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ENGLISH

LEATHER INDUSTRY DEVELOPMENT

DP/PAK/73/027

PAKISTAN

Mission report

Prepared for the Government of Pakistan by the  
United Nations Industrial Development Organization,  
executing agency for the  
United Nations Development Programme

Based on the work of G. van Hoorn, team leader

id.76-4318

Explanatory notes

References to dollars (\$) are to United States dollars, unless otherwise stated.

The monetary unit in Pakistan is the rupee (PRs). During the period covered by the report, the value of the rupee in relation to the United States dollar was \$US 1 = PRs 10.

A slash between dates (e.g., 1974/75) indicates a financial year.

NWFP refers to the North West Frontier Province.

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ABSTRACT

From October 1972 to March 1973 two experts from the United Nations Industrial Development Organization (UNIDO) visited Pakistan to study the leather, leather foot-wear and leather products industries to formulate a programme for their further development.

As a follow-up to these visits, a seminar was organized on the development of foot-wear manufacturing in Pakistan. This seminar took place in Lahore from 12 to 16 November 1973. There was keen interest manifested in the seminar by many manufacturers of leather, foot-wear and leather goods and they participated together with government officials from the livestock, industry, banking and commercial departments.

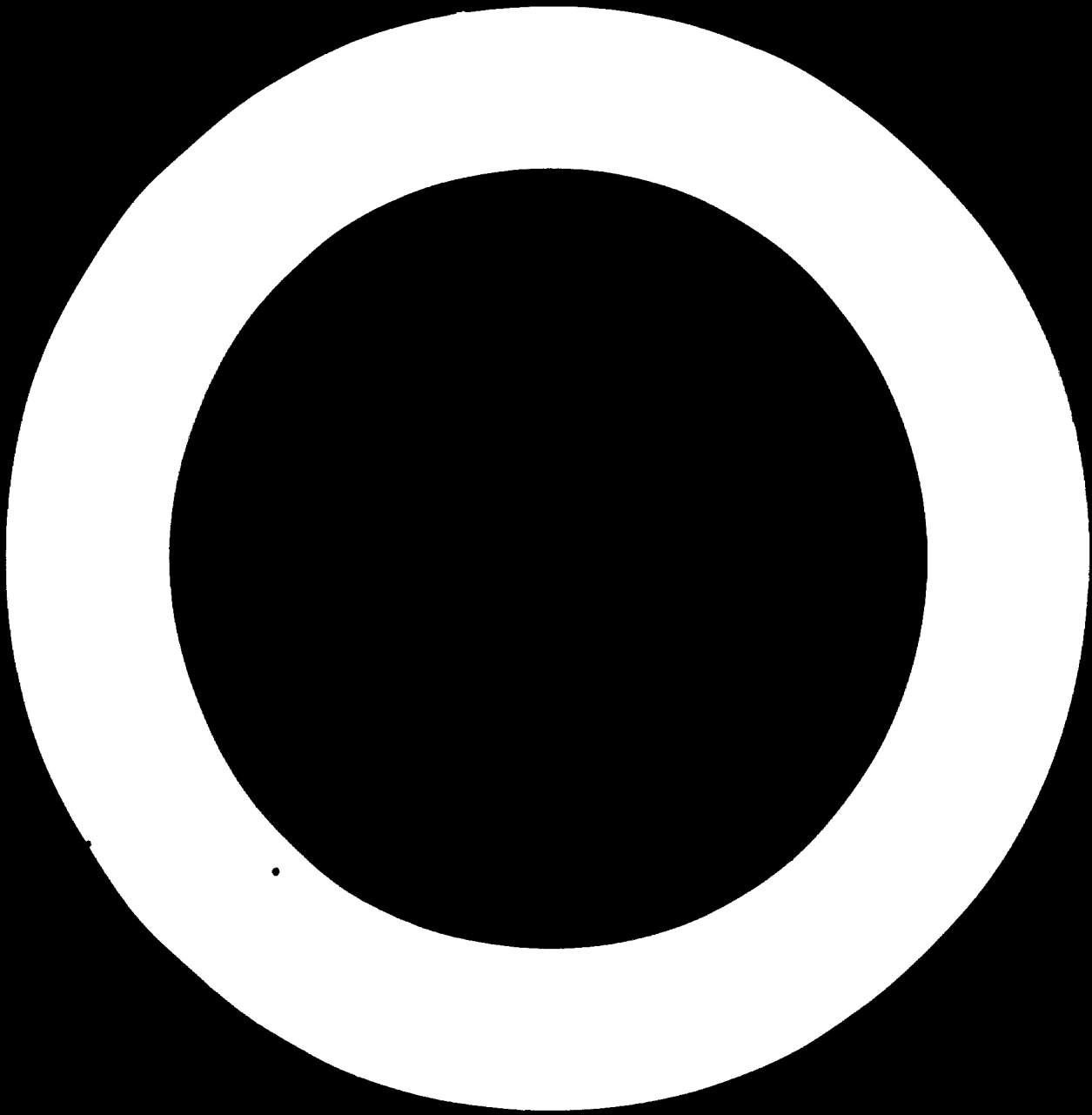
In response to this interest, the Government and the United Nations Development Programme (UNDP) decided to give further support to these industries. UNDP contributed \$218,100 toward the project "Leather industry development" (DP/PAK/73/027). The Government's contribution totalled PRs 225,700 (\$22,570). UNIDO was nominated as the executing agency with the Food and Agriculture Organization of the United Nations (FAO) as an associated agency. The Ministry of Industries in Pakistan was the co-operating agency.

The project document was signed on 28 June 1974. Under its provisions the following team was provided: one team leader (18 months) and three experts in the fields of hides and skins, foot-wear and leather products, and tanning (15 months each).

The objectives of the project were:

- (a) To assist in organizing the administrative and organizing bodies connected with the industries, and to assess the duties of a leather development board;
- (b) To assist and advise the manufacturers of leather, foot-wear, and other leather products on immediate changes in plants and in future planning to conform with modern, international standards;
- (c) To assist with, and advise on, methods of flaying hides and skins in abattoirs and slaughter-houses and of curing and grading those materials in order to improve their quality.

The project helped to achieve most of the immediate objectives but the vast leather and leather products industries need further support.



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## INTRODUCTION

Pakistan has exported raw hides and skins for many years and the importance of this trade will be realized from the fact that until 1972 exports were encouraged by a bonus of 10%.

Although some tanneries were established, the majority of skins were exported raw or in a wet blue stage as, before 1971, East Pakistan provided the finished leather for West Pakistan. After 1971, there were drastic changes as the Government encouraged the establishment of new factories with the aim of processing raw hides for local requirements and ultimately exporting the finished products instead of the raw material.

From October 1972 to March 1973 two experts from the United Nations Industrial Development Organization (UNIDO) visited Pakistan to study the leather, leather foot-wear and leather goods industries to formulate a programme for their further development.

As a follow-up to these visits, a seminar was organized on the development of foot-wear manufacturing in Pakistan. This seminar took place in Lahore from 12 to 16 November 1973. There was keen interest manifested and many manufacturers of leather, foot-wear, and leather goods participated together with government officials from the livestock, industry, banking and commercial departments.

In response to the interest shown by the industrialists, the Government and the United Nations Development Programme (UNDP) decided to give further support to these industries. UNDP contributed \$218,100 towards the project "Leather industry development" (DP/PAK/73/027). The Government's contribution totalled PRs 225,700 (\$22,570). UNIDO was nominated as the executing agency with the Food and Agriculture Organization of the United Nations (FAO) as an associated agency. The Ministry of Industries in Pakistan was the co-operating agency.

The project document was signed on 23 June 1974. Under its provisions the following team was provided: one team leader (18 months), and three experts in the fields of hides and skins, foot-wear and leather products, and tanning (15 months each).

The team leader arrived in Pakistan on 15 October 1974 to make the preparatory arrangements for the field work. The leather technologist arrived in November 1974 and was stationed in Lahore to cover the tanning industry in Punjab. He left on 24 October 1975. The shoe technologist was fielded on



2 February 1975 with Karachi as duty station to assist the Leather Footwear and Leather Goods Institute in Hyderabad and provide assistance to the shoe industry in Sind Province, which is mainly concentrated in Hyderabad and Karachi. This expert died at his duty station on 17 January 1976. The expert in hides and skins started his duties later than scheduled for several reasons. He arrived in Pakistan on 11 January 1976 with Lahore as duty station.

The objectives of the project were:

- (a) To assist in organizing the administrative and organizing bodies connected with the industries, and to assess the duties of a leather development board;
- (b) To assist and advise the manufacturers of leather, foot-wear, and leather products on immediate changes in plants and in future planning to conform with modern, international standards;
- (c) To assist with and advise on, methods of flaying hides and skins in abattoirs and slaughter-houses, and of curing and grading these materials in order to improve their quality

The project helped to achieve most of the immediate objectives but the leather and leather products industries need further support.

## I. FINDINGS

### A. Problems encountered initially

In view of the limited time of the project, and the many leather and shoe factories in the country, it was decided to concentrate activities in the Punjab and Sind Provinces where the majority of factories are established. Services to the Province of Baluchistan and the North West Frontier Province (NWFP) were provided on an ad hoc basis.

Although the establishment of project headquarters in Karachi or Lahore would have had the advantage of being close to the manufacturers and the commercial activities of the industry, it was decided to establish it in Islamabad which has the advantage of close communications with the Federal Government. In April 1975 facilities were provided in a house rented by the Government.

Project vehicles provided under the UNDP budget only arrived in February 1976. Efforts made to purchase duty free cars locally were unsuccessful. Temporary arrangements for transportation were made by both the Government and UNDP.

Counterparts were made available on the arrival of the experts but were on a part-time basis owing to a shortage of trained technical staff.

### B. Field activities

The original schedule for field work was:

- 4 months in Islamabad
- 4 months in Karachi for Sind Province
- 4 months in Lahore for Punjab Province
- 2 months in Peshawar for NWFP
- 1 month in Baluchistan

In view of the problems of transport and housing, the many factories involved, and the location of the industry in the Punjab and Sind Provinces, it was agreed to concentrate on these provinces and provide ad hoc services for the rest of the country.

Consideration was given to the best approach to training as two courses were possible, i.e.:

(a) To bring technical staff to the existing institutes and assist in training courses in the factory;

(b) To provide consultancy services to the industry and give in-plant training.

In view of the limited facilities available in the institutes and the variety of problems in each factory, it became clear that the latter course would be the most effective way to solve immediate production problems.

### C. Other activities

In addition to field work, the project team was actively involved in advising the Government on technical matters and providing information required for the institutional framework and for determining government policy. Reports were submitted by the project team on the following subjects:

Definitions of crust leather. (By request of the Central Board of Revenue.)

Market quotations for hides. (By request of the Central Board of Revenue.)

Definition of leather. (By request of the Central Board of Revenue.)

A visit to Sialkot and Gujranwala.

Ground plans and preparatory work for the Gujranwala Centre. (For the installation of new machinery.)

The Appeals concerning excise duty.

Cost price calculations for leather.

Proposal for the establishment of a Leather Board.

Assistance to the football industry in Sialkot.

The tannery, clothing and glove factory in Kasur. (Existing report revised.)

Potentialities of the Pakistan tanning industry and suggestions for improvement.

Detailed working programme for the experts and counterparts.

Report on a tripartite meeting in Islamabad on 10 June 1975.

The extension of the Leather Industry Development Project.

Expansion of Sialkot Sportsgoods Centre.

Visit to the International Leather Fair and the latest trend in machinery.

Priority lists for machinery for the Gujranwala Institute.

Survey of Pind Daden Tehsil District. (By request of the Punjab Small Industries Corporation.)

Report on the Amanat Leather Tannery. (Prepared for the Pakistan Industrial Credit Investment Corporation.)

Final report of the leather technologist.

Proposal for the establishment of a secretariat to the Leather Board.

Booklet on flaying in English and Urdu.

Phased plan for the modernization of the Gujranwala Institute.  
(Time schedule for the preparatory work.)

Five-year development plan for the leather and leather goods industries.

## II. LEATHER INDUSTRIES

### A. Tanning

#### Production

Activities in the tanning industry were concentrated in Punjab Province where numerous small and semi-mechanized tanneries are established. Most of the large-scale factories have their own technicians, do not have the same financial limitations as the small units, and have access to world-wide resources. Consequently, assistance was rendered to the smaller tanneries located in Burewala, Gujranwala, Kasur, Lahore, Lyallpur, Multan, Rawalpindi, Sahiwal, Sheikhupura, Sialkot.

Advisory services and demonstrations were provided in 46 tanneries where 199 tanners, foremen and skilled labourers were trained.

The kind of leather being produced in these tanneries varies from wet blue to sole and upper leather. The total production is considerable and consists of a daily output of:

- 60,000 ft upper leather corrected grain, cow and buffalo calf hide
- 27,000 ft wet blue buffalo calf, sheep and goat skins
- 13,000 kg sole leather, vegetable tanned from buffalo hide
- 8,000 kg harness leather produced from heavy buffalo hide
- 6,000 ft suede, semi-aniline and chrome/synthetic tanned
- 4,000 ft football leather and lining leather.

#### Processes

The significance of the assistance to the small and medium-size tanneries in Punjab Province can be expressed as a percentage of the total production in the country.

The 46 tanneries together produce 97,000 ft and 21,000 kg of leather per day which is close to one million hides per year or one fifth of the total hides available in the country.

Problems vary from tannery to tannery, depending on the kind of leather produced and the technical knowledge available in the factory. Tanning consists of successive chemical and mechanical processes which it is necessary to

analyse in order to advise on improvements. Although at the beginning they were very reluctant to discuss their processes, the tanners gradually realized that only frank and open discussions could solve their problems.

A practical approach was applied by analysing the problems of the factory concerned, discussing possible solutions and making practical, on-the-spot demonstrations involving technicians and labourers, and then carrying on with the adjusted processes, which included:

1. Liming of hides and skins in pits and calculating the timing for the different types of leather.
2. Deliming and bating; washing prior to deliming; reducing water consumption and fixing the correct temperature for this process.
3. Vegetable tanning in rocker suspenders, layers and drums.
4. Time control in vegetable tanning and control of liquor strength in order not to waste time and materials.
5. Drum oiling of sole leather and harness leather with sulphonated oil and fish oil.
6. Chrome tanning processes for wet blue and finished stock including pH control.

#### Types of leather produced

Two important leather producers in Punjab Province manufacture leather for their own shoe factory. The smaller and semi-mechanized tanneries are specialized in different products. Although sole and upper leather are the basic raw material used by the local shoe manufacturers, field activities in the tanning industry cover the following different types of leather:

- Wet blue hides and skins for export
- Vegetable tanned sole leather for shoes and sandals
- Chrome tanned garment leather and lining leather
- Chrome tanned uppers leather for shoes
- Combined chrome/synthetic tanned hides for football leather
- Vegetable and chrome tanned lining leather
- Vegetable tanned harness leather

### Demonstrations and follow-up visits

Local staff were instructed by demonstrations in the tannery and, whenever necessary, the processes demonstrated were given in writing. In several cases, translations into Urdu were made afterwards. Whenever possible, a follow-up visit was made after one or two months to find out if the changes were implemented and to assist in any additional problems that had arisen.

Before departure of the leather technologist, a meeting was held on 23 October 1975 in the Directorate of Industries and Mineral Development, Punjab, Lahore, to appraise the assistance rendered to the industry. A paper was presented summarizing the processes being followed by the various categories of tanneries, the faults detected and the recommendations made to remove the deficiencies and improve the quality and yield of the leather produced.

This paper was translated into Urdu to circulate to the tanners concerned.

#### B. Football leather industry

Pakistan is an important supplier of sports goods to international markets and in 1973/74 such exports were valued at \$11 million. The largest part consisted of four million footballs yielding foreign currency amounting to PRs 89 million (\$8.9 million). The most important countries of destination are the African countries, Australia, Canada, France, the Federal Republic of Germany, Greece, Italy, the Netherlands, New Zealand, Switzerland, the United Kingdom and the United States of America.

At the request of the manufacturers a report was prepared on assistance to the football-leather industry in Sialkot where production is concentrated. A second report recommended expansion of the Sialkot Sportsgoods Service Centre for Football Leather.

Following a meeting with the football manufacturers in Sialkot, three weeks of demonstrations on the production of football leather were provided at the premises of two of the main producers. All interested parties, including competitors, were allowed to attend which shows the broadminded, progressive outlook of some of the leading entrepreneurs in Pakistan. Unfortunately, the small football-leather tanners did not show much interest.

### C. Shoe industry

The shoe technologist was stationed in Karachi on 2 February 1975 for an initial period of six months to assist the shoe manufacturers in Sind Province. The demand of the industry for advisory services was such that the provincial Government requested an extension and the expert stayed till 17 January 1976.

#### Hyderabad Footwear Institute

In Hyderabad the Leather Footwear Institute of the Sind Small Industries and Hyderabad Development Corporation provides training facilities for the shoe industry. In addition, production of boots was started on a commercial base and, by request, the project activities included services to this Institute consisting of:

- (a) Re-organization of the Institute for the prompt supply of boots contracted by the police force;
- (b) Arranging for spare parts for broken-down machinery, re-organizing the work flow, putting machines into operation and training technical operators by giving practical demonstrations on the installed machinery;
- (c) Introduction of stock control and quality control along the production line;
- (d) Instructions and demonstrations on economic cutting of upper and sole leather for shoes to prevent unnecessary waste of raw materials;
- (e) Introduction of charts to define responsibilities for each department;
- (f) Introduction of a purchasing policy to obtain the most suitable products and demonstrations to staff in the tanneries on how to grade and select leather for the production of boots.

#### Large-scale mechanized units

There are 10 shoe factories in the country equipped with machinery to make the whole shoe or boot by mechanized methods. Two of the largest producers of foot-wear employ over 3,000 people each and out of 10 large-scale shoe manufacturers seven have their own tannery to secure their supplies of leather.

One new, modern, well-equipped combined shoe/leather factory has been recently completed in Hyderabad and one leather factory in Punjab is considering additional investments for a new foot-wear factory. In NWFP four large



leather factories are at an advanced stage of planning and two of them will also produce foot-wear. The total capacity for these two units is planned at 300,000 pairs of shoes per year.

Project activities for the shoe industry were concentrated in Sind Province. On arrival of the machinery for a newly-established foot-wear factory in Hyderabad, the project team assisted in working out plans for the layout of this modern equipment. Production lines were laid out for an initial production of 300 pairs per day of Italian-style cemented shoes. The ultimate capacity of this factory is 3,000 pairs per day.

Another factory in Hyderabad obtained additional finance to expand production and the project assisted with the machinery layout, technical production problems, and gearing up to an eventual output of 100 pairs of boots per day.

In Karachi several small shoemakers decided to mechanize their units and requested assistance to handle the new situation. Project activities consisted in layout of machinery, production flow, operation of machinery and training of staff for production.

#### Medium-size units

In addition to the many artisan shoemakers there are eight medium-size shoe producers in Karachi and Sind employing between 20 and 50 people. Although most of these units have only limited machinery at their disposal, two of them export shoes.

The project provided assistance to all these units if and when requested. The main problems were:

- (a) Economic cutting of leather to avoid wastage and reduce cost price;
- (b) Quality control on direct moulding processes;
- (c) The finishing of ladies' and men's shoes;
- (d) Training on specific machinery;
- (e) Re-organization of production flow;
- (f) Production planning.

### Small units

Small units consist of shops in which between one and ten shoemakers produce handmade foot-wear of excellent quality. There are thousands of units all over the country providing shoes for local requirements. A typical example is Peshawar where, in one street, 100 shops with a total of 400 people produce leather chappals. The estimated production of this kind of foot-wear is 100,000 pairs per year in Peshawar alone.

In Sind Province small units operate in Karachi and Hyderabad and the project endeavoured to assist these hard-working people who have very limited means. Although in some cases worthwhile demonstrations were made (building of heels, continuous soles, heel attaching, shape of shoes) it is clear that the problems are not technical but financial. The shoemakers lack funds and have to sell a pair of shoes before being able to buy leather which normally is obtained against credit but at a high price.

The solution of the problems of these numerous units is to combine forces through associations or co-operatives.

### Demonstrations

During project operations a total of 90 small-, medium- and large-size shoe-producing units were visited. Not all of them could be assisted; some were too small to help, others were large enough to make their own arrangements. In 47 units in-plant demonstrations for technical improvements were provided, with on-the-spot instructions and training for 129 people.

### III. NATIONAL LEATHER DEVELOPMENT BOARD

The importance of the hides, skins, leather, foot-wear and leather goods industry can be seen from the export figures pertaining to this industry. Exports of undressed hides and skins, furs, leather, leather foot-wear and leather articles, including gloves, leather garments and footballs, was PRs 660 million (\$66 million) during the year 1973/74. Leather exports, mainly in wet blue, contributed over PRs 400 million.

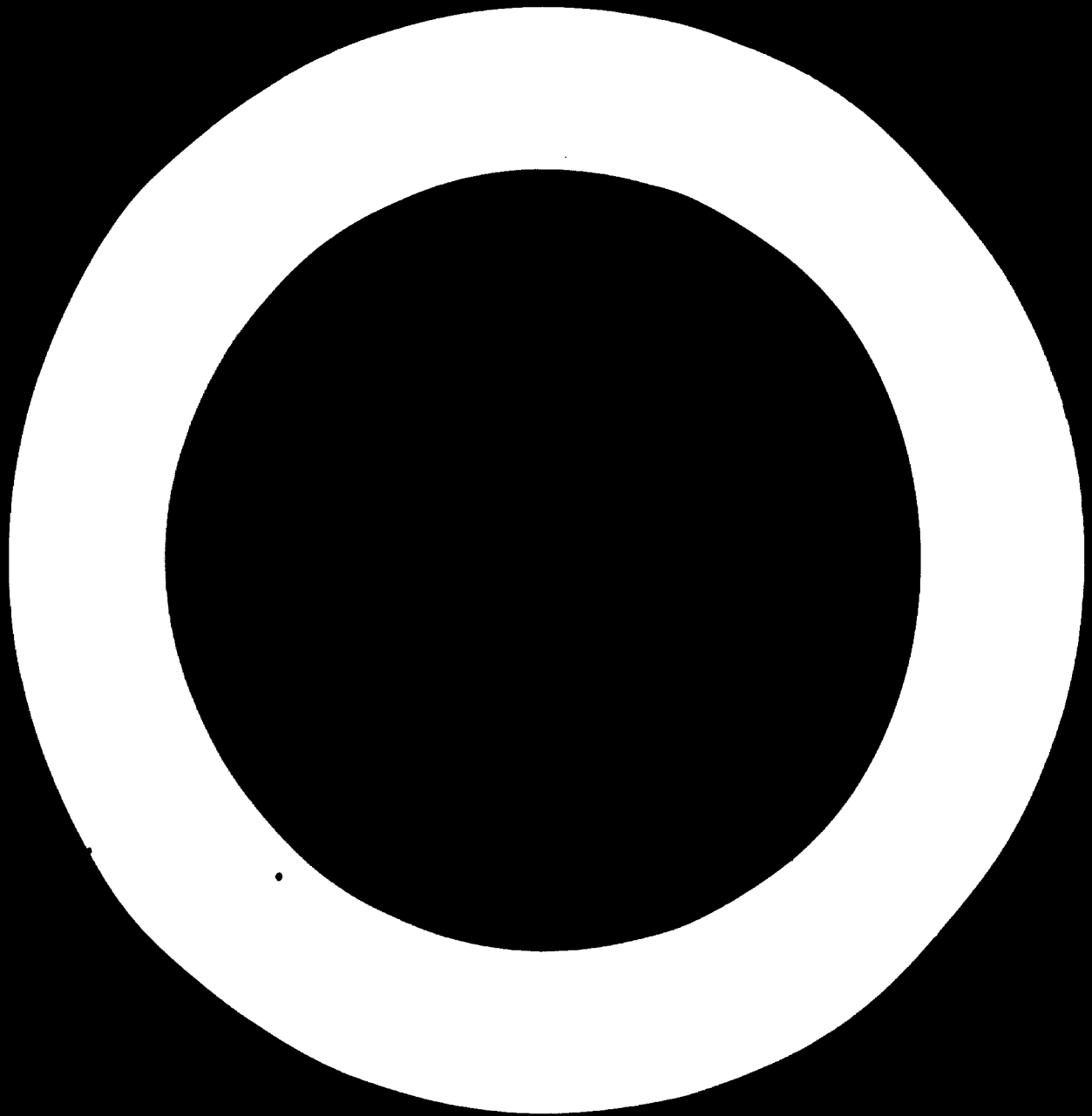
It is clear that each branch of the industry promotes their own interests through different organizations, institutions and government departments. In order to implement a government policy for obtaining the highest possible revenues from the vast raw materials available in the country, close co-ordination between producers of leather and leather articles and the Government is necessary. The Government determines the policy but the industry has to implement it.

Proposals for the establishment of a National Leather Development Board were submitted on 4 April 1975, from the Ministry of Industries (Resolution no. F.7(1)/73-I.A.). The Board was established on 3 July 1975.

The first meeting, attended by all the Board members, took place in the Ministry of Industries on 3 November 1975.

It is obvious that the Board cannot function properly without a secretariat for the day-to-day operations and proposals to establish one were submitted on 30 April 1976.

The establishment of the Leather Board is a step forward to co-ordinate the development of the industry on a country-wide base but it is only the start towards further progress. The project team prepared proposals for a five-year development plan and submitted them to the Government. It is recommended that these proposals be implemented through the National Leather Development Board.



Hyderabad Leather Footwear Institute

This Institute, located in a shoe-producing area, is presently more involved with production than training. In order to improve the training facilities the project team assisted with the plans for modernizing and financing the Institute and recommended required courses for students.

Fellowships

Six fellowships for a total of 48 months were provided in the budget. Since counterparts were not working full-time with the experts, no fellowships were awarded. These fellowships should be utilized for strengthening the Gujranwala Institute.

## V. CONCLUSIONS

The project achieved most of its immediate objectives. As to the long-range objectives, the vast leather and leather products industry in the country needs further support.

The Government gives a high priority to the development of the leather and leather products industries which are the third largest foreign exchange earner, after cotton and rice.

There was keen interest in advisory services in the Punjab tanning industry where 199 tanners were instructed during demonstrations in 46 tanneries.

In Sind Province, 47 shoe factories were provided with demonstrations on their relevant problems with training for 129 people.

The institutional framework was strengthened with the establishment of the National Leather Board and assistance to the institutes in Gujranwala, Hyderabad and Sialkot.

The Gujranwala Institute is being modernized by machinery from the Federal Republic of Germany.

On request of the Government, the activities of the tanning expert in Punjab were extended from 6 to 12 months which left Sind Province without assistance in the tanning industry. For the same reason the shoe expert, whose activities in Sind Province were extended to 12 months, did not cover Punjab Province.

The tanning expert completed his 12 months' service and the post, scheduled for 15 months, was not refilled. The shoe expert, who died after 12 months' service, was not replaced because of the financial restraint ordered by UNDP. The result was a delayed, reduced second phase of project operations. Assistance to the hides and skins sector only started in January 1976 owing to an unavoidable delay in the expert's arrival.

The interest which the industry has shown in advisory services shows clearly the need for improvement in technology and training which need will increase with the completion of plants under construction in NWFP, modernization of the Gujranwala Institute and the Centre in Sialkot, and implementation of the proposed five-year development plan.

## VI. RECOMMENDATIONS

1. The proposed training courses in the modernized Gujranwala Leather Institute will greatly contribute towards the availability of qualified technologists for the industry. However, it is recommended that:
  - (a) Well qualified instructors are available;
  - (b) The industry participates by accepting students for in-plant production training;
  - (c) The Government emphasizes training, not production;
  - (d) The Institute is provided with adequate funds for training and well-paid, capable instructors.
2. It is strongly recommended that all training efforts be concentrated on one good national leather institute rather than on many small and inefficient ones.
3. For the small producers who lack modern machinery, common facilities should be provided with the equipment available at the institutes in Gujranwala, Hyderabad and Sialkot.
4. Advisory services to the industry have proved successful. These services should be provided through the staff of Gujranwala Institute. At a later stage, a well-qualified consultant should be attached to the Institute.
5. Wet blue should be phased out in order to make more leather available for the leather products industry as suggested in the proposed five-year development plan.
6. It is recommended that the thousands of football-makers co-ordinate their efforts through a co-operative society. They would benefit highly from central purchasing, marketing and quality control and individual home production could continue with the profit going directly to the producers. A well-qualified marketing man is a prerequisite for the success of this scheme which could operate through the Sialkot Sportsgoods Centre.
7. The thousands of individual shoe producers should co-ordinate their efforts along the same lines as proposed for the football-makers. Concentration of small industries in co-operatives with supplies of good quality leather from the Gujranwala Institute will provide good-quality shoes at low prices with a good profit margin for the individuals.

8. The leather garment industry is expanding rapidly but is still small-scale in comparison with the large quantities of raw material available and the increased demand in world markets. The Government should support this industry by making expertise available through the Gajranwala Institute.

9. The National Leather Development Board can play an important role in co-ordinating the efforts of the Government and industry for the implementation of the five-year development plan. A secretariat should be established for the proper functioning of the Board.

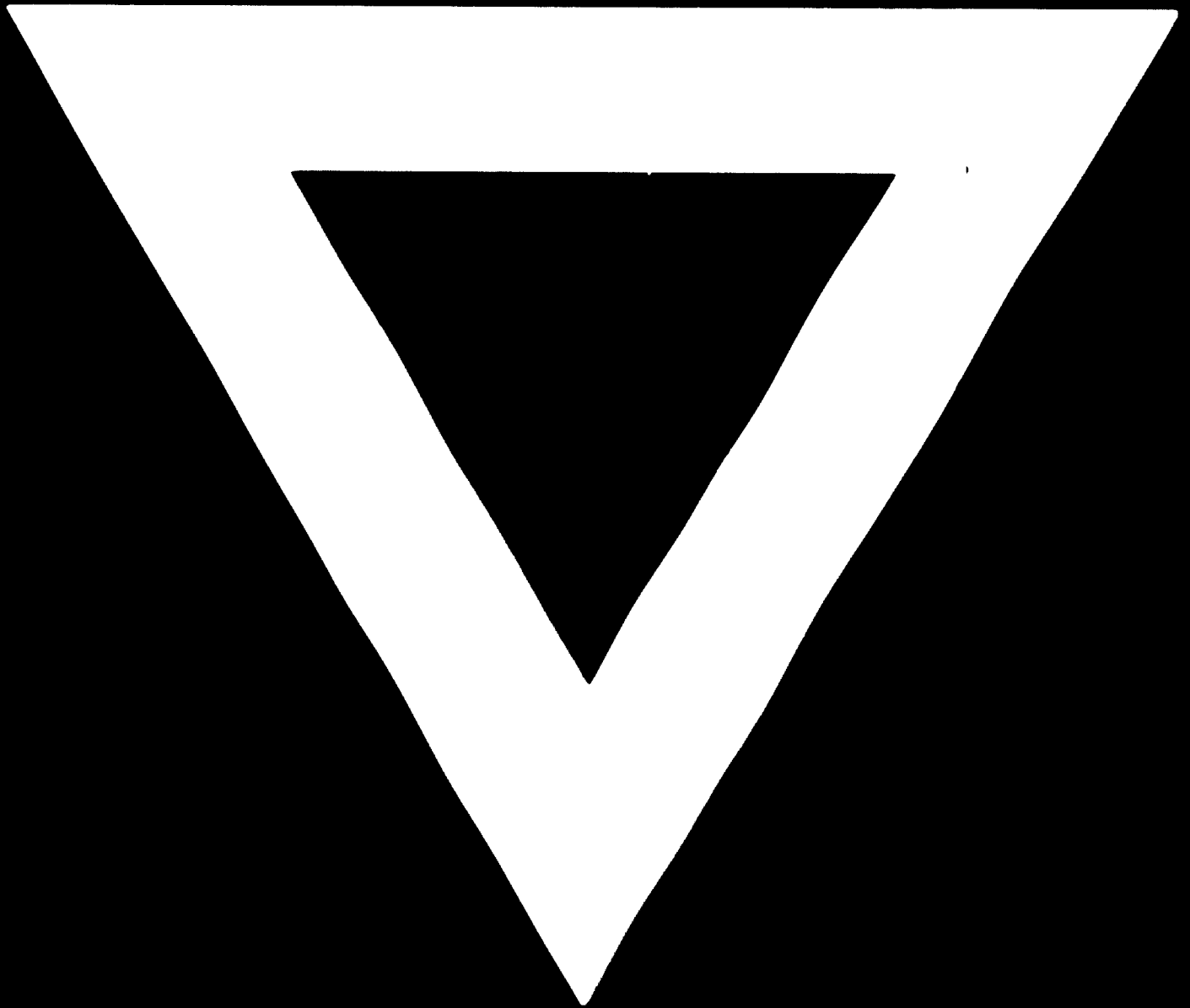


Annex

STAFF

	<u>Name</u>	<u>Date of arrival</u>	<u>Date of departure</u>	
Team leader	G. van Hoorn	15 October 1974	1 July 1976	
Leather expert	T. Johnson	8 November 1974	25 October 1975	
Shoe expert	R. Gladwell	2 February 1975	17 January 1976	
Hides and skins expert	K. Prince	11 January 1976	4 April 1977 (estimated)	
				<u>Commencement of duty</u>
Counterpart to team leader	Mohammed Tajuddin Warsi		October 1974	
Counterpart to leather expert	Iftikhar Hussain		November 1974	
Counterpart to shoe expert	A. R. Lodi A. Zaidi		February 1975 July 1975	
Counterpart to hides and skins expert	Nasir Ahmad		January 1976	

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**77.09.23**