co-operation based on availability of the raw material in the selected country in Asia for economic exploitation.

Asia 1982

Potential leather production (theoretical)

Total area of leather if all hides and skins potentially available were tanned (in million square feet).

Country (arranged acc. to size)	Bovine leather	Buffalo leather	Goat skin leather	Sheep skin leather	Total - all types types of leather
India	18.53	17.50	123.20	67.13	226.36
China	227.82	60.88	94.55	135.16	518.41
Pakistan	29.86	44.06	88.58	59.78	222.28
Iran	46.11	2.18	21.72	86.11	156.12
Bangladesh	41.37	0.67	17.02	0.90	59.96
Afghanistan	19.25		5.76	45.50	70.51
Mongolia	16.43		11.70	36.62	64.75
Indonesia	29.82	7.95	15.95	10.35	64.07
Syria	6.79	0.02	2.39	39.03	48.23
Thailand	23.39	9.25	0.12	0.22	32.98
Iraq	10.94	0.66	5.96	15.29	32.85
Philippines	15.72	7.48	3.54	0.05	26.79
Yemen Arab Rep.	2.96		16.54	6.11	25.61
Burma	19.84	3.29	0.98	0.54	24.65
Korea Rep.(South)	17.12		0.89	0.02	18.03
Viet Nam	7.80	9.00	0.65	0.06	17.51
Saudi Arabia	3.91		3.90	8.02	15.83
Nepal	1.32	3.59	4.67	3.45	13.03
Korea DPR (North)	7.04		0.54	0.63	8.21
Kuwait	0.41		0.20	5.30	5.91
Yemen Democratic	0.41		2.52	2.89	5.82
Cyprus	0.73		2.15	2.56	5.44
Lebanon	0.81		1.33	3.24	5.38
Sri Lanka	3.67	0.82	0.48	0.03	5.00
Laos	1.79	3.10	0.11		5.00
Israel	2.79		0.63	1.36	4.78
Jordan	0.50		1.79	2.08	4.37
Kampuchea Dm.	3.04	1.22	0	0	4.26
Malaysia	2.52	1.22	0.30	0.07	4.11
Un. Arab Emirates	0.28		1.33	1.45	3.06
Oman	0.48		0.53	0.25	1.26
Bhutan	0.07	0.07	0.04	0.08	0.26

PART II: ASIA: COUNTRY DEVELOPMENT PROFILES

94. This part of the regional survey presents summary profiles of individual Asian countries. These country reports are organized in order of the size of the country's leather and leather products industry and based on published sources as well as personal impressions of the consultant, and on information available to UNIDO. Each profile summarizes the raw material availability and potential for the country concerned. supported by a narrative on the industrial performance of the sector.

INDIA

Raw material availability

95. Based on the FAO World Statistical Compendium for Raw Hides and Skins, Leather and Leather Footwear 1961-82, India has the following estimated raw material potential.

Data for 1982

	Livestock population (1000 heads)	% of developing Asia	Total offtake (=potential hides and skins production) (1000 heads)	Offtake rates in % (calculated)
Cattle) Buffaloes)	244.000	48,7	34.400	14,1
Goats	72.000	25,2	40.000	55,6
Sheep	41.700	11,3	19.000	45.6

Background

96. With rich animal resources and traditional craftsmanship, the Indian leather industry not only has a huge export potential but also provides great avenues for gainful employment. India is favourably placed in terms of animal resources, hides and skins. The following table amply illustrates this:

97. With a livestock population estimated at 244 million heads, India occupies the first position in overall world cattle resources. This primacy exists for the various individual species except sheep, in which India's position is fifth in the world.

98. Offtake of hides and skins in relation to cattle population is, however, quite low, compared to the world's overall offtake rates, especially in the case of cattle and buffalo hides. This is due to lack of development of the meat industry and unsatisfactory arrangement for recovery of hides from fallen cattle in villages and remote areas.

99. While due to religious taboos against cow slaughter it may not be possible to develop the bovine meat industry along the lines of the industrialized countries, much could be done to improve animal husbandry facilities, in creating the infrastructure for immediate recovery of hides from fallen animals and in the flaying of hides on an organized basis. The scope for developing the meat industry however does exist for goat and sheep.

100. In a decade from the early '70s to the '80s, leather exports increased fourfold, from Rs.1000 million in 1971-72 to Rs.4253 million in 1979-80. This bears adequate testimony to the premise that the industry has a large untapped export potential. There has been a significant change in the composition of exports. Whereas the bulk of exports in 1971-72 comprised semi-processed or crust leather, in the '80s the accent is on finished leather and leather footwear components.

Composition of exports

Item	1971/72	1979/80	1985/86 (estimated end of the Sixth Plan)
	(figures in millions of rupees)		
Semi-processed leather	860.4	885.45	300.00
Finished leather	36.0	2660.08	3000.00
Leather footwear components and leather manufactures	107.2	708.32	2700.00
	1003.6	4253.85	6000.00

101. During the three years preceeding 1983, finished leather and footwear components have shown a continuing steep increase in their share of the value of India's exports. In spite of this progress, however, share in total world leather and leather products exports remains very low.

102. According to the latest figures available, a comparative statement can be derived showing India's share byproduct category, as compared to the rest of the world.

(in million US$)

Item	World exports	India's exports	%share of India
Leather	1530.5	188.8	12.3
Footwear	3936.4	23.9	0.61
Travel goods, handbags, etc.	798.5	7.3	0.92
Leather garments and accessories	871.7	1.3	0.15
	7137.1	221.3	3.10

103. In view of the fact that India's share in world trade in the sector was less than 1% in manufactured items, the Government set up a Task Force to identify ways and means by which a rapid increase of exports of higher manufacturing value-added products could be realized from the large availability of finished leather in India.

104. Since the leather industry had been put under the development plans for the small scale sector, the country has been unable to mobilize sufficient funds to create the necessary infra-structure required for setting up a modern leather footwear or leather goods manufacturing industry. It is only in the last five or six years that a relaxation has occurred for the setting up of export oriented footwear and leather goods industries which have an export obligation of 75% or more of total production. It was realised by the country that a consistent quality of footwear, leather garments or leather goods could only be produced in mechanised units and international competition could only be met if such units had the benefit of economies of large scale production.

Export performance of the leather and leather products industry

105. India today has a well developed tanning industry which is partly modern and partly old-fashioned, geared more to labour intensive technology than to high productivity machinery, since the employment of labour is of paramount importance to its economy.

106. The industry is concentrated in three areas: Madras has approximately 60% of installed capacity, Calcutta 20%, Kanpur and the North-Eastern region 15% and the balance is scattered over India. Over the years the policy of the Government has been to export more and more of higher manufacturing value-added products, in preference to exports of wet blue hides and skins or tanned leathers.

107. At present, despite difficulties imposed by the international recession, over the past three years India has been able to maintain its export earnings at a level of $400 million by increasing the share of leather products in total exports.

108. Selection by selection, Indian upper leather is no longer cheaper than that of the developed countries. There is hardly any motivation for developed countries to buy leather from India at those times when industrialized country tanners can cover their needs from domestic hides and skins. By comparison, low labour costs in India make the purchase of leather products and components a more attractive proposition. Fortunately, over the last five years there has been infrastructural investment for the manufacture of leather products, but much more needs to be done if exports of leather products are to achieve the target of $600 million. India has embarked on a plan of allowing imports of wet blue as well as finished leather in order to re-export leather products. It hopes to follow the examples of South East Asian countries, which despite a small domestic raw material base, have a successful export oriented leather footwear and leather goods industry which is based on imported hides from America, Australia and New Zealand and other developed countries.

109. The present policy allows the import of sophisticated leather finishes at levels of import duty of around 200%. Fortunately, however, the higher costs of imported chemicals and finishes are more than offset by a large resource of

cheap labour and low manufacturing costs of leather products, which are still a fraction of the developed countries' costs. This has led to a rapidly growing trend in the exports of footwear components and leather goods in the last few years as the major part of the country,s finished leather is still available for production of leather manufactures.

Under-utilization of industrial capacities

110. India suffers from a low utilization of installed capacity in the leather and leather products industry. This is a selective under-utilization, since the tanning capacity for cattle hides is far in excess of the availability of hides in the country. In the sphere of skins, i.e. goat, sheep and buff calf, the impact of raw material shortage is yet to be felt.

111. Since 70% of the world's raw material resources are cattle hides, there is great scope for international co-operation in utilizing India's capacity more fully by importing wet blue hides.

112. India is uniquely placed in possessing a good quality of buffalo calf skins, a superb red haired sheep and a substantial quantity of very good quality goat skins which are found mostly in the regions along the borders of West Bengal and Bangladesh. Presently, the major buyer of goat skins is the USSR, but Indian tanners are increasingly looking towards the west for new market possibilities. Countries such as Italy, France and Spain could co-operate with India to provide contemporary and sophisticated know-how for the manufacture of leather from skins for ladies fashion shoes, garments and leather goods. India has a captive leather chemicals and leather products auxiliary industry that supplies the leather and leather products industry' requirements at prices at slightly higher than international prices.

Fiscal policies for export promotion

113. The Indian Government is very conscious of the need to increase foreign exchange earnings. The country suffers a negative balance of trade of about $5300 million. This has led the government to provide fiscal incentives for exports of leather and leather products.

(a) Broadly, exports are eligible to refund of all import duties and taxes on inputs that go directly into the exported product;

(b) Secondly, there is a system of cash compensatory support based on the average indirect taxes that goes into the cost of products for export;

(c) Certain income-tax allowances are given on incremental export earnings, if they relate to improved export performance;

(d) Finished leather, leather footwear and products being related to fashion changes have, of necessity, to be airfreighted; and the government assists exporters by subsidised air freight rates to enable them to be competitive.

Future infrastructural requirements

114. Since India's target is to export Rs.1000 million worth of leather products at the end of the Sixth Plan (1985-86), this would require a heavy dose of infrastructural investment. It is estimated that approximately Rs.2000 million will have to be invested in setting up additional manufacturing capacities for shoe upper making, leather goods and leather garments. Fortunately for India, funding in the large scale sector comes from the Industrial Development Bank and in the small scale from the State Financial Corporations who obtain re-finance from the Industrial Development Bank of India. Usually a promoter's share of 20% of the project equity is required, and there are various schemes by which equity capital can be borrowed if the entrepreneur has a shortfall in his required share of the equity.

International co-operation

115. One of the reasons why India has not been a host to large scale foreign collaboration joint ventures in the leather industry is due to the Government's policy of putting this industry in the small scale sector and making it difficult to obtain industrial licensing. Today these regulations have been relaxed, and foreign collaborators could be allowed up to a 40% participation in the equity of an Indian joint venture or even up to 100% if the foreign investor were prepared to put up a 100% export-oriented project.

116. Exchange Control regulations and general complications in foreign exchange regulations have not been conducive to attracting foreign investors. With the vast resources that are available for exploitation and the necessary change in the foreign investment climate, India would be ripe for

international co-operation either in the form of joint ventures or in buy-back or marketing collaborations, in the future.

Indicative areas of international co-operation

Semi-tanned leather:

117. The principal types are Wet Blue Hides and Skins and EI Kips and Skins. The principal buyer of chrome tanned wet blue skins is the Soviet Union followed by other socialist countries. On the other hand EI tanned skins are primarily bought by Europe and the United States. Chrome tanned hides and EI Kips have suffered a tremendous decline due to drop in international prices and unless the international price rises or the raw material price is internally lowered, there is hardly any prospect of increasing exports. EI Sheep skins, particularly the red haired sheep and buffalo calf are premium skins as these are unsurpassed in quality and are good material for the high fashion leather garment and leather goods industry.

118. At the moment the depressed situation in the leather garment industry is also affecting the prices and sale of this type of leather. In this area foreign marketing collaboration lends itself admirably for creating the necessary facilities for manufacture of finished leather for leather garments and goods.

Footwear

119. As already mentioned, the entire leather and footwear industry has been placed in the small scale sector for development and has therefore suffered in the context of rapid vertical integration, due to paucity of investments in this sector. During the last plan, the Government licenced numerous export-oriented shoe and upper making units in the large scale sector, and it is hoped that more such export-oriented units will come up in the near future. This sector lends itself to foreign collabaoration especially in areas like sports and leisure shoes, safety footwear and fashion shoes which require a high degree of manual labour.

Fashion, leisure, sports and golf gloves

120. Being prolific in the different types of goat, kid and sheep skins that are necessary for the production of the different types of gloves, India could utilize technical know-how both in processing skins and in setting up manufacturing facilities including grading and designing of diverse gloves. This could be the subject matter of an inter-regional co-operation with Japan or from any part of the world either as a joint venture, a marketing collaboration or a total transfer of plant and machinery for production in India along the requirements of the foreign partner.

Industrial leather gloves

121. Indian hides are well suited for this item and a marketing collaboration between developed countries and India could pay dividends. The collaboration should envisage manufacture in India to the patterns and designs of the international collaborator and eventual marketing and sale by the international party.

Technical co-operation

122. Whilst it is possible to identify certain types of footwear, leather goods and gloves for collaboration between India and the developed countries, a far greater possibility exists in indirect transfer of technology by technical agreements for the manufacture of India, of sophisticated chemicals, fat liquors and leather finishes. This would also involve the supply of plant and machinery that is not indigenously available.

CHINA

Raw material availability in quantitative term

123. The scarcity of published data and different statistical approaches made it difficult to integrate hides and skins production data on a statistically consistent basis. For this reason, this section relies on comparisons of FAO data with information provided to UNIDO from industry sources in China.

124. Based on the FAO Production Yearbook 1981, Vol.35, livestock availability and hides and skins production in China is as follows:

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	53.410	14,72%	11.278	21.1%
Buffaloes	18.854	15,99%	3.014	16.0%
Goats	82.284	30,30%	23.638	28.7%
Sheep	105.200	31,40%	22.031	25.7%
Pigs (1974)	300.000	-	187.000	62.3%
Actual recovery of pig skins (D. Winters Pigskin study)			50.000	

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	227,82	million square feet
Buffalo leather	60,88	" " "
Goat skin leather	94,55	" " "
Sheep skin leather	135,16	" " "
	518,41	million square feet
Pig skin leather (10 sq.ft. 50,0)	500,00	" " "
Grand total	1018,41	million square feet

However, sources within China estimate a different livestock population and hides and skins production rate:

	Livestock population (mill. heads)	Production of hides and skins (mill. pieces)
Cattle)	)	)
)	) 76.969 [a]	) 50.0 [c]
Buffaloes)	)	)
Goats)	)	40.0 [c]
)	) 197.353 [b]	
Sheep)	)	20.0 [c]
Pigs	298.066 [c]	80.0 [c]

a Source: "China Daily", Jan. 7, 1984.

b Information provided by Shanghai Agricultural Bureau.

c Source: "Hebei Leather", No. 2, 1983.

125. In order to ensure consistency of information, however, the analysis is conducted on the basis of FAO estimates. The utilization of leather production is estimated as follows:

China: Utilization of hides and skins and leather

Hides and skins	
Exports of bovine hides and skins	nil
Exports of sheep skins	nil
Exports of goatskins (dry weight)	4,500 tons
Leather *	
Theoretical production	518.4 mill. sq.ft.
Exports of bovine leather	5.0 mill. sq.ft.
Exports of sole leather	800 tons
Exports of sheep and goat leather	nil
Footwear	
Production of leather shoes	220.0 mill. pairs
Exports of leather shoes	28.0 mill. pairs

* Note: Pigskin leather is not included in the table.

126. After India, China has the largest availability of raw hides and skins in Asia as can be seen from the availability profile. Adding to this the availability of pig skins (production of which in 1983 was estimated at 80 million pieces) China may have a theoretical availability of leather which is more than that of India, as each pig skin yield 8-10 sq.ft. of leather, on average.

Production of bovine goat/sheep leather

127. With its large human population, China is deficient in its cattle population. Cattle are traditionally raised as draft animals, rather than for their meat, with the result that they are not slaughtered as long as they provide energy for tillage. This accounts for the low offtake rates of cattle hides in China. The demand for hides can be estimated by the fact that if global per capita leather consumption of three square feet were to be attained, China would require approximately 100 million pieces of bovine hides for its tanning industry. Due to practical constraints, this large amount of raw material cannot be procured either by importation or by increased domestic production.

128. Bovine hides produced in China are used exclusively for the domestic market and transformed into leather. Hides produced in the Honan province and its adjacent areas are good in quality, having fine grain and level substance. Those produced in the north-west area are heavily ticked, and can only be used to produce corrected grain chrome-retanned upper leather. Buffaloe hides are only produced in the southern areas of China, and are mostly vegetable tanned for sole and luggage leather, only a minor part, which is of better substance, is processed into industrial leather.

129. Considerable amounts of bovine hides and leather have been imported in recent years. The value of China's total imports of hides in 1982 were estimated to be in the region of U.S. $115 million, of which 80% were from the U.S.A., 5% from Australia and the balance 15% from New Zealand, Argentina and Bangladesh. The hides were not only imported for covering production capacity, but also to adapt to the Chinese consumers' tastes to smoother and better finished leather footwear. The quality of hides imported from Australia and New Zealand are generally satisfactory. Wet-blue leather produced in Bangladesh was imported to balance China's exports but the quality

was inconsistent in respect to the basicity of the chrome salt and chrome content, as they were gathered from a number of small scale producers. It is quite paradox to observe that hides imported from U.S.A. were considered to be of the poorest quality. Some of the black leather was brown-coloured on the flesh side and the black finish peeled off on lasting or wearing to reveal the brown coating underneath. The wet-blue hides were of low area yield as a result of branding marks on butt areas. Considerable amounts of wet-blue hides were attacked by mould, and some wet-blues were even found to have raw streaks in the center. 1/

130. Goat and kid skins produced in the Hangkow district are of superior quality, and about 20 million pieces are exported per annum. The goat skins produced in Sichuan are better than those produced in other areas. Goat and kid leather produced in China is mainly used to make shoes for export, while the rest is used to produce garment and gloving leather. Goat skins of lower grades are vegetable tanned for linings. Most sheepskins produced in China are dressed for furs, and the exploitation of sheepskins for leather production is of low priority.

Production of pigskin leather

131. In early 1950s, the government decided that production of leather and leather products should be expanded in order to meet increasing domestic demand. The main problem which had to be resolved at that time was the availability of raw materials. Policy discussions revealed that the only possibility lay in enhanced utilization of pigskins. There is a traditional culinary habit of eating pork among the Chines population (except Moslems), and pigs are raised almost by every peasant family. Moreover, the reproduction rate of pigs is much higher than that of cattle, however, the skin off-take rate is still low for pigs. The facts clearly indicated that the largest potential resource of raw material which could be explored for the tanning industry in China is pigskins.

132. Feasibility studies on developing the manufacture of leather from pigskins revealed the fact that they are rarely used as the raw material for tanning in western countries. There are two main constraints which are

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1/ "Leather Technology and Science", No.1, 1983.

responsible for this, the first economic and second technological in nature. If carcass skinning is required by the tanning industry, instead of scalding, the abattoirs would have to take into consideration investment in equipment for skinning, the hygienic conditions and market for skinned pork meat, the price of skins that tanneries can pay etc. Abattoirs would then remove the skin only if their total revenue is increased. The paradox is that the price of pigskins asked by the abattoirs is always a bit higher than that which the tanners can afford to pay, and a compromise has been reached between abattoirs and tanneries in a common interest for developing pigskin leather manufacture. Secondly, as is well known, pigskins have a characteristic grain pattern which does not generally appeal to the consumers' taste, and the fibrous structure of pigskins is markedly different from those of bovine hides and ovine skins. Pigskins have a shell area of very high fiber density and firm structure, while the fibrous texture in the butt part is extremely loose (especially for skins taken from female pigs, as a sow may bear ten or more embryo pigs during pregnancy). The minimization of topographical differences[2/] during leather processing is the crucial technical problem which is not yet resolved in western countries. A lack of economic incentive prohibits investing more funds for carrying out research and development activities to improve the technology of pigskin processing. On the other hand, even if efforts are not made by research and development activities to improve the aesthetic appearance of pigskin leather to suit the consumers' tastes and to minimize the topographical difference to increase area yield, the cost of pigskin leather production will never bring higher profits to the abattoirs to convert from scalding to skinning. This dilemma, presently occuring in western countries, may account for the scarcity of pigskins utilized to make leather.

133. China has a centrally planned economy. The government studied the problem from quite a different point of view from countries with market economies. The issues to be considered for the development of pigskin leather production were as follows:

2/ The common practice resorts to liming and reliming to loosen the fibrous structure in the butt area of pigskins. But whenever lime liquor exerts its action on the fiber bundles in the butt area, simultaneous reaction occurs in the belly parts, and render their fiber texture even looser. Evidently this process cannot minimize the topographical difference and exaggeration may occur in certain cases.

(a) Prime importance was attached to the problem of meeting the increasing demand of leather products in the domestic market;

(b) Since all factories and enterprises are owned nationally, the decrease of financial return of the abattoirs could be balanced by the profits gained in the tanneries (if any) and the factories producing leather products (which are generally profitable). If the overall balance was financially profitable, the project would be considered to be economically viable. For those projects which have good prospects, but the overall balance may be not economically beneficial within a reasonable time limit, the government will pay a subsidy to support it, in order that the project can realize its feasibility;

(c) Given the fact that the leather products industry is labor-intensive, whereas the tanning industry is capital intensive, but labour-intensive work methods can be utilized, the expansion of leather and leather products production will offer more employment opportunities. This benefit has been taken into account in development plans for this sector.

134. Based on the above considerations, the government has taken the following measures to develop pigskin leather production:

(a) In order to facilitate pig skinning in abattoirs, the government has determined that skins taken off from animals be sold to tanneries at the same price as pork meat. Thus, most of the impediments of financial nature have been eliminated. The government set a quota for every province to indicate the skin off-take per annum, and is responsible for the distribution of these pigskins (wet-salted after fleshing) to the tanneries;

(b) The government pays a subsidy to tanneries to offset the higher cost of raw material, and imposes no tax on pig leather;

(c) The government expanded the production of pig leather footwear and encouraged the production of other leather products to use pig leather as the basic material instead of bovine and sheep/goat leather;

(d) The government planned and implemented a number of projects to develop the technology for processing pigskins, thus many technical innovations occurred which have been adopted by tanneries in their production process;

(e) The overall benefits of the development project of pig leather production has been assessed and balanced annually by the government. The quotas for skin off-take and leather production to indicate for every year have been principally based on the annual final account from the previous year.

135. Since the promotion of pig leather production in the early 1950s, the development in the leather industry has been significant, the following may serve as illustration:

(a) Pigskin production has increased from a few million pieces in the early 1950s to 80 million pieces in 1980. A total amount of 500 million pieces of pigskin have been produced over the period 1950-1980 [3], which is equivalent to 125 million pieces of bovine hides;

(b) With pigskins as the most important raw material, leather production has been able to increase to about 1000 million ft^2 per annum presently, of which at least 75% is pig leather;

(c) There are 3163 factories in the leather industry sector in 1982, a total amount of 560,000 workers are employed in these factories [4];

(d) Almost all types of leather produced using bovine or ovine leather originally, are now being produced by using pig leather as the basic material. Pigskins are now used for:

136. Shanghai is one of the most important centers of leather production in China, and is presented as a case to point. In 1982, 2.84 million pieces of pig leather were produced[5], with the product mix being as follows: [6]

Upper leather aniline	12.4%
Upper leather pigmented	38.1%
Garment suede	18.4%
Ball leather	6.4%
Leather for luggages etc.	6.6%
Industrial glove leather	5.0%
Lining leather	5.3%
Sole leather (veg.tanned)	8.3%

Approximately two thirds of the pig leather is used in the production of various kinds of leather products for export, and a corresponding return of U.S. $11.0/pc. pig leather was earned by export of these fabricated products.

137. There have been disputes as to whether pigskins should be consumed as food to supplement human protein needs, rather than as a raw material for tanning. The nutritional value of pigskins for food was investigated. It was found that all animal skins are composed mainly of collagen, and collagen lacks some essential amino acids like tryptophan, tyrosine and cysteine on the one hand but has an abundance of glycine and arginine on the other hand. This causes nutritive amino acid imbalance with a consequent loss of body mass. Some product of collagen-based diet supplemented with tryptophan were used for treatment of obesity, however, the diet has induced several clinical problems including cardiac arrhytmia, debydration, hypocalcemia and muscle weakness. [7]

3/ "Hebei Leather", No.2, 1983 (in Chinese).
4/ "Leather Technology and Science" (in Chinese), supplementary issue of 1982.
5/ "Shanghai Economy" (in Chinese), 1982.
6/ "Leather Technology and Science" (in Chinese), No.8, 1982.
7/ "Fibrous Proteins", edited by D.H.D. Parry and L.K. Creamer, 1979.

138. It can be concluded that China has made rather large strides in developing pig leather production. This has enabled the leather and leather products industry in China to expand its production capacity to cope with the increasing demand of the domestic market, mainly by exploring the utilization of pigksins as an alternative resource to traditional raw material. However, when judged from the industrially developed countries' point of view, the effective utilization of pigskins and financial efficiency of the production is still of low order. These deficiencies have been realized and research programmes are being directed to the enhancement of product quality by joint efforts undertaken by tanneries in co-operation with leather colleges. There are two colleges with specialized leather department in China; the Scientific and Technological College in Chengdu and the North-Western College of Light Industry in Sian. In addition, the government also encourages the transfer of modern technical know-how and managerial expertise from developed countries to increase the yield of the higher manufacturing value added end products. Improvement of raw skin quality is also considered indispensable to China's efforts. Experiments to raise new varieties of pigs by cross-breeding are undertaken in the animal husbandry sector with the objective of producing pigs which yield more meat, less fat as well as a skin of finer grain and more level substance.

Production of tanning chemicals

139. China produces most of the tanning chemicals required by the leather industry. Only some of the most technically sophisticated specialized chemicals are not produced in the country. These chemicals may be classified into three categories in accordance with the sources of production:

(a) Basic chemicals produced and supplied by the chemical industry. In this case, the leather industry's consumption forms only a small portion of the production;

(b) Tanning chemicals produced and supplied by chemical plants established in the leather industry sector;

(c) Chemicals of more sophisticated nature which are being produced only in pilot plant scale, most of which have been started recently, along with the development of the petro-chemicals industry.

The production of leather shoes and allied materials

140. The production of leather shoes for domestic market and exports from

China, as published by FAO [8], are generally in agreement with those provided by publications written in Chinese. Hence, FAO data are quoted as follows:

Production of leather shoes, all types (1982): 220.0 (mill. pairs)
Export volumes of leather shoes, all types (1982): 28.0 (mill. pairs)
Export value of leather shoes, all types (1982): 118.0 (mill. US$)
Apparent availability of leather shoes, all types (1982): 192.0 (mill. pairs)

141. The production of footwear in Shanghai is considered to be of the highest economic efficiency in China. In 1982, Shanghai produced a total amount of 13.2 million pairs of leather shoes of which 3.20 million pairs were for export. [9]

142. To meet the increasing demand of the domestic market is a heavy task for the leather footwear industry in China. For the majority of consumers in the countryside and city, heavy-duty durable shoes of moderate price are required. From the pragmatic point of view, the process of producing pig leather shoes with directly molded rubber soles have been developed since the early 1960s. The pigskins are chromed to give an higher content of Cr_2O_3 so that they will stand the higher temperature necessitated for rubber vulcanization during sole attachment. The pig leather thus produced is cut and closed to form uppers which are pulled on lasts made of aluminum. The rubber, after milling with various ingredients as specified by the recipe, is cut into doughs of proper weight and placed into the moulds. Then the Al-lasts with the uppers on are put in direct contact with the moulds and pressed, while moulding of the rubber sole with simulataneous attachment to the upper occurs by heating and accelerated vulcanization. The heating process only take a few minutes, then the whole set is cooled, and shoes pulled out for finishing. These types of shoes made by the direct moulding process have been produced in large volumes. They are sold at very moderate prices in the domestic market, equivalent to only U.S. $3.5-4.0/pair.

143. Shoes of higher quality are made of bovine leather (mostly grain corrected and embossed with delicate patterns), cemented soles are usually

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8/ FAO World Statistical Compendium for Raw Hides and Skins, Leather and Leather Footwear, 1961-1982.

9/ "Shanghai Economics", 1982 (in Chinese).

used for this type of footwear. Rubber soles are generally preferred by consumers as they are more durable and water resistant than leather soles. Shoes made with the goodyear welting process with leather soles are regarded as luxury dress shoes, and are produced in smaller quantities.

144. Goat and kid leather is used mostly for dress shoes as well as sports shoes for export. This footwear is produced according to the style and pattern requirements of the exporter. Pigskin nubuck and suede lined with kid leather are used for hiking and jogging shoe uppers. The production of hiking shoes has increased considerably in recent years, as they are demanded both by export and domestic markets and can be priced a bit higher because they are more comfortable to wear than the direct moulded rubber sole shoes.

145. The productivity of the leather shoe industry has been increased significantly in western countries because shoe manufacture has developed into a kind of assembly industry over the past two decades. The ready made shoe component parts and materials are provided either by specialized producers or separate workshops specially equipped, under the supervision of the footwear factory. However, the productivity of the leather shoe industry in China is low since this industry is being transformed from traditional handicraft work methods to the modern ways of mass production, and time is needed to accomplish this transformation. For the time being, in respect to the provision of shoe component parts and auxiliaries there is a complex situation, as some are produced by specialized factories, some are made in separate workshops, and some are still prepared by footwear workers in the traditional way.

146. Among the variety of materials used for shoe making, the following articles are produced and supplied to the shoe industry by specialized factories which belong to the leather industry sector or allied industries in China:

lasts and heels (wooden and plastic)
rubber soles and heels
fabrics for lining
insole material (non-woven material impregnated with thermo-setting resins)
laces
shanks
zippers

metallic fittings

neoprene adhesives and isocyanate hardeners

With the recent development of petrochemicals and plastics industries in China, chemists and technologists are now engaging in the experiments for the production of unit moulded sole (TR and PU) and hot-melt adhesives, so it is expected that new materials could be added to the above list.

Conclusion

147. With the gradual opening of the country, international co-operation in respect of sub-contracting or finishing raw materials in China to produce finished leather, leather garments, leather footwear and leather goods are on the increase, and joint ventures are increasingly being contemplated. China's policy of trading with the rest of the world is largely dependent on its requirement of foreign exchange for development purposes.

148. In recent years, China is emerging as a major producer of leather products. In 1982 it was the leading importer of U.S. leather, principally wet blues which accounted for 26% of U.S. leather exports. The best quality leather is from tanneries and manufacturers producing goods under licence from European companies, which are in effect "off-shore" production facilities established by them to service their own domestic and export markets. The most important products of these plants are leather clothing and footwear.

149. Hide imports by China are being affected by the growing congestion in China's major ports and shortage of warehouse storage space. It is therefore proposed to increase the ratio of wet blue hides to 80% of total bovine hide imports, since these are more suitable for long term storage, especially during the summer. As a consequence, it is expected that imports of wet salted or brine cured hides will fall.

150. China could be the subject matter of an individual study, as not very much is known about this country's leather footwear and leather products industries, apart from the fact that today China is one of the leading exporters of pig skin industrial leather gloves to the EEC countries and America.

151. From the point of view of international co-operation, China would be in a very advantageous position, especially in the field of leather products where manual work is contemplated. China's vast human resources will act as a great catalyst for future joint ventures.

PAKISTAN

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	15.084	4,16%	1.493 (1.90)*	9,9% (12.6)
Buffaloes	11.794	10,0%	2.203 (3.00)*	18,7% (25.4)
Goats	32.808	12,08%	17.716 (13.50)*	54,0% (41.1)
Sheep	28.468	8,50%	11.956 (10.50)*	42,0% (36.9)

* Estimates of actual production for 1982, of hides and skins obtained from industry sources in Pakistan.

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	29.86	million	square feet
Buffalo leather	44.06	"	"
Goat skin leather	88.58	"	"
Sheep skin leather	59.78	"	"
Total	222.28	million	square feet

Human population 1981: 89,416 million people

= 3.41% of total Asian population

Pakistan has the sixth largest human population in Asia.

Theoretical potential leather production	222.3 million sq.ft.
Exports of bovine leather	20.0 " " "
Exports of sheep and goat leather	70.0 " " "
Production of leather shoes	39.0 million pairs
Export of leather shoes	0.7 " "
Export of bovine hides and skins	n i l
Export of sheep and lamb skins (dry weight)	100 tons

The tanning sector

152. The leather and leather products industry represents one of the most important industrial sectors in the country. It contributes approximately 4 per cent to the GDP and ranks as the fifth export earning sector. The industry is widely dispersed all over the country, and has six main activities: tanning and finishing, footwear manufacture, garments manufacture, gloves manufacture, leather sports goods manufacture and leather goods manufacture.

153. The tanning industry represents the largest activity in the sector and it has an ample capacity to process leather up to the wet-blue stage, while prefinishing and finishing is done only to a minor portion of the wet-blue material. It is in the interest of the Government and the industry to further increase the sector's capacity towards prefinishing and finishing operations.

154. There are approximately 200 tanneries in the country. These are concentrated around Karachi for skin processing, and around Lahore for hide processing while individual units exist in Hyderabad, Multan and Peshawar.

155. The tanning sector is fairly young in terms of exposure to modern techniques, particularly for finishing operations. For skins, the bulk of raw material is processed by fairly large tanneries which together consume more than 70 per cent of the raw stock while leaving about 30 per cent for medium and small scale units. In case of hides, more than 50 per cent of the raw stock is processed up to the finished stage, employing low technological levels. This situation results in a very limited quantity of high quality finished leather available either for exports or for further manufacture by the leather products industry.

156. Among large scale tanneries, only two joint venture units rely directly on overseas partners for the flow of technology, while other units are obtaining technology through constant contact with foreign buyers as well as chemical and machinery suppliers. These means of technology transfer are not, however, available to the bulk of the tanning sector.

157. Process control and finished product quality control receives minimal attention by the industry as a whole. On the national level, the introduction of quality control techniques are not yet introduced at the production floor level in most tanneries.

158. Another problem is the limited number of qualified leather technologists available in the country. The Institute of Leather Technology in Gujranwala and the Pakistan Council for Scientific and Industrial Research offer only general training in tanning. Further specialized training on finishing techniques is very much required by the sector in order to support the required development for finishing of leather.

The footwear industry

159. The footwear subsector is the main consumer of leather material in the domestic market. Approximately 60 per cent or more of the country's footwear is manufactured at the cottage level, and leather is used in almost all components. The large- and medium-scale manufacturers account for about 40% of installed capacity, and use both leather and man-made materials for their production.

160. Footwear manufacture at the large scale is undertaken by three major companies, and they do not encounter serious problems as far as production, marketing or materials are concerned.

161. Some 20 factories operate at the medium scale, and their production is mainly oriented towards cheaper types of footwear, using locally made components of modest quality. Managerial capabilities as well as shortage of trained production supervisors and formen, are the main factors affecting the performance of this part of the sector.

162. The small-scale and cottage type units are widely scattered all over the country and oriented to manufacture fashion shoes applying hand working techiques. Their performance is seriously affected by low productivity and usage of unsuitable materials and components in making shoes.

163. Design aspects, starting from last making, pattern-making and pattern grading is another drawback having an adverse on the form and construction of shoes.

Leather goods

164. The manufacture of leather sports goods such as soccer balls, footballs, baseballs, rugby balls etc., is entirely located in Sialkot. This subsector incorporates small and medium size units totally oriented to the export market. The subsector operates with manual techniques with successful sub-contracting arrangements. Its main problem lies in the availability of specific types of leather suitable for the very specific needs of the goods produced. More than 50 per cent of leather supply for sports goods is manufactured without the technology and testing facilities needed for the specific quality requirements of the sports goods industry.

165. Leather garments are manufactured on small or medium scales, and all the production is oriented for export, being concentrated mainly in Karachi. There are some 20 factories manufacturing leather jackets, coats and other fashion articles and some of the units are associated with the large skin tanneries. With some exceptions, the manufacturing process is characterized by tailoring coperations, not modern process line manufacturing. Due to the marked increase in the demand for leather garments, more than 20 large scale factories are being planned, a matter which invites intensified technical co-operation on management, production planning and production control aspects, in order to enable the industry to cope with the planned developments.

166. The raw material used by the industry is confined to sheep and goat skins. This causes higher production costs, due to higher waste and extensive matching work. Bovine leather is not used for garment production in Pakistan, despite the possibility that this could yield more economical production due to lower waste and less matching effort.

167. Leather gloves are manufactured mainly for export and consist of industrial gloves, sports gloves and dressing gloves. Production is concentrated in Sialkot, which produces 70-80 per cent of the country's output. Production of formal or dress gloves as well as high quality golf gloves is not yet developed in Pakistan, despite attractive marketing prospects and available local material. Greater skills are also needed for this particular line and this is not available in the country.

168. The manufacture of leather goods such as wallets, purses, ladies bags and the like, is undertaken on a very limited basis. With the exception of six small units engaged in the manufacture of appropriate lines for domestic market, production reflects low levels of design and manufacturing capabilities, using materials which are ill-suited for the purpose.

169. The industry activities towards expansion and development are hampered by constrains of skilled labour as well as availability of suitable technology and components. The leather products development Centre in Karachi is attempting to overcome this constraint by providing theoretical and practical training in the design and manufacture of leather goods and leather garments.

IRAN

Raw material availability, in quantative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	8.139	2,24%	1.954	24,0%
Buffaloes	220	0,19%	65	29,5%
Goats	13.709	5,05%	3.620	26,4%
Sheep	34.377	10,26%	13.350	38,8%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	46.11	million	square feet
Buffalo leather	2.18	"	"
Goat skin leather	21.72	"	"
Sheep skin leather	86.11	"	"
Total	156.12	million	square feet

Human population 1981: 39,320 million people

= 1.50% of total Asian population

Theoretical potential leather production	156.1 million sq.ft.
Exports of leather	n i l
Production of leather footwear	30.0 million pairs
Export of leather footwear	n i l
Exports of bovine hides and skins (wet salted)	100 tons
Exports of sheep and lambskins (dry weight)	10,000 tons
Exports of goat and kind skins (dry weight)	5,000 tons

170. Iran is the fourth largest potential leather producer in developing Asia. Under the Melli group, modern tanneries and shoe factories were developed with foreign collaboration, these are currently state-owned. However, at present, there is no information available on the status of the sector, its development potential or prospects for international co-operation.

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, vol 35

Data for 1981

	Livestock population 1981 (1000 heads)	Figures given by D Winters	% of total Asia	Hides & Skins (slaughterings) potential recovery 1000 pieces	Off-take rates in % calculated	% D.W.	Hides & Skins production estimated by D.Winters (1000 pcs.)
Cattle	35,000	23,000	9.65%	2100	6.0%	15.2%	3500
Buffaloes	1,600	900	1.36%	34	2.1%	8.9%	80
Goats	11,800	9,000	4.34%	4600	39.0%	90.0%	8100
Sheep	1,070	400	0.32%	200	18.2%	50.0%	200
							11.880

Human population 1981 - 90,693 million people (3.46% of total Asia)

Bangladesh is the fifth largest Asian country, in human population.

Potential leather production (theoretical)
(in million square feet)

if all potentially available hides and skins were tanned

	Based on FAO's data	Based on D. Winters' data
Bovine leather	41.37	70.0
Buffaloe leather	0.67	2.4
Goat skin leather	17.02	30.0
Sheep skin leather	0.90	0.9
	59.96 mill. sq.ft.	103.3 mill. sq.ft.

Theoretical potential leather production	103.3 million sq.ft.
Exports of bovine leather	55.0 " "
Exports of sheep and goat leather	30.0 " "
Production of leather shoes	4.0 million pairs
Exports of leather shoes	n i l
Exports of hides and skins	n i l

171. The origin of the tanning industry in Bangladesh is the same as in India and Pakistan. It is the same community in all the three countries which is involved in the hide, skin and leather business. At the time Bangladesh won its independence from Pakistan most of the owners of the East Pakistani tanneries migrated to West Pakistan, creating an enormous problem with regard to running the tanning industry. Subsequently, a substantial part of the tanning industry was nationalized and the rest was run by new entrepreneurs mostly exporting wet blue, cow and goat leather, until the recession had an adverse effect in 1978-79.

172. Currently, a majority of the tanners in Dhaka and Chittagong are engaged in the processing of wet blue hides and skins, while a couple of tanners in Chittagong are engaged also in the manufacture of crust and finished leather. The biggest problem of the industry has been its inability to sell its wet blue production with any regularity at workable prices. The industry has often resorted to distress selling.

173. The best known raw material from Bangladesh is the small fine grained Kushtia goat, used mainly by Italian dressers for manufacturing high grade upper leather. The cow hides in Bangladesh are of better quality than that of the rest of the Indian sub-continent, since most of them are taken from animals slaughtered for meat, as Bangladesh is a Muslim country, which no religious taboo on cattle slaughter.

174. The Government of Bangladesh has a development programme for upgrading 13 existing units for production of crust and finished leather. In Dhaka there are only four tanneries equipped with modern machinery - two for goat skin finishing and two working on bovine raw material. The majority of tanning chemicals and auxiliaries are imported and the import duty is 50-70% plus a sales tax of 20%. This in itself is a major constraint.

175. The country suffers from a difficult balance of trade position. The only foreign company existing in Bangladesh is BATA who would be substantially expanding their capacity with loans from the International Finance Corporation. To allevate the difficulties of selling wet blue and crust leather there seems to be scope for international co-operation for a wet blue/finishing complex and for manufacture of leather footwear and leather goods, preferably on a buy-back basis.

AFGHANISTAN

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	3.800	1,05%	615	16,2%
Buffaloes	0	0	0	0
Goats	3.000	1,10%	1.600	53,3%
Sheep	20.000	5,97%	7.000	35,0%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	19.26 million square feet
Buffalo leather	0 " " "
Goat skin leather	5.76 " " "
Sheep skin leather	45.50 " " "
Total	70.51 million square feet

Human population 1981: 16,347 million people

= 0.62% of total Asian population

Theoretical potential leather production	70.5 million sq.ft.
Exports of bovine leather	2.7 " " "
Exports of sheep and goat leather	8.5 " " "
Production of leather shoes	10.0 million pairs
Export of leather shoes	n i l
Export of bovine hides and skins (wet salted)	13.500 tons
Export of sheep and lamb skins (dry weight)	1.700 tons

176. Afghanistan ranks sixth in potential production of leather in developing Asia. The total theoretical availability, if all available hides and skins are tanned, would be in the region of 70.5 million sq.ft. Production of leather shoes are about 10 million pairs per annum, almost all of which are consumed domestically.

177. For its size, Afghanistan is prolific in sheep and has always been known for its karakul, which produces a soft and ideal fur that is exported internationally. The best karakul is made out of slaughtered still born sheep kid. The tanneries are medium and small sized, and although they are not modern, they have processing facilities primarily for pickled and wet blue hides and skins, and to a limited extent for finishing and fur processing capacity. The tonnage of cattle hides and skins currently being exported, in the raw state could be economically harnessed for industrial processing.

MONGOLIA

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	2.397	0,66%	450	18.8
Buffaloes	0	0	0	0
Goats	4.567	1,68%	1.300	28.5
Sheep	14.231	4,25%	4.412	31.0

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	16.43 million square feet
Goat skin leather	11.70 " " "
Sheep skin leather	36.62 " " "
Total	64.75 million square feet

Human population 1981: 1.716 million people

= 0.07% of total Asian population

Despite its great development potential, no updated information was available to UNIDO or the writer, on the industrial situation in this sector, in Mongolia.

INDONESIA

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	6.435	1,77%	840	13,1%
Buffaloes	2.506	2,12%	224	8,9%
Goats	7.925	2.92%	3.988	50,3%
Sheep	4.196	1.25%	2.300	54,8%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	29.82 million square feet
Buffalo leather	7.95 " " "
Goat skin leather	15.95 " " "
Sheep skin leather	10.35 " " "
Total	64.07 million square feet

Human population 1981: 150,520 million people

= 5.73% of total Asian population

Indonesia is the third largest country of Asia, in human population.

Theoretical potential leather production	64.1 million sq.ft.
Exports of oflight bovine leather	0.4 " " "
Exports of light sheep and goat leather	7.5 " " "
Production of leather shoes	8.0 million pairs

Exports of leather shoes	0.1 million pairs
Exports of bovine hides and skins (wet salted)	400 tons
Exports of sheep and lamb skins (dry weight)	200 tons
Exports of goat and kid skins (dry weight)	1000 tons

178. Indonesia has numerous tanneries, primarily producing wet blue skins. Golf gloves are manufactured with Japanese collaboration. Leather shoes are consumed primarily in the home market. A certain amount of reptile skins are also exported in the raw stage.

SYRIA

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	817	0,23%	276	33,4%
Buffaloes	2	0,002%	1	50,0%
Goats	1.200	0,44%	398	33,2%
Sheep	11.738	3,50%	5.204	44,3%

Potential leather production (theoretical)
(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	6.79 million square feet
Buffalo leather	0.02 " " "
Goat skin leather	2.39 " " "
Sheep skin leather	39.03 " " "
Total	48.23 million square feet

Human population 1981: 9,331 million people

= 0.36% of total Asian population

Theoretical potential leather production	48.2 million sq.ft.
Exports of bovine leather	1.0 " " "
Exports of light sheep and goat leather	7.0 " " "
Production of leather shoes	1.3 million pairs
Exports of leather shoes	0.3 million pairs
Exports of bovine hides and skins (wet salted)	400 tons
Exports of sheep and lamb skins (dry weight)	100 tons

179. In terms of potential leather production, Syria ranks ninth in developing Asia. With a sheep population of over 11 million heads, its main exports are light sheep leather. According to the last information available, there is one main Government owned tannery and one private tannery in the north. There is also one Government owned shoe factory. Cattle and buffaloes are few in number, and 5500 tons of wet salted bovine hides and skins were imported in 1982. According to the FAO World Statistical Compendium data, 500 tons (dry weight) of sheep and lambskins and 100 tons (dry weight) of goat and kid skins were also imported in 1982 while at the same time 400 tons of wet salted bovine hides and skins and 100 tons (dry weight) of goat and kid skins were also imported in 1982 while at the same time 400 tons of wet salted bovine hides and skins and 100 tons (dry weight) of sheep and lambskins were exported from Syria. Since data on this country is somewhat limited, it may be worthwhile to further study the scope for development and International Co-operation.

THAILAND

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	5.062	1,40%	831	14,4%
Buffaloes	6.299	5,34%	289	4,6%
Goats	31	0,01%	15	48,4%
Sheep	64	0,02%	32	50,0%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	23.39 million square feet
Buffalo leather	9,25 " " "
Goat skin leather	0.12 " " "
Sheep skin leather	0.22 " " "
Total	32.98 million square feet

Human population 1981: 48,520 million people

= 1.83% of total Asian population

Thailand has the ninth largest human population in Asia.

Theoretical potential leather production	33.0 million sq.ft.
Exports of bovine leather	9.0 " " "
Exports of sheep and goat leather	0.1 " " "
Production of leather shoes	12.0 million pairs
Exports of leather shoes	2.0 million pairs

Exports of bovine hides and skins (wet salted)	500 tons
Exports of goat and sheep skins	n i l

180. Thailand ranks tenth in potential leather production in developing Asia. Tanning capacity in 1976 was officially estimated at 30,000 tons and is estimated to have risen by about 12% in 1981.

181. Australia has been a traditional supplier of raw hides (fresh, pickled, salted or limed) to Thailand, and this trade was growing until lower slaughterings in Australia cut down the supply. Thai tanners favour untanned hides of middle quality as:

(a) there is little local demand from manufacturers for top quality leather, and

(b) Thailand does not currently have the equipment, technology or finishing materials to produce high quality leather.

182. The Thai Investment Board (TIB) is anxious to encourage overseas participation in this industry. Thailand's exports of bovine leather is primarily buffalo upholstery leather and goes mostly to Western Europe. The local footwear industry can produce goods with quality of international standards. Exports of footwear with outer soles and uppers of leather increased in volume by 442.3% and in value by 171.8% in 1980 over 1979.

183. The only other type of footwear competitive in overseas markets and in production and exports, are slippers and other indoor footwear. Footwear imports by Thailand have dropped to 417,054 pairs in 1980 from 802,048 pairs in 1977. On the other hand, exports have risen to 25,117,542 pairs in 1980 from 1,949,784 pairs in 1977. There has been rapid progress made in Thailand's Glove industry. In 1977, more than 11 million pairs of gloves were exported, and in the first three quarters of 1980, more than 19 million pairs were exported.

184. Thailand is also known for its snake and reptile skin industry. A new development is the export of chicken-leg skin in many colours for small leather goods. Co-operation with France in the development of finished exotic skins and goods is a distinct possibility.

IRAQ

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	2.624	0,72%	480	18,3%
Buffaloes	288	0,19%	29	12,7%
Goats	3.675	1,35%	1,083	29,5%
Sheep	11.650	3,48%	2,370	20,3%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	10.94	million square feet
Buffalo leather	0.66	" " "
Goat skin leather	5.96	" " "
Sheep skin leather	15.29	" " "
Total	32.85	million square feet

Human population 1981: 13,527 million people

= 0.52% of total Asian population

Theoretical potential leather production	32.9 million sq.ft.
Production of leather shoes	3.0 " " "
Exports of leather shoes	n i l
Exports of bovine hides and skins (wet salted)	200 tons
Exports of sheep and lambskins (dry weight)	1400 tons
Exports of goat and kid skins (dry weight)	400 tons

185. Iraq ranks eleventh in potential leather production in developing Asia. No updated information was available to UNIDO and the writer, on the industrial situation in this sector.

PHILIPPINES

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	1.900	0,52%	578	30,4%
Buffaloes	2.850	2,42%	275	9,6%
Goats	1.500	0,55%	644	42,9%
Sheep	31	0,01%	9	29,0%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	15.72 million square feet
Buffalo leather	7.48 " " "
Goat skin leather	3.54 " " "
Sheep skin leather	0.05 " " "
Total	26.79 million square feet

Human population 1981: 50,525 million people

= 1.92% of total Asian population

Philippines has the eighth largest human population in Asia.

Theoretical potential leather production	26.8 million sq.ft.
Exports of leather	n i l

Production of leather shoes	7.0 million pairs
Exports of leather shoes	3.0 " "

186. Philippines belongs to the intermediate group of leather producers in developing Asia, ranking twelfth. The ban of slaughter of water buffaloes (carabao) caused an acute shortage of hides and the already few operating tanneries had to operate at as low as 20% of their normal production.

187. Upto the 1970's there were 17 moderate sized mechanized tanneries almost wholly Filipino capitalized. Today there are only seven out of which three are indigenously owned firms.

188. There are three groups of tanners, the first being mentioned above. The second group are tanneries licensed by National Cottage Industry Authority (NACIDA). There are about 28 of these partly mechanized units who enjoy duty and tax exemptions. They produce the lower range of leathers such as linings, splits, cheap strap and belt leather. Despite the low value of these products, they yield a relatively high rate of profit.

189. The total annual production of leather for shoes, leather goods and industrial leather from these two groups is between 16-20 million sq.ft. and 400-500 tons of sole and insole leather is also produced.

190. About a 100 unmechanized tanneries form the third group, processing mostly buffalo hides and producing cheap leather for saddlery, sheaths, wooden sandals and slippers. Export of leather is practically nil. The only leather product exports of any consequence are shoes made in Marikina. Some leather goods are also exported. Domestic leather is also used in the manufacture of sports type shoes for export.

191. Exotic skin production is another important feature of the Philippines industry. However, local supply has been depleted owing to over-harvesting of sea snakes and lizards. Crocodile and aligator skins are no longer available in commercial quantities because of over exploitation since even before the Second World War. Endeavours are being made currently to procure raw materials from Thailand and Indonesia.

192. Owing the the poor performance in the tanning industry, arising out of a basic lack of raw materials, shoe makers have to import increasing amounts of their leather requirements, imports in the first half of 1981 rising to over US$ 11 million. Duties and taxes are inordinately high and threaten to throttle the Filipino tanner. For example, import duties of chemical products range from 20% to 90%. The fully industrialized tanneries are at a disadvantage as compared to the NACIDA tanneries, who enjoy tax and duty exemptions. Thus an industry which has the capability not only to supply the Filipino leather using industries but also to earn foreign exchange from exports is in a state of weakness, whereas shoe manufacturers and leather users import finished leather, the cost of which sometimes far outstrips the export value of leather products. Much can be done within this country to improve the situation especially by rationalized taxation.

YEMEN ARAB REPUBLIC

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	950	0,26%	100	10,5%
Buffaloes	0	0	0	0
Goats	7.500	2,76%	2.545	33,9%
Sheep	3.159	0,94%	873	27,6%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather 2.96 million square feet

Buffalo leather -

Goat skin leather	16.54	"	"
Sheep skin leather	6.11	"	"
Total	25.61	million square feet	

Human population 1981: 5,940 million people

= 0.23% of total Asian population

Theoretical potential leather production	25.6 million sq.ft.
Exports of leather	n i l
Production and exports of leather shoes	n i l
Exports of bovine hides and skins (wet salted)	1200 tons
Exports of sheep and lambskins (dry weight)	600 tons
Exports of kid and goat skins (dry weight)	2500 tons

193. Yemen Arab Republic is one of the intermediate producers of leather, ranking thirteenth in developing Asia. A large quantity of hides and skins are exported at the raw stage. There is scope for establishing a tannery here if suitable co-operation is found. Attempts are being made to obtain international co-operation by one of the small tanneries existing in the country.

BURMA

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	8.600	2,37%	640	7,4%
Buffaloes	1.950	1,65%	106	5,4%
Goats	625	0,23%	195	31,2%
Sheep	230	0,07%	77	33,5%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	19.84	million	square feet
Buffalo leather	3.29	"	"
Goat skin leather	0.98	"	"
Sheep skin leather	0.54	"	"
Total	24.65	million	square feet

Human population 1981: 36,116 million people

= 1.38% of total Asian population

Theoretical potential leather production	24.7 million sq.ft.
Exports of leather	n i l
Production of leather shoes	4.8 million pairs
Exports of bovine hides and skins (wet salted)	100 tons
Exports of kid and goat skins (dry weight)	100 tons

194. Two tanneries have been installed by the Government, one in Rangoon and the other in Mandalay, in the 'fifties. Both operate below installed capacity, although raw material imports have increased in order to meet export market for wet blue hides and skins. A third Government factory is barely operational, due to lack of appropriate machinery. There are 30 small tanneries in Rangoon who produce vegetable tanned leathers for chappals, sandals, bags, etc.

195. Facilities for proper collection of hides and skins have been insufficient, and consequently much of the leather potential is lost. Apart from the 480 licenced slaughter houses, there is a good deal of unofficial slaughter, which raises the hide and skin availability to about one million cattle and buffalo hides and 450,000 goat and sheep skins. The government has plans for increasing livestock holding, by 500 per cent and there is scope for the expansion of production of shoes and leather goods.

KOREA REPUBLIC (SOUTH)

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	1.531	0,42%	511	33,4%
Buffaloes	0	0	0	0
Goats	201	0,07%	127	63,2%
Sheep	6	0,002%	3	50,0%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	17.12 million square feet
Buffalo leather	-
Goat skin leather	0.89 " " "
Sheep skin leather	0.02 " " "
Total	18.03 million square feet

Human population 1981: 39,110 million people

= 1.49% of total Asian population

Theoretical potential leather production	18.0 million sq.ft.
Exports of light bovine leather	4.2 " "
Exports of light sheep and goat leather	2.0 " "
Production of leather shoes	33.0 million pairs
Exports leather shoes	18.0 " "

196. Korea, along with Taiwan Province of China, has an infrastructural capability for the manufacture of products based on raw materials primarily imported from developed countries. Korea's own livestock population is low, but in recent years, attempts have been made to increase both beef and dairy cattle populations, and large numbers of breeding stock are being imported every year.

197. There are 51 major mechanized tanneries with an installed capacity of 25,640 hides a day. The largest tanneries still run almost exclusively on imported hides with a growing tendency to purchase wet blue and crust. The smaller mechanized and artisan tanneries use the bulk of the Korean hides. 80% of hide imports are from the U.S. and Canada. The global recession has affected the industry and tanneries are still operating at 15 to 30% below capacity. There are about 450 leather shoe manufacturers, mostly in the small and medium scale levels. Production has rapidly increased from 3.3 mill. pairs of leather shoes in 1970 to 33.0 mill. pairs in 1982. There are several leather garment manufacturers, many of whom also make gloves, but there are about 15 manufacturers specialising in the whole gloving range, from dress gloves and work gloves to gloves for all sports. There are 30 export oriented handbag manufacturers, some of them producing combination leather and synthetic goods. Considerable imports of leather are needed to sustain finished goods production. Most tanning chemicals and special auxiliaries are imported, primarily from the Federal Republic of Germany.

VIET NAM

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	1.765	0,44%	260	14,7%
Buffaloes	2.378	2,02%	300	12,6%
Goats	200	0,07%	100	50,0%
Sheep	15	0,005%	8	53,3%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	7.80	million	square feet
Buffalo leather	9.00	"	"
Goat skin leather	0.65	"	"
Sheep skin leather	0.06	"	"
Total	17.51	million	square feet

Human population 1981: 54,968 million people

= 2.09% of total Asian population

Viet Nam has the seventh largest population in Asia.

Theoretical potential leather production 17.5 million sq.ft.

198. Like Thailand, Viet Nam's cattle population consists to a large extent of buffaloes. The country ranks sixteenth in developing Asia, in terms of its raw material base. There is little available data with respect to the country's leather and leather products industry.

SAUDI ARABIA

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	410	0,11%	180	43,9%
Buffaloes	-	-	-	-
Goats	2.043	0,75%	600	29,4%
Sheep	4.201	1,25%	1,234	29,4%

Potential leather production (theoretical)
(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	3.91 million square feet
Buffalo leather	-
Goat skin leather	3.90 " " "
Sheep skin leather	8.02 " " "
Total	15.83 million square feet

Human population 1981: 9,319 million people

= 0.36% of total Asian population

Theoretical potential leather production	15.8 million sq.ft.
Exports of leather	n i l
Production of leather shoes	0.5 million pairs
Exports leather shoes	n i l
Exports of bovine hides and skins (wet salted)	300 tons
Exports of sheep and lambskins (dry weight)	600 tons
Exports of goat and kid skins (dry weight)	400 tons

199. Saudi Arabia ranks seventeenth in potential leather production in developing Asia. Not enough data is available on this country.

NEPAL

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	6.973	1,92%	54	0,77%
Buffaloes	4.267	3,62%	147	3,44%
Goats	2.525	0,93%	1.167	46,2%
Sheep	2.397	0,72%	766	32,0%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	1.32	million	square feet
Buffalo leather	3.59	"	"
Goat skin leather	4.67	"	"
Sheep skin leather	3.45	"	"
Total	13.03	million	square feet

Human population 1981: 14,617 million people

= 0.56% of total Asian population

Theoretical potential leather production	13.0 million sq.ft.
Exports of leather	n i l
Production of leather shoes	0.. illion pairs
Exports leather shoes	n i l
Exports of bovine hides and skins (wet salted)	10,100 tons
Exports of sheep and lambskins (dry weight)	300 tons
Exports of goat and kid skins (dry weight)	600 tons

200. Nepal ranks eighteenth in potential leather production in developing Asia. A new tannery, which was opened in March 1982 in Nepal is the largest single industrial unit in the country. Much of the raw material that is processed into wet blue and chrome crust leather comes from India. In order to supply meat for human consumption and hides for the tannery, hundreds of buffaloes are driven across the Indian border, and slaughtered in Nepal.

201. The most soundly established tannery in Nepal is situated in the South and concentrates on wet blue goat skins for further processing. Another two tanneries are under the same ownership and produce only wet blue chrome tanned kid, 75% of the raw materials for which are imported from India and 25% of which arrive across the border 'on the hoof'.

202. Although Nepal has been classified in the intermediate category, it is a borderline area and could be the subject matter of a very interesting evaluation as an example of international co-operation for other Asian countries of the smaller category. At present, a joint project is being contemplated by the Federal Republic of Germany, Nepal and the People's Republic of China with a capacity for ultimately producing 30,000 wet blue hides per month. If the collaboration proves successful, the next step would be to set up a finishing unit and plan a leather goods complex around this unit.

KOREA DPR (NORTH)

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	690	0,26%	210	21,9%
Buffaloes	-	-	-	-
Goats	245	0,09%	77	31,4%
Sheep	300	0,09%	97	32,3%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	7.04	million	square feet
Buffalo leather	-		
Goat skin leather	0.54	"	"
Sheep skin leather	0.63	"	"
Total	8.21	million	square feet

Human population 1981: 18,317 million people

= 0.70% of total Asian population

Theoretical potential leather production 8.2 million sq.ft.

203. North Korea is potentially one of the smaller producers of leather in developing Asia, ranking nineteenth. There is very little information available about this country apart from the fact that it is deficient in leather and has been known to import leather.

KUWAIT

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	11	0,003%	18	163,6%
Buffaloes	-	-	-	-
Goats	110	0,04%	31	28,2%
Sheep	158	0,05%	757 (imports)	479,1%

Potential leather production (theoretical)
(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	0.41 million square feet
Buffalo leather	-
Goat skin leather	0.20 " " "
Sheep skin leather	5.30 " " "
Total	5.91 million square feet

Human population 1981: 1,426 million people

= 0.05% of total Asian population

Theoretical potential leather production 5.9 million sq.ft.

204. Kuwait's own livestock population is very small. A certain number of sheep skins and cattle hides are obtained from imported livestock but there does not appear to be much potential for the development of a leather industry.

YEMEN DEMOCRATIC

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	120	0,03%	14	11,7%
Buffaloes	-	-	-	-
Goats	1.350	0,50%	420	31,1%
Sheep	987	0,29%	413	41.8%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	0.41 million square feet
Buffalo leather	-
Goat skin leather	2.52 " " "
Sheep skin leather	2.89 " " "
Total	5.82 million square feet

Human population 1981: 1,906 million people

= 0.07% of total Asian population

Theoretical potential leather production	5.8 million sq.ft.
Exports of leather	n i l
Production and exports of leather shoes	n i l
Exports of bovine hides and skins (wet salted)	200 tons
Exports of sheep and lambskins (dry weight)	300 tons
Exports of goat and kid skins (dry weight)	400 tons

205. Yemen Democratic Republic exports a certain quantity of raw hides and skins. There is one industrial tannery and one medium scale footwear factory in the country. The tannery is not yet able to supply all types of leather required for footwear manufacture. As a result, the shoe factory has to import part of its leather requirements.

CYPRUS

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	41	0,01%	18	43,9%
Buffaloes	-	-	-	-
Goats	360	0,13%	307 (imports)	85,3%
Sheep	525	0,16%	394 (imports)	75,0%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	0.73 million square feet
Buffalo leather	-
Goat skin leather	2.15 " " "
Sheep skin leather	2.56 " " "
Total	5.44 million square feet

Human population 1981: 0,623 million people

= 0.02% of total Asian population

Theoretical potential leather production	5.4 million sq.ft.
Exports of leather	n i l
Production of leather shoes	5.0 million pairs
Exports of leather shoes	3.5 " "
Exports of sheep and lambskins (dry weight)	100 tons
Exports of goat and kid skins (dry weight)	100 tons

206. Cyprus is one of the smaller producers in Asia, ranking twentysecond in potential leather production. Prior to currently prevailing political problems, although possessing meagre raw material resources in respect of cattle, goat and sheep, Cyprus was well established in the production of worker boots and cheap civilian uppers for exports to the U.K. At present, leather footwear exports are of considerable importance to the industry, since about 70% of production is exported.

LEBANON

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	60	0,02%	25	41,7%
Buffaloes	-	-	-	-
Goats	445	0,16%	204	45,8%
Sheep	148	0,04%	405	273,6%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	0.81	million square feet
Buffalo leather	-	
Goat skin leather	1.33	" " "
Sheep skin leather	3.24	" " "
Total	5.38	million square feet

Human population 1981: 2,685 million people

= 0.10% of total Asian population

Theoretical potential availability of leather	5.4 million sq.ft.
Exports of bovine hides and skins (wet salted)	100 tons
Exports of sheep and lambskins (dry weight)	6000 tons
Exports of goat and kid skins (dry weight)	1800 tons

207. Like Kuwait, much of Lebanon's exports of skins is from imported livestock slaughtered in the country.

SRI LANKA

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	1,664	0,46%	180	10,8%
Buffaloes	843	0,72%	40	4,7%
Goats	493	0,18%	137	27,8%
Sheep	29	0,009%	7	24,1%

Potential leather production (theoretical)
(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	3.67 million square feet
Buffalo leather	0.82 " " "
Goat skin leather	0.48 " " "
Sheep skin leather	0.03 " " "
Total	5.00 million square feet

Human population 1981: 15,109 million people

= 0.58% of total Asian population

Theoretical potential leather production	5.0 million sq.ft.
Production of leather shoes	5.0 million pairs
Exports of leather shoes	1.0 " "
Exports of bovine hides and skins (wet salted)	800 tons

208. An attempt is being made to develop and upgrade the industry by introducing a duty free zone with the objective of exporting finished leather and goods based on imported raw materials. Three shoe making units had been set up, one of which involves American collaboration. In the leather goods sector, there has been investment by local companies as well as overseas firms, notably from Hong Kong. There is also a unit manufacturing industrial gloving.

209. Outside the duty free zone, there are 11 small independent tanneries. There are two major producers of shoes on the island who buy their leather from the major tanneries.

210. The Government-owned Ceylon Leather Products Corporation owns the largest tannery as well as the largest footwear unit. The other shoe unit is owned by BATA. CLPC makes 265,000 pairs leather footwear each year, the majority of which is sold locally. Around 35,000 pieces of shoe components are exported.

211. Attempts are being made to get foreign collaboration, but growth potential of the industry is limited owing to the small number of livestock, in the country.

LAOS

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	445	0,12%	59	13,3%
Buffaloes	879	0,75%	102	11,6%
Goats	54	0,02%	16	29,6%
Sheep	-	-	-	-

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	1.79 million square feet
Buffalo leather	3.10 " " "
Goat skin leather	0.11 " " "
Sheep skin leather	-
Total	5.00 million square feet

Human population 1981: 3,811 million people

= 0.15% of total Asian population

Theoretical potential leather production 5.0 million sq.ft.

212. Laos is another one of the smallest producers of leather in Asia. The livestock population is extremely small and consists predominatly of buffalo. About 0.5 million pairs of shoes are produced per year, mostly for domestic consumption. Laos exported 100 tons of wet salted bovine hides and skins in 1982. In view of its size and small livestock population, there does not appear to be much potential for development of a leather industry.

ISRAEL

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	265	0,07%	69	26,0%
Buffaloes	-	-	-	-
Goats	119	0,04%	70	58,8%
Sheep	270	0,08%	170	63,0%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

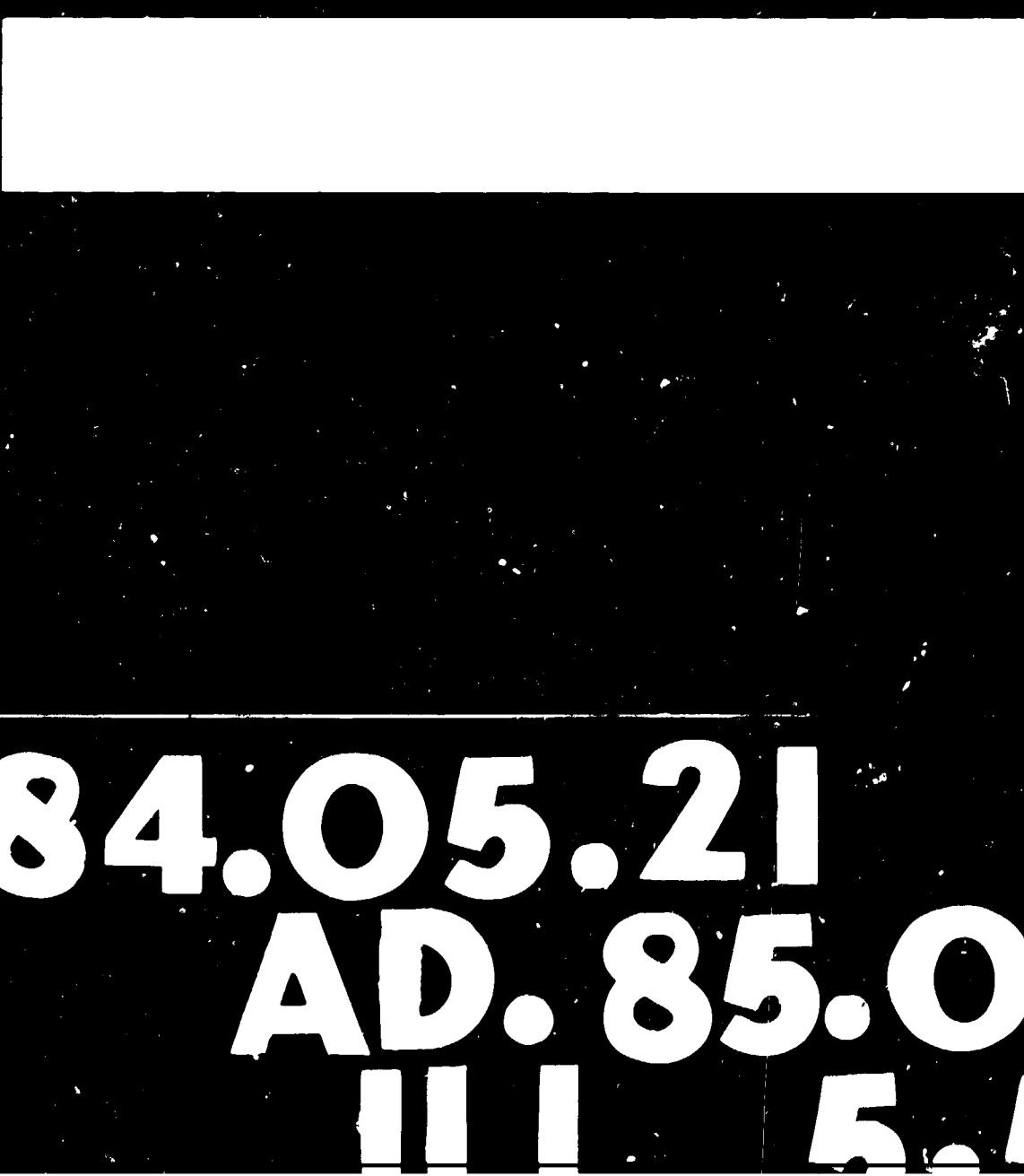
Bovine leather	2.79	million square feet
Buffalo leather	-	
Goat skin leather	0.63	" " "
Sheep skin leather	1.36	" " "
Total	4.78	million square feet

Human population 1981: 3,951 million people

= 0.15% of total Asian population

Theoretical potential leather production 4.8 million sq.ft.

213. Israel is one of the countries with the smallest availability of leather in Asia and with one of the smallest livestock populations. However, leather products now make up 10% of Israel's exports. The success of the country lies in its ability to serve overseas markets with fashionable goods, especially leather garments.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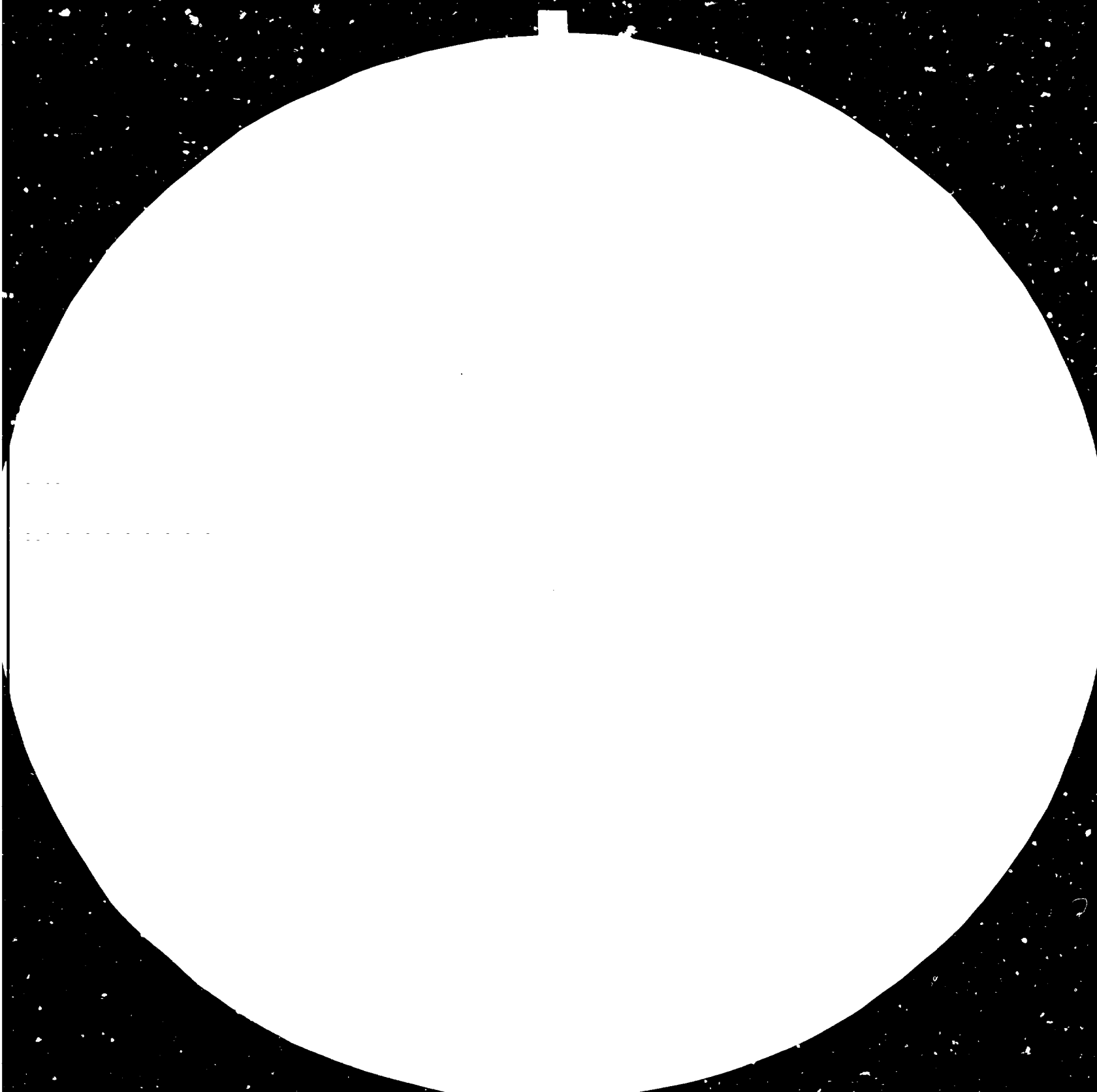

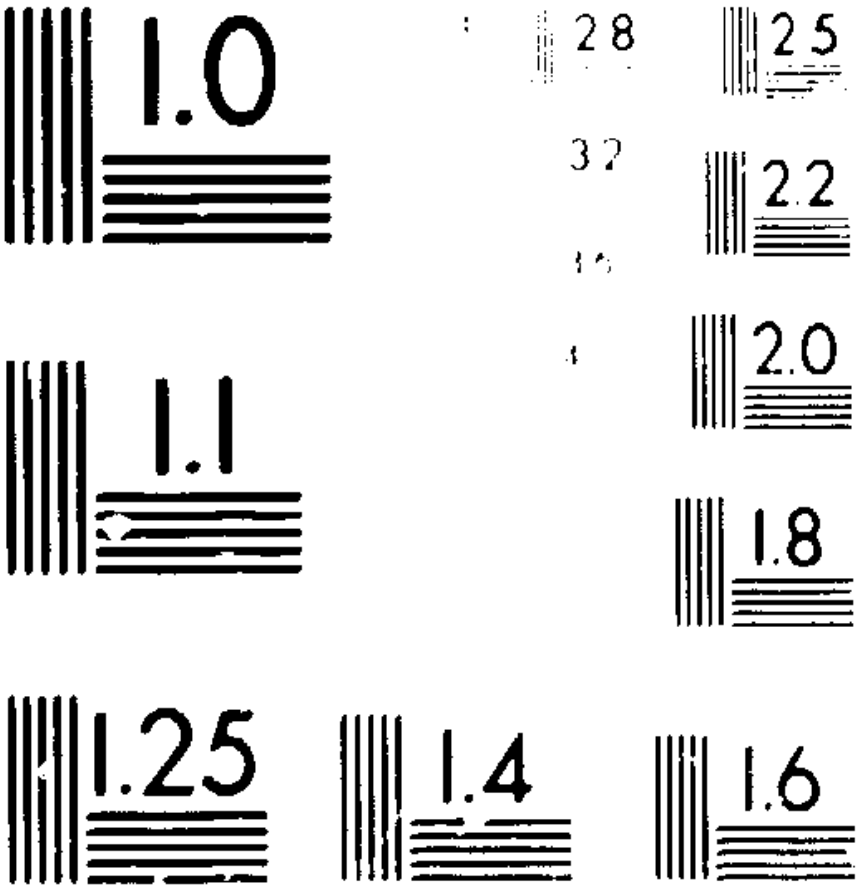

214. There are three main abattoirs, slaughtering about 4500 cattle per month. A Danish designed slaughter house has been built in Tel Aviv. In 1981, about 22 million sq.ft. of leather was produced by Israel, mostly from imported raw material. In view of the close ties that Israel enjoys with the U.S. there is not dearth of co-operation, from the point of view of both industrial development and trade, and it is because of this close relationship that Israel has been able to make and will continue to make such rapid progress.

JORDAN

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	37	0,01%	16	43,2%
Buffaloes	-	-	-	-
Goats	490	0,18%	255	52,0%
Sheep	1000	0,30%	320	32,0%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	0.50 million square feet
Buffalo leather	-
Goat skin leather	1.79 " " "
Sheep skin leather	2.08 " " "
Total	4.37 million square feet

Human population 1981: 3,364 million people

= 0.13% of total Asian population

Theoretical potential leather production 4.4 million sq.ft.

215. There is not much information available in Jordan apart from the fact that its main production of leather is mainly from sheep skins. In view of its size and small livestock numbers, there does not appear to be much scope for further development.

KAMPUCHEA (DEMOCRATIC)

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	956	0,26%	100	10,5%
Buffaloes	404	0,34%	40	9,9%
Goats	-	-	-	-
Sheep	-	-	-	-

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	3.40 million square feet
Buffalo leather	1.22 " " "
Goat skin leather	-
Sheep skin leather	-
Total	4.26 million square feet

Human population 1981: 6,828 million people

= 0.26% of total Asian population

Theoretical potential leather production 4.3 million sq.ft.

Exports of bovine hides and skins (wet salted) 300 tons

216. Democratic Kampuchea is one of the smallest producers of leather in Asia, its main output being bovine leather. There is no further information available on the tanning industry or on the scope for international co-operation.

MALAYSIA

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	540	0,15%	87	16,1%
Buffaloes	293	0,25%	42	14,3%
Goats	365	0,13%	75	20,5%
Sheep	65	0,02%	10	15,4%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	2.52 million square feet
Buffalo leather	1.22 " " "
Goat skin leather	0.30 " " "
Sheep skin leather	0.70 " " "
Total	4.11 million square feet

Human population 1981: 14,415 million people

= 0.55% of total Asian population

Theoretical potential leather production	4.1 million sq.ft.
Production of leather shoes	3.0 million pairs
Exports of bovine hides and skins (wet salted)	900 tons

217. Whilst exporting 900 tons (wet salted) of bovine hides and skins Malaysia imported 500 tons (wet salted) of bovine hides and skins, 4.3 mill. sq.ft. of bovine leather and 0.5 million sq.ft. of goat and sheep leather in 1982.

218. In comparison to its size and raw material resources, the leather and leather products industries are fairly developed and the leather product industry supplies the export market. Much of the products, including reptile skins are sent to Singapore where they are either re-exported or transformed into leather products. There is one Government-owned tannery and six or seven private tanneries, all suffering from a shortage of bovine hides. There is also a shoe factory owned by the Government. International co-operation can only work on the basis of imported hides. Malaysia offers good prospects, as labour costs are lower than Korea, Taiwan, etc.

UNITED ARAB EMIRATES

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	26	0,007%	13	50,0%
Buffaloes	-	-	-	-
Goats	361	0,13%	205	56,8%
Sheep	139	0,04%	207 (import)	148,9%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	0.28	million square feet
Buffalo leather	-	
Goat skin leather	1.33	" " "
Sheep skin leather	1.45	" " "
Total	3.06	million square feet

Human population 1981: 0,762 million people

= 0.03% of total Asian population

Theoretical potential leather production 3.06 million sq.ft.

219. There is no information available with respect to the tanning industry in this country.

OMAN

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	146	0,04%	22	15,1%
Buffaloes	-	-	-	-
Goats	250	0,09%	82	32,8%
Sheep	116	0,03%	35	30,2%

Potential leather production (theoretical)

(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	0.48	million	square feet
Buffalo leather	-		
Goat skin leather	0.53	"	"
Sheep skin leather	0.25	"	"
Total	1.26	million	square feet

Human population 1981: 0,919 million people

= 0.04% of total Asian population

Theoretical potential leather production 1.26 million sq.ft.

220. There is little information available on the tanning industry in Oman with its miniscule livestock population and raw material resources, and there is not much scope for development of the sector in this country.

BHUTAN

Raw material availability, in quantitative terms

Based on FAO Production Yearbook 1981, Vol.35

Data for 1981

	Livestock population 1981 (1000 heads)	% of total Asia	Hides and skins (slaugtherings) potential recovery (1000 pieces)	Offtake rates in % (calculated)
Cattle	306	0,08%	3	1,0%
Buffaloes	27	0,02%	3	11,1%
Goats	22	0,008%	11	50,0%
Sheep	43	0,01%	18	41,9%

Potential leather production (theoretical)
(in million square feet)

if all potentially available hides and skins were tanned

Bovine leather	0.07	million	square feet
Buffalo leather	0.07	"	"
Goat skin leather	0.04	"	"
Sheep skin leather	0.08	"	"
Total	0.26	million	square feet

Human population 1981: 1,325 million people

= 0.05% of total Asian population

Theoretical potential leather production 0.26 million sq.ft.

221. The available profile study shows that Bhutan has negligible raw material resources in respect of hides and skins. Further, there is hardly much of an infrastructure in respect of tanning and none at all in respect of footwear manufacture.

222. The potential also of establishing leather and shoe factores in Bhutan is none too bright, and with the close ties Bhutan has with India, the country's requirements are easily met by the Indian industry. Attempts at regional co-operation by India to set up a tanning industry in Bhutan has not met with any success as yet, as it seems more lucrative for Bhutan to sell its raw material to India.

TAIWAN PROVINCE OF CHINA - SINGAPORE AND HONGKONG

223. No study on Asia would be complete without referring to Taiwan Province of China, Singapore and Hongkong, who, with practically no domestic raw material resources still manage to be outstanding in their export performance which is based entirely on imported raw material. Even the current world recession has not been able to hamper their economic growth.

TAIWAN PROVINCE OF CHINA

224. Taiwan Province of China imports 95% of its requirements of bovine hides, mainly from North America and Australia. Private slaughtering is forbidden by law. Over one million pigskins are produced per year, mainly from pigs whose carcasses are exported frozen to Japan. Flaying is mainly mechanical. Dogskins is somewhat of a speciality in Taiwan. The skins are tanned for use in dress gloves.

225. According to information available, there are about 14 important bovine tanneries and six major pigskin tanneries. There are three important sole leather tanneries, two important split tanneries and two small goat and sheep tanneries.

226. There is a great demand for leather from the finished goods industries, and less than 5% of all leather produced is exported. On the other hand, a large portion of leather products output is exported. Taiwan has a healthy domestic market for footwear and there is an increasing preference for leather footwear. The home market is mainly serviced by small artisan shoemakers. Out of the 543 footwear units in 1980, only 37 produced leather uppered footwear. About six manufacturers specialize in leather bags, which although only 1% of the volume of the trade account for 5-8% of the value of the trade. There are five or six important leather garment manufacturers in Taiwan. Export manufacturing is done with close co-operation from importers.

SINGAPORE

227. The tanning side is modest with only three tanneries of any size, one specializing in reptile skins. There are 24 leather merchants concerned with importing and exporting and about 48 manufacturers and wholesalers of leather manufactured goods. Singapore is the largest and most important centre in South East Asia for reptile skins. It has some crocodile farms of its own where crocodiles are brought from outside and reared until they are large enough for slaughter. In addition, much of the supplies of crocodile, lizard and snakeskins from Indonesia, Papua New Guinea, Thailand and Malaysia pass through Singapore. There are several companies manufacturing a wide range of fashion items. Much of these goods are sold locally and some exported.

HONGKONG

228. Hongkong in 1982 exported 150 million sq.ft. of bovine leather, 5.5 million sq.ft. of sheep and goat leather and 5.0 million pairs of leather shoes in addition to almost 5,000 tons of bovine hides and skins (wet salted).

229. Multistoreyed tannery buildings have been constructed and are suitable only for processing from the wet blue or crust stage. Raw hides are imported from the U.S.A. and Australia, and wet blue hides come from South East Asian sources, Pakistan and Australia.

230. The shoe industry is one of Hongkong's oldest industries, composed of a multitude of small semi-mechanized workshops. There is plenty of scope for development in this sector as well as in the leathergoods and garment sectors.