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**PREPARATORY
ASSISTANCE
TO
THE HIDE,
SKIN AND LEATHER
DEVELOPMENT
CENTRE
OF ISIRI**

DU/IRA/74/059

IRAN

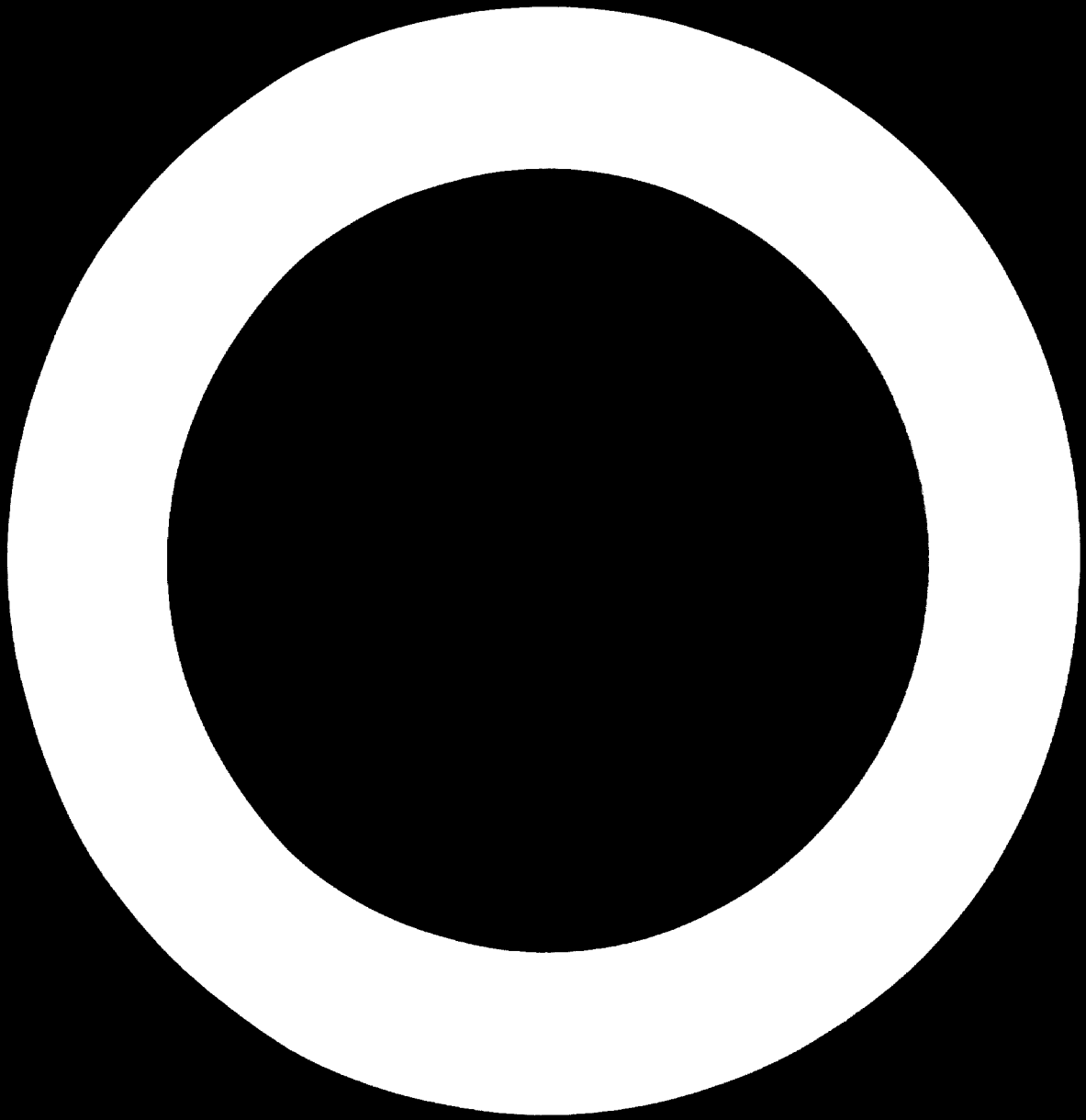
TERMINAL REPORT

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



United Nations Industrial Development Organization

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards even though the best possible copy was used for preparing the master fiche.



United Nations Development Programme

PREPARATORY ASSISTANCE TO THE HIDE, SKIN AND
LEATHER DEVELOPMENT CENTRE OF ISIRI

DU/IRA/74/059

IRAN

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

Based on the work of David Winters, consultant on leather industry development

United Nations Industrial Development Organisation
Vienna, 1975

Explanatory notes

A comma (,) is used to distinguish thousands and millions.

During the period of the project, the value of the Iranian rial (Rls) in relation to the United States dollar (US\$) was US\$ 1 = 66.641 Rls.

The following abbreviations are used in this report:

HSLDC	Hide, Skin and Leather Development Centre
ISIRI	Institute of Standard and Industrial Research of Iran

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CONTENTS

<u>Chapter</u>	<u>Page</u>
SUMMARY	4
INTRODUCTION	5
I. FINDINGS OF THE MISSION	5
A. The leather and allied industries	5
1. Tanneries	5
2. Shoe factories	8
3. Other leather products	9
B. Hide, Skin and Leather Development Centre	9
II. RECOMMENDATIONS	11

Annexes

I. Iranian tanneries, pickling plants and abbatoirs visited by the consultants	13
II. Draft project document	19

SUMMARY

A six-week assessment of the Iranian leather and allied industries as well as of the Hide, Skin and Leather Development Centre (HSLDC) of the Institute of Standard and Industrial Research of Iran (ISIRI) was carried out by a team of two consultants, one representing the Food and Agriculture Organization of the United Nations (FAO) and one representing the United Nations Industrial Development Organization (UNIDO). The UNIDO consultant concluded that the proposed 115 per cent expansion of the leather industry due to occur over the next three years will be in jeopardy if no qualified leather technologists are available.

The consultant calculates that the requirement of some 45 technologists would seem realistic to satisfy the proposed industrial expansion and suggests that the existent HSLDC of ISIRI be reoriented from its current academic bias to its more practical use as an industrially oriented pilot-plant/demonstration unit. With such reorientation could be coupled a training programme at the HSLDC to produce some of the technologists shown to be needed for the development of this sector of Iranian industry.

In order to effect the reorientation and initiate the necessary high-level training courses at the HSLDC, external assistance should be sought. A draft project document is attached such as would be suitable for a project launched under the United Nations Development Programme (UNDP).

INTRODUCTION

The Institute of Standards and Industrial Research of Iran (ISIRI) has created a Hide, Skin and Leather Development Centre (HSLDC). The HSLDC, which was conceived in 1965, had in the past received assistance from the United Nations Development Programme (UNDP) under project "Hides, Skins and Leather Development" (IRA/65/513), which came to an end in September 1974. The Government of Iran, wishing to have further assistance for this Centre, asked for preparatory assistance in order to define the scope of a second phase of activity. This request was made in September 1974. Accordingly, a team of two consultants, one representing FAO and the other UNIDO, were fielded to carry out this assignment.

The UNIDO consultant commenced his assignment on 25 May 1975. Following briefings at Vienna (UNIDO) and Rome (FAO), he arrived at the duty station on 29 May and left on 17 July. The FAO consultant arrived 14 June. The two consultants collaborated closely, and their recommendations for future activity at the HSLDC, embodied in a draft project document (annex II), were jointly prepared.

I. FINDINGS OF THE MISSION

A. The leather and allied industries

The consultant was requested to:

"Assess the existing situation and future prospects of the leather and allied industries in Iran, and the industry's requirements for extension services, applied research activities, training of personnel at various levels, etc."

1. Tanneries

In compliance with this facet of the consultant's duties, visits were made to 23 tanneries and 4 abbatoirs, which have been summarized in tabular form (see annex I). Additionally visits were made to various governmental

departments and institutions. The tanneries visited were in the Teheran area as well as those which could be visited during a six-day tour covering Ganji, Rasht and Tabriz. The tanneries visited represented some 70 per cent of the total Iranian leather industries capacity in the upper leather sector and thus, it is felt that the mission's findings were soundly based.

A summary of the Iranian leather industry and its future prospects and needs may be found in the background and supporting information of the draft project document in annex II.

The most pertinent factor to emerge was that there is now an acute shortage of trained technologists and technical personnel at all levels and that this situation will be aggravated, if and when the proposed 115 per cent expansion of the industry occurs.^{1/} The shortage of trained personnel is not so apparent in the older established sector of the industry, although some firms need an upgrading of their technologies.

However, the dearth of technologists and technicians at all levels is highlighted by the situation at three modern, heavily mechanized tanneries. Two of the tanneries employ three expatriates each and the other tannery has nine expatriates. Thus an average of five expatriates per tannery is found necessary. When it is considered that 6 new tanneries (of similar size) are proposed (2 tanneries per year scheduled for the next 3 years), it is apparent that a further 30 trained personnel will be required. Thus a requirement of at least 45 technologists is likely to occur by 1978 (15 for tanneries existent in 1975; 30 for proposed expansion of the industry).

The proposed tanneries, of capacity 4,000 skins or 1,000 hides per day, will, under Iranian conditions, need at least five technologists each. Countries with well-established leather industries such as ~~units~~ would require only four qualified staff, i.e. one technical manager, one technologist for beamhouse, one technologist for tanning and a further technologist for

^{1/} In order to avoid confusion it should be noted that the word technologist is used in the current English sense which the Shorter Oxford English Dictionary defines as "the scientific study of industrial arts". Technologists should, in the consultant's view, be of equal academic calibre to university graduates in the pure sciences. Indeed it may well be expedient to use university graduates in chemistry or similar disciplines as the raw material from which technologists may be produced. Whether technologists are produced by further training of university graduates or by direct training of high school diploma it seems imperative that the Iranian Government accept and reward them comparable status to graduates.

finishing. However, after visits had been paid to two of the modern tanneries at Ganji (see annex I), it became clear that a greater number of trained personnel would be required to give the necessary supervision to ensure that reasonable quality standards are achieved under Iranian conditions.

The majority of the leather to be produced by these prospective tanneries - mostly sheep and goatskins - are destined for exportation as internal demand for such leathers is low. Thus high-quality products of internationally acceptable standards are essential; very high levels of supervision must be available.^{2/}

Currently the quality of products of these two modern, well-equipped tanneries is abysmally low - even the presence of 12 expatriates (3 + 9) is not able to guarantee acceptable international quality standards. It must, therefore, be assumed that the 5 technologists suggested per tannery is the minimum requirement of the units. It may, however, prove that qualified Iranians may be more effective as they will more easily be able to communicate with the workers and will be more conversant with the Iranian labour codes.

The proposed new tanneries will be joint ventures. The Iranian partners hope to receive the necessary technical inputs from their overseas partners. The experience of the two Ganji tanneries (which includes some measure of joint venture and foreign assistance) shows that such procedures do not always yield perfect results. In any case, in due course, the expatriate staff must be replaced by qualified Iranian personnel.

Thus, without a doubt, the demands of the Iranian leather industry and its proposed expansion require an immediate crash programme of training in the field of leather technology.

It is considered essential that an Iranian institute be available to train technologists, technicians and workers at the necessary levels for the efficient operation of the industry.

Additionally it is imperative that a source be available to supply updated technology on an institutional demonstration basis as well as on an in-plant consultative basis.

^{2/} It may be noted that the 45 technologists suggested earlier will need augmenting with some number of lower level technicians for supervisory duties.

There is a definite need for improvement in the processing (flaying, preparation and curing) and marketing of raw hides and skins in Iran. Improvement in this most important vital area of the leather industry will not only benefit the producer with better prices for these materials but will also ensure that the tanning industry will have access to better quality raw material from which a prime quality finished leather acceptable to global export markets may be produced.

C. Shoe factories

Total foot-wear production in Iran is said to be about 80 million pairs per year. The breakdown of this production may be seen in the table.

Daily production of foot-wear

Enterprise	All materials		Leather shoes	
	10 ³ pairs/day	(%)	10 ³ pairs/day	(%)
Melli	45	17	20	27
Bella	50	19	5	7
Wien	30	12	2.5	3
Shadanpour	25	10	2.5	3
Total	150	58	30	40
Other enterprises and artisan production	110	42	45	60
Total	260	100	75	100

Although the majority of all shoes are produced by the four large groups, the majority of leather foot-wear is produced by small enterprises. A recent study suggests that artisan shoemakers account for some 43 percent of the leather-shoe production.

The consultant visited two of the mechanized units in the Melli group (two separate joint-venture factories), as well as countless artisan shoemakers in the bazaars.

The products of the mechanized units are of reasonable quality and no external assistance appears necessary, as the joint-venture partners appear to supply sufficient expertise.

The products of the artisans are varied, some being of extremely low quality and other of very high quality. There appears little need for assistance in this sector as these artisans supply all the quality levels demanded by market forces at economic prices.

3. Other leather products

The consultant did not visit any producers in this sector but did examine some Iranian leather goods. The quality of the products is generally mediocre, but there is little realistic hope of raising quality levels in this sub-sector until greater supplies of higher quality leathers are available.

In discussions with government officials and others, it was understood that entry was planned into the leather-garment and glove industries in the future. This proposed future activity is to be export oriented. The activity is suggested as an integrated activity to utilize the products of the proposed tanneries. However, the one currently active, modern plant to process sheep and goat leather does not produce leathers suitable for production into garments after several years of experience. There is no guarantee that high-quality garment and glove leathers will be produced by the proposed tanneries. The time does not seem opportune for development in this sector.

A logical approach would be to direct the tannery products to export markets. When export markets for garment and glove leathers have been satisfied, it will be the correct time to contemplate production of leather goods. If the tanneries cannot reach international quality levels, it would suggest that any leather goods produced would be sub-standard.

Rapid development of leather-garment production could be obtained if the joint-venture partner in one of the proposed tanneries were already operating such an integrated unit elsewhere.

B. The Hide, Skin And Leather Development Centre of ISIRI

The consultant was to:

"Assess the existing capability of the ISIRI Leather Institute to provide the leather and allied industries with the services needed in the above industries with the services needed in the above fields, and determine the requirements in terms of expert

assistance, equipment, training of national counterparts, all other aspects necessary to enable the Institute to contribute successfully to the development of the leather and allied industries so as to reduce imports and increase exports of leather and leather products";

Following two weeks of investigation at the HSLDC, including lengthy individual discussions with all staff members, the consultant found that the HSLDC is well housed and superbly equipped. It has a large pilot plant tannery with ancillary laboratories and offices. The pilot tannery occupies 1,200 m², the laboratory block 420 m² and the office block 1,600 m².

The capacity of the pilot tannery in ft³/day may be assumed:

Mixed production skins	8,500
plus Bovine	<u>2,200</u>
	10,700
or	
Skins only	14,000

The existent HSLDC is materially equipped to carry out the training, technological, demonstration and consultative duties, however, it would require a radical reorientation of activity from the present academic bias and specifically towards the recognized needs of the leather and allied industries which are in the fields of training, technical services to the leather industry and improvement in the raw hide and skin sector.

The original purpose of the HSLDC was "to carry out applied research, training and demonstration on the processing and marketing of hides, skins, leather and animal by-products, and to advise on planning and legislation for the hide and leather industry".

Due to a variety of reasons the HSLDC never became truly operational and has not been able to achieve its original objectives. Factors contributing to this were the late arrival of the plant and the extended building time which resulted in the centre becoming active only towards the end of the UNDP assistance period. However, of greater import was the acute shortage of qualified Iranian technologists.

The centre was staffed with graduates in academic fields and, due to the lack of technologists, the centre's efforts tended to become academic and sight was lost of the objective "to orient the institute's work to the basic needs of the leather and allied industries".

Thus today, the HSLDC is functioning at a low level, putting supposed applied laboratory work forward as its major justification for existence. However, such experimental laboratory projects are at low academic and technical levels due to poor technical direction in the past and an apparent lack of awareness of the need for literature surveys, prior to experimentation, in order to know what lines of thought and results have been obtained elsewhere.

However the building, plant and equipment exist at the HSLDC, which could allow the logical reorientation of the centre whereby the pilot tannery becomes the dominant activity with the emphasis on assistance to industry, all other aspects taking supporting roles to the tannery production.

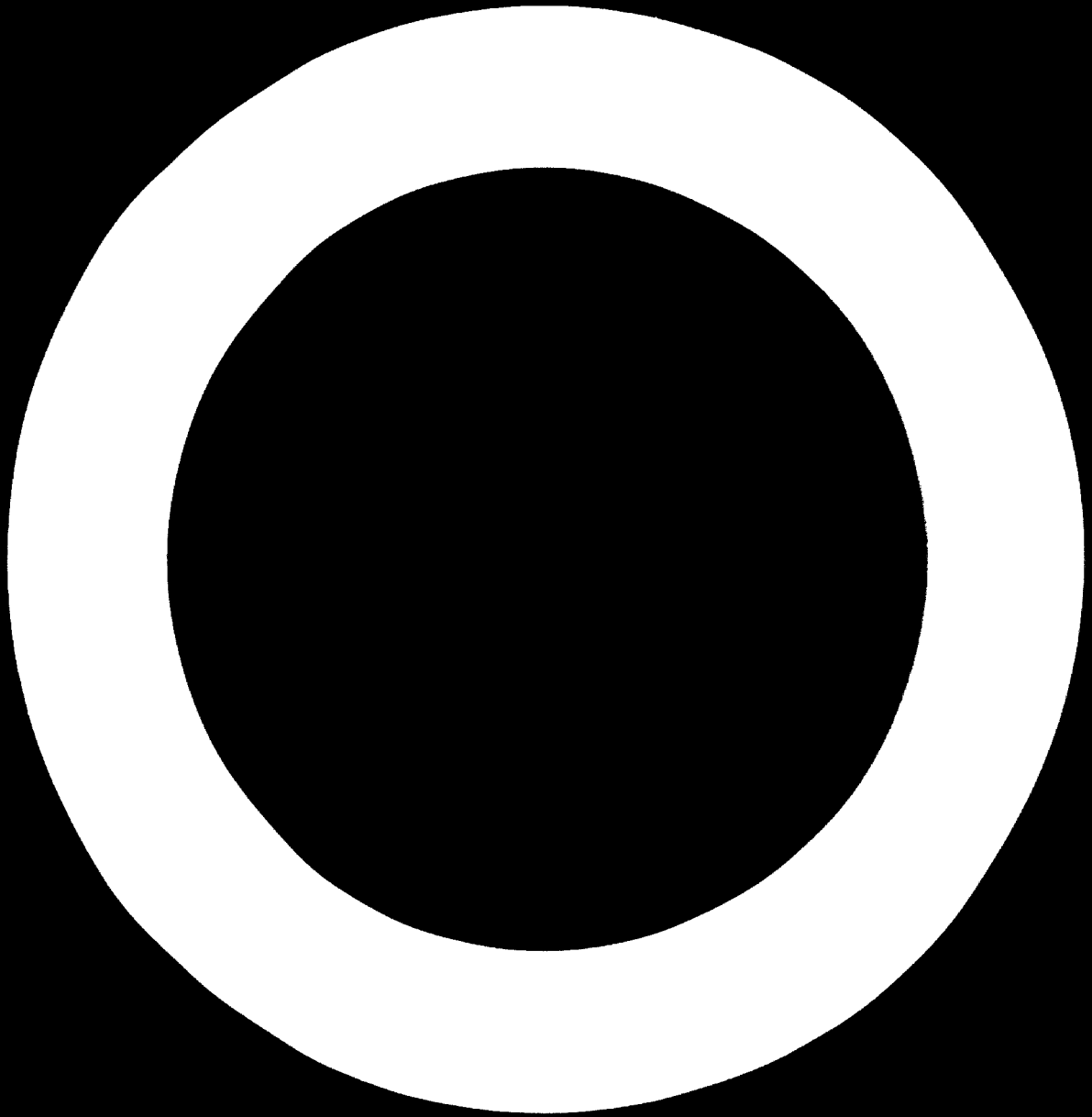
Subject only to the necessity to partition a classroom out of an unused area of the building, virtually all equipment is available to successfully operate the training schemes shown to be necessary for the development of the leather industry in Iran.

Thus an injection of leather technological expertise into the centre appears to be the major requirement of the centre's second phase of activity.

II. RECOMMENDATIONS

It is recommended that the project to reactivate and reorientate the HSLDC be implemented at an early date (see the draft project document in annex II).

During the implementation of the project all concerned should ensure that the assistance given is of a technological nature to balance the "pure-science" bias which now exists at the Centre.



Annex I

IRANIAN TANNERIES, PICKLING PLANTS AND ABBATOIRS VISITED
BY THE CONSULTANTS

Tanneries and pickling plants

Plant	Number of employees	Production (units)	Approximate annual production	Approximate annual capacity	Mechanical facilities	Remarks
Pars Tannery Teheran	35	Uppers (ft ²)	780 000	1 600 000	Good. Splitter, vacuum, mollisa, lightening, pad conveyor, 600-ton press	Poor quality, particularly buffing and finishing, using local and dry hides
		Soles (kg)	Nil	Nil		
Hartunian (No.1) Tannery, Teheran	60	Uppers (ft ²)	2 000 000	2 000 000	Good. Vacuum, spray conveyor, 600-ton press	Excellent quality. Ladies shoes wt, only using 8/10 kg, local hides
		Soles (kg)	Nil	Nil		
Melli-Azar Tannery Teheran		Uppers (ft ²)	5 700 000	8 000 000	Excellent	Average quality, using Dar, W/S and EA 16 lb + yield about 30 ft ² /hide
		Soles (kg)	Nil.	Nil		
Zok Tannery, Teheran	100	Uppers (ft ²)	2 100 000	4 000 000	Very good. 2 flesh, 2 split, vacuum, paste x 25 plates, 2,600-ton presses	Fair to average quality, connected with Bella Shoes
		Soles (kg)	250	400 000		
Agher Kasemi Tannery Teheran	25	Uppers (ft ³)	800 000	800 000	Poor. Hand fleshing	Quality as good as Zok above but far less mechanical equipment. Handles some skins
		Soles (kg)	Nil	Nil		

Plant	Number of employees	Production (units)	Approximate annual production	Approximate annual capacity	Mechanical facilities	Remarks
Melli (skins) Tannery, Ganji	120	Finished skins (ft ²)	1 600 000	6 000 000	Good. Finished production limited by 2 presses. Act capacity to retain 13,000 skins daily or approximately 18 million ft ² annually	Poor quality finished leather. Total daily input presently 5,000 skins - 1,000 to finish and 4,000 to pickle
Melli (hides) Tannery, Ganji	180	Uppers (ft ²) Soles (kg)	5 200 000 Nil	6 500 000 Nil	Good, but some m/os looking badly worn	Poor quality using South African dry salts, 9 expatriate supervisors
Zahoori Aleemajdi Tannery, Tabris	20	Uppers (ft ²) Soles (kg)	520 000 200 000	670 000 300 000	Medium mechanization hand fleshing	Average quality but good soles. Also produces some harness leather
Pack Tannery Tabris	4	Uppers (ft ²) Soles (kg)	- 700	- 850	Limited mechanization hand fleshing, rolling machine	Poor to average quality processing masks and face pieces only
Milban Tannery Tabris	5	Uppers (ft ²) Soles (kg)	170 000 -	500 000 -	Limited mechanization shaver, lightening, Gloria-type press	Poor to average quality using some dry hides
Omeran Tannery Tabriz	5	Uppers (ft ²) Soles (kg)	105 000 -	200 000 -	Limited mechanization lightening, Gloria type	Poor to average quality

Plant	Number of employees	Production (units)	Approximate annual production	Approximate annual capacity	Mechanical facilities	Remarks
Khosrovi Tannery Tabriz	250	Uppers (ft ²)	2 000 000	2 600 000	Good. Fleisher, splitter	Excellent quality. Company has small glue plant
		Soles (kg)	nominal	1 500 000		
Battas Tannery Tabriz	15	Uppers (ft ²)	525 000	750 000	Limited mechanization hand flesh'ng, splitting machine 600-ton press	Poor quality
		Soles (kg)	-	-		
Etehad Tannery Tabriz	25	Uppers (ft ²)	525 000	800 000	Limited mechanization hand fleshing	Poor quality
		Soles (kg)	-	-		
Afroos Tannery Tabriz	40	Uppers (ft ²)	750 000	900 000	Limited mechanization shaver, buffer, 600-ton press	Poor quality
		Soles (kg)	-	-		
Nomontaz Tannery Tabriz	8	Uppers (ft ²)	125 000	175 000	Limited mechanization hand fleshing	Poor quality using some dry goatskins
		Soles (kg)	-	-		
Ofahrideh Pickling Plant, Tabriz	14	Pickled skins	170 000 mainly sheep	1 000 000	Limited mechanization no fleshing	Satisfactory quality
		Pickled skins	2 400 000 mainly sheep	3 000 000	Limited mechanization 2 Up-right unhairing no fleshing	

Plant	Number of employees	Production (units)	Approximate annual production	Approximate annual capacity	Mechanical facilities	Remarks
Pickling Plant Teheran		Pickled skins	1 000 000 mainly sheep	1 300 000	Limited mechanization no fleshing	Satisfactory quality 5-day lime
Parach Tannery Teheran		Uppers (ft ²) Soles (kg)	850 000 350	1 000 000 2 000	Limited mechanization hard fleshing	Good quality using mainly East African dyes 12/16 and 16 +
Karatumian (No.2) Tannery, Teheran	40	Uppers (ft ²) Soles (kg)	1 430 000	1 430 000	Good but limited	Excellent quality 30% full grain, using 10chl W/S 8-12 kg
Schmal Tannery Teheran	6	Uppers (ft ²) Soles (kg)	416 000	2 100 000	Good	Poor quality on grain finishing but good-quality suede
Monts Tannery Teheran	35	Uppers (ft ²) Soles (kg)	1 560 000	2 080 000	Good	Average quality
			nominal	nominal		

Abattoirs

Location and population	Approximate daily kill (thousands)			Approximate annual kill (thousands)			Remarks
	Sheep	Goat	Bovine	Sheep	Goat	Bovine	
Teheran 4 000 000	10 250 mainly sheep		535	3 075 mainly sheep		160.5	Australian sheep comprise about 30% of small animal kill Daily production of approximately 3 tons "meal" Production of tallow Value of Iranian sheep - 270 Rls Value of Australian sheep - 150 Rls Value of bovine - 38 Rls 6-month contract for hides and skins
Rasht 160 000	275 mainly sheep		40	82.5 mainly sheep		12	Butchers carry out slaughtering No hides and skins contract Value of sheep - 140 Rls Value of bovine - 40 Rls Value of intestines - 40 Rls
Tabriz 500 000	650	100	200	185	30	60	1-year hides and skins contract Value of sheep - 320 Rls Value of goats - 150 Rls Value of bovine - 30 Rls Value of sheep intestines - 100 Rls Value of goat intestines - 50 Rls
Zanjan 65 000	110	55	25	33	16.5	7.5	Butchers carry out slaughter No hides and skins contract

Annex II

DRAFT PROJECT DOCUMENT

United Nations Development Programme

Project of the Government of Iran

Title: Assistance to the Hides, Skins and Leather
Development Centre of ISIRI

Number: IRA/74/059/B/01/37

Duration: Three years

Sector: 35 - Industry

Sub-sector: 3530 - Industrial Services and Institutions

Government Co-operating Agency:

Ministry of Industry and Mines
Institute of Standards and Industrial
Research of Iran (ISIRI)

Executing Agency:

United Nations Industrial
Development Organisation (UNIDO)

Associate Agency: FAO

Date of submission: July 1975

Starting Date: September 1975

Government Contributions:

In cash US \$829,521
In cash Rls. 11,780,000
In kind Rls. 52,105,000

UNDP Contribution: \$71,400

Approved: _____

On behalf of the Government

Date: _____

On behalf of the Executing Agency

Date: _____

On behalf of UNDP

Date: _____

I. BACKGROUND AND SUPPORTING INFORMATION

A. Justification of the Project

1. Iran is currently rapidly increasing its rate of industrialization. Among those industries which are being actively promoted by quasi-governmental bodies in association with the private sector are the leather and allied industries.

2. The existing tanning activity in Iran is said to be carried on in some 20 industrial units, of which 5 are large scale units (finished capacity 10,000 sq. ft. per day) 14 are medium scale (finished capacity over 2,000 sq. ft. per day).

3. The Iranian leather industry although long established has been limited in its aims and has concentrated on the manufacture of products that were in demand for domestic production, mainly footwear. Even so the country is not self-sufficient in the supply of certain leathers for the expanding footwear industry. This lack of self sufficiency is due partly to the limitations of the quantity of available bovine raw material and compounded by the poor handling techniques in the raw hide state coupled with low levels of technology employed in the tanning operation.

4. In addition to the shortcomings mentioned above it is known that the vast majority of the 20 million Iranian sheep and goat skins available annually are currently exported in the raw or pickled condition (minimal added value conditions).

5. Thus an outline picture of Iranian hide and skin availability and utilisation is:-

	<u>Approx annual Production</u> <u>million pieces</u>	<u>Approx. Raw Value</u> <u>million US \$</u>	<u>Current usage</u>
Sheepskins	14.1	64.2	Mainly exported in raw and pickled condition
Goatskins	5.9	14.3	
Cattle and Buffalo Hides	1.1	12.9	All consumed together with some 0.5 million hides imported

6. The Government realising the large potential available for increasing the added value by processing to the finished leather state and with its future thoughts directed initially toward exportation of finished leathers

and eventually exportation of manufactured leather goods has already encouraged the construction of 3 large scale commercial tanneries.

7. One of these new commercial tanneries in operation has high-lighted some of the problems which must be faced in the development of the leather and allied industries in Iran. The major deficiencies have been in the field of technology evidenced by an acute shortage of trained technologists and technicians at all levels. This deficiency has to some extent been temporarily alleviated by employing expatriate technologists and technicians.

8. The government is also actively promoting the leather industry with 5 new large tanning and finishing units for the skin sector and a new large unit is also scheduled for processing of both hides and skins.

These 6 new prospective tanneries will have the capacity to process to finished state some 10 million of the Iranian sheep and goat now exported in the raw and pickled states and would obtain increases in added value of US \$20-30 million per annum (from this first stage of the industries development). Future possibilities exist for a doubling of this added value at a later date when the balance of Iranian skins are fully processed to finished leather and a 6 fold increase or more could be expected in added value if leather products were produced at a later stage. The 6 proposed new tanneries will represent a 115% increase in the leather industry (on a finished area basis).

9. It is apparent that the major requirement for achieving a coordinated development of the proposed expansion in the leather sector is a nucleus of trained and experienced middle management personnel and technologists. In addition it is considered that there is a need for processing techniques to be adapted to suit local conditions as well as the particular characteristics of Iranian hides and skins.

B. Institutional Framework

10. The Government, with UNDP assistance under project. IRA/65/513 from 1965-1974, has created a Hide, Skin and Leather Development Centre (HSLDC). The centre which was initially associated with the Ministry of Agriculture and Natural Resources was later transferred to the Institute of Standards and Industrial Research of Iran (I.S.I.R.I.).

11. ISIRI operates as a department of the Government of Iran, within the Ministry of Industry and Mines deriving its authority from a constitution enacted in 1960.

A major responsibility of ISIRI is providing technological assistance and service to industry when these are required to raise the quality of Iranian goods. Training of national staff in these technological fields is a further ISIRI responsibility.

12. The H.S.L.D.C. which is well housed and superbly equipped consists of a large pilot plant tannery with ancilliary laboratories and offices. The original purpose of the IRA/65/513 project was "to carry out applied research, training and demonstration on the processing and marketing of hides, skins, leather and animal by-products, and to advise on planning and legislation for the hide and leather industry."

13. The H.S.L.D.C. due to a variety of reasons never became truly operational and has not been able to achieve its original objectives. Factors contributing to this were the late arrival of the plant, and the extended building time which resulted in the centre becoming active only toward the end of the UNDP assistance. However of greater import was the acute shortage of qualified Iranian leather technologists.

14. The Centre was staffed with graduates in academic fields and due to the lack of technologists the centre's efforts tended to become academic and sight was lost of the objective "to orient the institute's work to the basic needs of the leather and allied industries."

15. The current 115% planned expansion in the leather industry has as its objectives the exportation of a large percentage of the finished product. This will require an even higher level of quality than is presently being produced and will need high calibre technologists and other managerial staff. The joint venture partners in these proposed enterprises will supply some expatriate expertise and it is anticipated they will send some Iranian staff members for training overseas. However to meet the future expertise requirement it is considered essential that an Iranian institute be available to train technologists, technician and workers at the necessary levels for the efficient operation of the industry.

16. Additionally it is imperative that a source be available to supply updated technology on an institutional demonstration basis as well as on an in-plant consultative basis.

17. There is a definite need for improvement in the processing (flaying, preparation and curing) and marketing of raw hides and skins in Iran. Improvement in this most important vital area of "the leather industry" will not only benefit the producer with better prices for this material but will also ensure that the tanning industry will have access to better quality raw material from which a prime quality finished leather acceptable to global export markets may be produced.

18. The existant H.S.L.D.C. is materially equipped to carry out the training, technological demonstration and consultative duties however it would require a radical reorientation of activity moving from the present academic bias and being specifically directed towards the felt needs of the leather and allied industries which are in the fields of training, technical services to the leather industry and improvement in the raw hide and skin sector.

19. To provide the necessary dynamism and reorientation within the H.S.L.D.C. it is felt essential to inject a team of expatriates to supply the expertise until a measure of self-sufficiency in this technological sector is obtained. Fellowship training for Iranians at technological institutes overseas will also be a significant project activity.

20. Minimal building and plant requirements will be necessitated to carry out this reorientation of the H.S.L.D.C. as when initially equipped a pilot plant of large size was installed (capacity over 10,000 sq. ft. of finished leather per day) with adequate laboratory and testing equipment.

Socio-Economic Aspects

21. The project being primarily of a support technology nature with training services is not likely to have direct investment potential. However it may be pertinent to note that the planned expansion in the skin sector will include an investment of some US \$66 million for fixed capital and perhaps an equal amount for working capital. Thus this project must be viewed as a backup service to ensure efficient operation of these new units as well as upgrading of the existing units.

. It has been directed that all of the new tanneries being planned are due to be located in provincial areas far removed from the capital, thus reducing the industrial centralization in the capital and providing job opportunities in other areas. The projects planned work in the raw hide and skin sector could yield significantly increased returns to the rural primary producers.

Future UNDP assistance

23. In view of the large industrial expansion proposed for the leather sector and the possibility of producing high grade finished leather in Iran in the future which would be suitable for conversion into nontraditional leather products (garments, gloves, etc.) at a later date the H.S.L.D.C. should consider expanding its activities in the Leather Utilization sector.

Such possible expansion must proceed only when the H.S.L.D.C. is reorientated and in full operational activity. Review missions would be necessary to monitor progress in the H.S.L.D.C. and to identify any expansion of the centre which may be necessitated by the developments in the industrial sector.

II. OBJECTIVES OF THE PROJECT

The project is included in Section V, Subsector - Industry- on Page 31 - ref. no. 109 of the document "Annual Review of the Country Programme of Iran June 1974".

A. Long Range Objectives

The long range objectives are:

1. To ensure a supply of trained prepared personnel for the leather and allied industry at all levels as may be required by the commercial sector.
2. To ensure that the H.S.L.D.C. has the capability (plant, equipment, manpower and knowhow) to service the complete leather sector of industry from the procurement and processing of the raw hides and skins through tanning to production of Leather goods and the ultimate export marketing of the products by means of demonstration at the centre as well as by Inplant assistance and consultancy services.

3. To utilize the plant and equipment installed at the H.S.I.D.C. in such way as to maximise its practical assistance to the leather and allied industries and assist the industrial sector in its endeavours to expand production in an orderly fashion simultaneously raising the quality levels of its finished products in order to enter the international markets in a competitive condition.

4. To develop into a multifunctional "Leather Institute" expanding from the industrial service and training functions to embrace the whole sector including economic and statistical aspects of the Iranian and global leather industries so as to be in a position to advise both industry and government of changing worldwide trends and the actions necessary, to be taken in Iran.

B. Immediate Objectives

1. To strengthen the centre's technical expertise so as to be in better condition to serve industry and assist it raise its leather quality standards.

2. To utilize at minimum 20% of the present capacity of the pilot tannery, by processing regular daily packs of skins (250 skins per day) follow through to the export markets (initially to wet blue and proceeding as rapidly as is realistic to the crust and later finished leather state) for use as industrial "case study" projects.

3. To utilize the regular daily pilot plant, to provide realistic training of professional, technical and manual workers.

4. To harness the institutes laboratory and ancilliary services as a support to the regular daily production through the pilot plant so as to be in a position to offer industry the results of these "Case Study" production.

5. To establish at the centre teaching and training facilities:

a. To offer a 2 year diploma type course for those with a good general educational background. The level of such course to approximate to the final Examination in Leather Manufacture of the City and Guilds of London Institute or the equivalent international standard.

b. To offer training courses for technicians as may be required by the developing industrial leather and allied sectors.

- c. To offer workers in the industry suitable courses in machine operation and familiarisation with tannery practices.
6. To promote improved hide and skin flaying and curing by housing pilot "improvement" schemes at 3 or 4 representative abbatoirs. The results will be closely monitored and technical and economic assessments of the operation will allow realistic discussion for future activity in this subsector.

III. WORK PLAN

1. Project activities

Dates and Duration

All Project activities will be based at the Hides, Skins and Leather Development Centre in South Tehran. The work plan is shown in relation to the "immediate objectives".

2. Preliminary activities to be carried out by the government:

- | | |
|---|-----------------------|
| (i) the government will provide the necessary office space and facilities; | Dec. 1975 |
| (ii) the government will arrange to have the required counterpart personnel assigned and available for the project; | Dec. 1975 as required |
| (iii) the government will provide the necessary Pilot tannery, Laboratory building space and premises; | Dec. 1975 as required |
| (iv) the government will arrange to have the required financial allocation for the project included in the yearly budget of the HSLDC; | Sept. 1975 |
| (v) the government will provide necessary transport for expatriate personnel until the transport provided for in the OCCC budget is made available. | |

3. Objective I

"To strengthen the centres technical expertise so as to be in better condition to serve industry and assist it to raise its leather quality standards":

- | | |
|--|--------------------------|
| (i) Fellowship Training for 2 potential leather technologists to be commenced at overseas technical institute; | Sept. 75 through July 77 |
| (ii) experts to be available at the centre. | Dec. 75 |

Project Activity

Dates and Duration

4. Objective II

"To utilize at minimum 20% of the present capacity of the Pilot tannery by processing regular daily packs of skins (250 skins per day) follow through to the export markets (initially to wet blue and proceeding as rapidly as is realistic to the crust and later finished leather state) for use as industrial "case study" projects.

- | | |
|---|--------------|
| (i) Specify and order equipment for pilot tannery (Dry Tunnel and embossing plates and equipment necessary for inplant production control); | January 1976 |
| (ii) Install above equipment; | |
| (iii) Negotiate and procure suitable Raw Material for Pilot Plant Operation; | March 1976 |
| (iv) Specify and procure chemicals suitable for 3 month Pilot Plant Production; | January 1976 |
| (v) Commence Pilot Plant Production on regular daily basis; | April 1976 |
| (vi) Investigate Domestic and Export market for products from pilot plant. | January 1976 |

5. Objective III

"To utilize the regular daily pilot plant to provide realistic training of Professional, Technical and Manual workers".

- | | |
|--|---------------|
| (i) Commence practical training of counterparts, staff and students in routine tannery operations. | April 1, 1976 |
|--|---------------|

6. Objective IV

"To harness the institutes laboratory and ancillary services as a support to the regular daily production through the pilot plant so as to be in a position to offer industry the results of these "Case Study" productions.

- | | |
|---|---------------|
| (i) Specify and order necessary extra laboratory equipment and supplies; | January 1976 |
| (ii) Commence practical training of counterparts and students on routine chemical and physical analysis of leather and process materials; | February 1976 |

<u>Project Activity</u>	<u>Dates and Duration</u>
(iii) Commence training of counterpart staff and students in modern production control procedures applicable to the Pilot Plant Production;	April 1976
(iv) Commence regular monthly interdepartmental technical discussions and seminars;	February 1976
(v) Prepare regular combined Technical, Analytical and economic reports covering each completed "base stud" production.	As applicable.
Objective V	
"To establish at the Centre teaching and Training facilities:-	
a. To offer a 2 year diploma course for those with good general educational background. The level of such course to approximate to the final Examination in Leather Manufacture of the City and Guilds of London Institute or equivalent International Standard.	
b. To offer training courses for technicians as may be required by the developing industrial leather and allied sectors.	
c. To offer workers in the industry suitable courses in machine operation and familiarisation with tannery practices.	
(i) Specify and order necessary audio-visual and training aids;	January 1976
(ii) Specify and supervise conversion of part of drying area to form classroom; and equip	January-March 1976
(iii) Prepare necessary curriculum and outline lecture notes for anticipated courses (see Annex IV);	January-March 1976
(iv) Interview and select prospective students;	January-March 1976
(v) Commence 2 year diploma course in Leather Technology;	April 1976
(vi) Initiate courses in the English Language for staff/students where applicable;	March 1976
(vii) Commence technicians and workers training courses	as requested by Industry

Project Activity
8. Objective VI

Dates and Duration

"To promote improved hide and skin flaying and curing by housing pilot "improvement" schemes at 3 or 4 representative abbatoirs. The result will be closely monitored and technical and economic assessments of the operation will allow realistic discussion for future activity on a countrywide basis.

- | | | |
|-------|---|--|
| (i) | Select 3 or 4 representative abbatoirs for applying concentrated Improvement Measures and obtain municipality support for schemes (Tabriz, Rasht, Zanjan and Ghazvin) | January 1976 |
| (ii) | Select and train in practical improvement techniques 4 suitable candidates and post to abbatoirs; | January-March 1976 |
| (iii) | Utilizing demonstration and training commence Hide and Skin Improvement at the selected abbatoirs; | April 1976 |
| (iv) | Determine and report progress and efficiency from technical and economic aspects the achievements obtained from the Hide and Skin Improvement programme; | July 1976 (and then at 6 months intervals) |

9. Mid-term review

Joint Executing Agency mid-term review mission to assess the progress and achievement of the project in respect of the objectives specified in the work plan and to recommend adjustments as necessary.

10. Consultants

- | | |
|------------------------------------|--------------------|
| Leather Trade's Engineer | 2 months) |
| Fur Technologist | 2 months) as and |
| " " | 1 month) when re- |
| By-Products utilisation | 2 months) quired |
| Leather utilisation | 1 month) |
| Other specialists as required | 2 months) |
| Preparatory Mission (May/July '75) | 4 months) |

11. Technical Assistance to Industry

In conformity with the Long Range Objectives 2 and 3 the Centre should offer a technical and economic consultative service to the Leather and Allied Industries.

As soon as practical

Description of UNDP Inputs

<u>(1). Assignment of International Staff</u>	<u>Location</u>	<u>Starting Date</u>	<u>Duration</u>
(a). <u>Project Manager</u> will advise, co-	Teheran	Dec. 1975	36 months

ordinate and assist the activities of the projects international experts to ensure implementation of the projects work plan and objectives. In particular he will advise on the selection of counterpart personnel and necessary equipment and supplies. He shall supervise the building modifications required. He shall coordinate and participate in the proposed training programmes, "case study" production and technical assistance to industry.

Qualifications: Graduate of University or Technical College with qualification in Leather Technology. Experience in training of technical personnel and with a wide range of experience in commercial tannery operation.

(b). <u>Expert in Leather Technology (Skins)</u>	Teheran	Jan. 1976	30 months
--	---------	-----------	-----------

will work under the overall supervision of the Project Manager and in close cooperation with the Leather Technologist (finishing) and the Leather Chemist/Technologist to ensure the successful operation of the centre's pilot tannery. He shall participate by presenting lectures on the subjects relevant to the scheduled training programme. He shall give technical assistance, when required, to Industry. This expert will develop modern technical process for converting Iranian raw skins into a variety of high quality finished leathers.

Qualifications: Graduate of University or Technical College with qualification in Leather Technology. Extensive experience in the large scale commercial production

	<u>Location</u>	<u>Starting Date</u>	<u>Duration</u>
of a variety of finished leathers from sheep and goat skins with the capability of training students and subordinate staff in this field.			

(c). Expert in Leather Technology (Finishing)

will work under the overall supervision of the Project Manager and in close cooperation with the Leather Technologist (Skins) and the Leather Chemist/Technologist to ensure the successful operation of the centre's pilot tannery. He shall participate by presenting lectures or subjects relevant to the scheduled training programme. He shall give, when so required, technical assistance to industry. This expert should specialize in the development of "finishing" of hide and skin leathers with the object of transferring this proven technology to the Iranian Industry.	Teheran	Jan. 1976	30 months
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Qualifications: Graduate of University or Technical College with qualification in Leather Technology. Extensive experience in the finishing of a variety of leather with the capability of training students and subordinate staff in this field.

(d). <u>Expert in Leather Chemistry/Technology</u> will work under the overall supervision of the project manager and shall supervise and control the analytical, physical testing and microbiological laboratories which shall provide a backup technical support service for the pilot tannery. He shall ensure that the centre's analytical laboratories can provide such services as may be required by the Iranian leather and allied Industries. He shall par-	Teheran	Jan. 1976	30 months
--	---------	-----------	-----------

Location Starting Date Duration

participate by presenting lectures on subjects relevant to the scheduled training programme. This expert shall be responsible for the organization, maintenance and updating of the centres technical library.

Qualifications: Graduate of University or Technical College with qualification in Leather Chemistry/Technology with extensive experience in the operation of Industrial Analytical quality control laboratories with the capability of training students and subordinate staff in this field.

(e). Expert in Leather Economics and Marketing Teheran Jan. 1975 30 months

will work under the overall supervision of the project manager and in close cooperation with the other international experts and shall be responsible for the compilation of an updated technico-economic report covering the whole Iranian Leather and allied Industrial Sector. The expert shall collaborate with others in the preparation of the technical/economic reports relevant to the "Case Study" productions of the pilot plant as well as the Hide Improvement pilot schemes. The expert will be responsible for advice and assistance in the field of marketing for Raw Materials, Leathers of all categories and finished leather products serving both the centre's activities as well as industries requirements. He shall participate in the scheduled training program by presenting lectures in the fields of tannery productivity, economics Costing and marketing.

	<u>Location</u>	<u>Starting Date</u>	<u>Duration</u>
<p><u>Qualifications:</u> Preferable a graduate of a University or Technical College with qualifications in Leather Technology/Management with extensive experience in the management and marketing function of commercial tanneries with the capability of training students and subordinates staff in this field.</p>			

<p>(f). <u>Expert in Hide Improvement</u></p> <p>will work under the overall supervision of the project manager and will be responsible for the initiation and operation of the 2 or 4 "pilot" improvement schemes aimed at improving flaying, treating, curing and marketing techniques for the raw hides and skins at selected abbatoirs reporting at 6 monthly intervals on the technical and economic aspects of the achievements of the improvement scheme with the object of implementing similar improvement techniques in other areas of the country. He shall participate in the centres scheduled training program by presenting lectures within his field of competence. He shall, as required, assist in the selection and purchase of raw materials for the pilot tannery operation.</p>	Teheran	Jan. 1976	30 months
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Qualifications: Preferably a graduate of a Technical College with qualification in Leather Technology but of more importance proven experience in the operation of hide improvement schemes in developing countries.

(g). Consultant Services as outlined in Workplan III 10-Duties to be elaborated by the Project Manager in light of progress of the project.

	<u>Location</u>	<u>Starting Date</u>	<u>Duration</u>
(3). <u>Training Provisions</u>			
A. Diploma course in Leather Technology 10 students	HSLDC Teheran	April 1976	24 months
B. Technicians Courses	"	as required	as found
C. Worker Courses	"	by industry	necessary

D. Leather Technology	UK	Sept.	24 months
2 Fellowships	"	1975	24 months
E. Leather-Institute operation and management	?	1976/7	9 months
2 Fellowships	?	" "	6 months
F. Leather Technology/management	UK	Sept. 1975	10 months
2 Fellowships	UK	Sept. 1977	10 months
G. Leather Technology/finishing	UK	Sept. 1976	10 months
2 Fellowships	UK	Sept. 1977	10 months
H. Hide and Skin improvement/by products utilization		Sept. 1976	10 months
2 Fellowships		Sept. 1977	10 months

(3). <u>UNDP Provided Supplies and Equipment</u>	<u>Delivery Date</u>	<u>Cost US \$</u>
1 - Skin Drying Tunnel/conveyor/chain (?)		25,000
4 - Embossing plates for Hydraulic Press		5,000
Misc. spares for existing plant and equipment		25,000
Audio Visual Teaching Aids		2,000
Misc. Laboratory equipment and supplies		5,000
Production Control Laboratory equipment and Supplies		5,000
		<u>67,000</u>

(4). <u>Miscellaneous</u>		
Reporting Costs		5,000
Sundry		2,000

C. Description of Government Inputs

1. Prerequisite

(1) Prior to the arrival of experts in Dec. 1975 arrangements for office accommodation and secretarial facilities will be made.

(2) The counterpart personnel for UN Experts will be provided in each of the technical disciplines in order to maintain an effective work team.

7. Financial Provisions

(a) Government Cost Sharing Contribution (in convertible currency)

The Government will pay the sum of US \$ 829,521 as a contribution to the international costs in accordance with the schedule specified at the relative budget sheet.

(b) Government Counterpart Cash Contribution (in convertible currency)

The Government will pay the sum of Rials 11,80,000 as a contribution to the local administrative costs in accordance with the schedule specified on the relative budget sheet.

(c) Government Provided Premises and Equipment as Follows:

(1) Conversion of part of Drying Room to form a

lecture room to hold 25 people.....	800,000 Rials	
Equipment for Lecture Room (25 tables/chairs).....	125,000	"
Humidity and Temperature control equipment for Hide store and Physical Test Laboratories.....	1,000,000	"
Misc. operations and maintenance of Bldg/Equipment.....	2,600,000	"
Revolving Fund for Hide, Skin and chemical purchases..... (40 days at 250 skins at 380 Rials)	3,800,000	"
Rent.....	4,320,000	"
(2) Miscellaneous.....	600,000	"

WORK PLAN - BAR CHART

1955 1956 1957 1958
SOND/JFMAMEJJASOND/JFMAMEJJASOND/JFMAMEJJASON

Conversion to Farm Section
Room

Completion



Conversion to Farm Production
Control Laboratory

Completion

Assignment of International
Experts.



01 Project Manager



02 Leather Technology (Skin)



03 Leather Technology
(Finishing)



04 Leather Chemistry/
Technology



05 Leather Economic and
Marketing



06 Hide Improvement



Mid Term Review Mission

Consultants

II

PROJECT BUDGET COVERING UNDP CONTRIBUTION

(In U.S. Dollars)

Country: **IRAN**

Project No: **IDA/74/059/B/01/37**

Title: **Assistance to Hides, Skins and Leather Development Centre of ISIRI**

10. PROJECT PERSONNEL

	Total	1975	1976	1977	1978
	m/m \$	m/m \$	m/m \$	m/m \$	m/m \$
11-01 Project Manager	36	1	12	12	11
11-02 Leather Technology (S) Expert	30	-	12	12	6
11-03 Leather Technology (F) Expert	30	-	12	12	6
11-04 Leather Chemistry/Technology Expert	30	-	12	12	6
11-05 Leather Economist/Marketing Expert	30	-	12	12	6
11-05 Hide Improvement	30	-	12	12	6
11-06 Consultants	14	4	4	4	2

11-99	Sub-Total	200	600,000	5	15,000	76	228,000	76	228,000	43	129,000
13.	Support Personnel		30,000		825		9,900		9,900		9,375
16.	Missions Costs		5,000		-		-		5,000		-
19.	Component Total		635,000		15,825		237,900		242,900		138,375

	<u>1975</u> <u>\$</u>	<u>1976</u> <u>\$</u>	<u>1977</u> <u>\$</u>	<u>1978</u> <u>\$</u>
30. TRAINING				
31. Individual Fellowships	89,550	29,700	41,550	13,500
39. Component Total	<u>89,550</u>	<u>29,700</u>	<u>41,550</u>	<u>13,500</u>
49. Equipment	-	67,000	-	-
59. Miscellaneous	7,500	800	800	5,800
90. Sub-total	<u>799,050</u>	<u>335,400</u>	<u>285,250</u>	<u>157,675</u>
97. Cost-Sharing	<u>(727,650)</u>	<u>(320,370)</u>	<u>(255,220)</u>	<u>(146,335)</u>
99. UNDP Total Contribution	<u>71,400</u>	<u>15,030</u>	<u>30,030</u>	<u>11,340</u>

PROJECT BUDGET COVERING GOVERNMENT COST-SHARING CONTRIBUTION
(In U. S. Dollars)

Country: Iran

Project No.: IRA/74/059/B/01/37

Title: Assistance to Hides, Skins and Leather Development Centre of ISIRI

	<u>Total</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
56. Agency Overhead Cost	101,871	801	44,852	35,121	20,487
27. Cost-Sharing Project Cost	124,650	5,725	320,310	255,220	146,335

99. **GRAND TOTAL** 829,521 6,526 365,222 290,251 166,822

A) Proposed Schedules: \$ 341,748 on 15 October 1975 or signing of the Project document
whichever occurs first.

\$ 290,951 on 15 October 1976

\$ 166,822 on 15 October 1977

B) To be deposited in UNDP Resident Representative's dollars account No. 700003 with
Bank Melli, Iran, Central Branch, Tehran.

\$

PROJECT BUDGET COVERING GOVERNMENT CONTRIBUTION IN CASH
(in Local Currency)

Country: IRAN

Project No: IRA/74/059/B/01/37

Title: Assistance to Hides, Skins and Leather Development Centre of ISIRI

	1975 m/m	1976 m/m	1977 m/m	1978 m/m
TOTAL				
10. <u>PROJECT PERSONNEL</u>				
15. Support Personnel Cash Counterpart				
15-d. Secretary	36	12	12	11
15-02 Drivers (5)	156	60	60	35
19. COMPONENT TOTAL	192	72	72	46
	7,440,000	2,760,000	2,760,000	1,830,000
49. Equipment	2,600,000	2,600,000	-	-
59. Miscellaneous	1,740,000	560,000	560,000	405,000
99. GRAND TOTAL	11,780,000	6,020,000	3,420,000	2,235,000

A) Payment Schedule = Rials 6,125,000 on 15 October 1975 or signing of the Project Document, whichever occurs first.
 " 3,420,000 on 15 October 1976
 " 2,235,000 on 15 October 1977

B) To be defined in UNDP Resident Representative's Rials Imprint A/C No. 1785 with Irano-British Branch, UN Branch.

PROJECT BUDGET COVERING GOVERNMENT CONTRIBUTION IN KIND

(In Local Currency)
In Thousands of Rials

Country: IRAN

Project No: IRA/74/059/B/01/37

Title: Assistance to Hides, Skins and Leather Development Centre of ISIRI

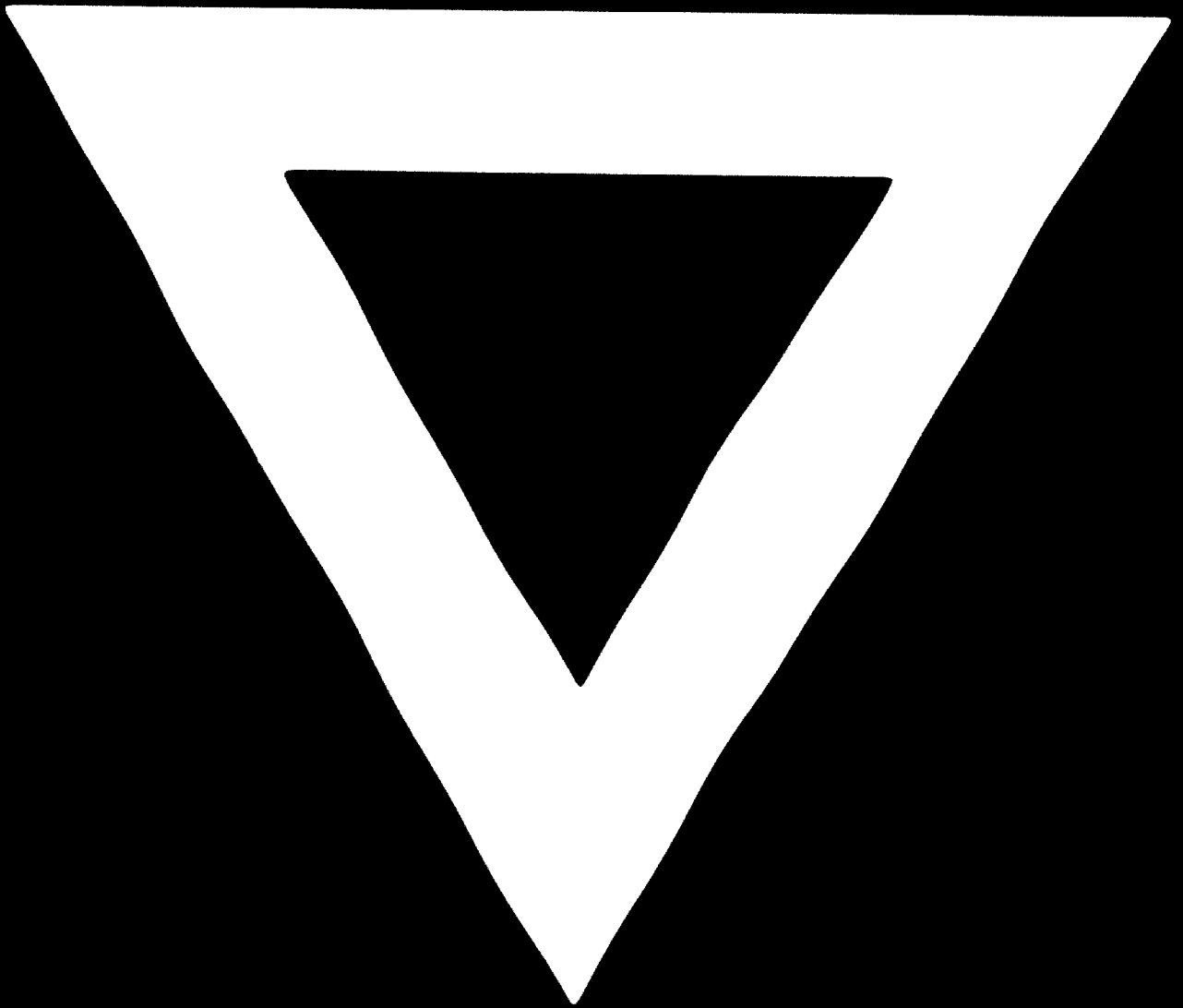
	<u>TOTAL</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>					
10. <u>PROJECT PERSONNEL</u>										
Co-Manager	36	1	12	12	11					
Co-Manager	36	1	12	12	11					
Counterpart to Leather Technology Expert (S)	30	-	12	12	6					
Counterpart to Leather Technology Expert (P)	30	-	12	12	6					
Counterpart to Leather Chemist/ Technology	30	-	12	12	6					
" " " "	30	-	12	12	6					
" " " "	30	-	12	12	6					
" " " "	30	-	12	12	6					
Counterpart to Leather Economist/ Marketing	30	-	12	12	6					
Counterpart to Hide Improvement Expert	30	-	12	12	6					
Counterpart to Hide Improvement Expert	30	-	12	12	6					
Counterpart to Hide Improvement Expert	30	-	12	12	6					
Counterpart to Hide Improvement Expert	30	-	12	12	6					
Counterpart to Hide Improvement Expert	30	-	12	12	6					
11-99 SUB-TOTAL	432	34,560	2	160	168	13,400	168	13,440	94	7,520

PROJECT BUDGET COMPARING GOVERNMENT CONTRIBUTION IN KIP

(In Local Currency)
In Thousands of Riels

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>
TOTAL	160	13,440	13,440	7,520
Support Personnel	700	250	250	190
30. Training	3,600	1,350	1,800	450
49. Equipment	12,645	7,365	2,640	2,420
59. Miscellaneous	600	200	200	180
99. GRAND TOTAL	<u><u>52,105</u></u>	<u><u>22,605</u></u>	<u><u>18,130</u></u>	<u><u>10,860</u></u>

* Provision for stipend for 10 Students for 24 months



76.01.13