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AGENCY OF THE MINISTRY OF INDUSTRY  
YOGYAKARTA  
PREPARATORY MISSION,  
INDONESIA  
(10/INS/75/0.1/01-01/75)

Project Findings and Recommendations

Terminal report prepared for  
the Government of Indonesia  
by

Magne Mestvold

staff member of the United Nations Industrial Development Organization  
acting as Executing Agency for  
the United Nations Development Programme

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## SUMMARY

This three-week preparatory mission was carried out to assist the Government of Indonesia in formulating a project for assistance to the Leather Research Institute in Yogyakarta. Based on the assessment made of the industry and the institute, and on the information thus obtained, a proposal is presented for a UNDP/UNIDO large-scale project for a duration of two years, scheduled to start on 1 April 1976, to assist in the modernization of the Leather Research Institute in Yogyakarta and through this institute to provide technical assistance to the entire leather industry sector in Indonesia.

The project will involve a total UNDP contribution of US\$ 346,950 and, tentatively, a Government counterpart contribution amounting to 37.5 million Rupiahs. The services of four experts, some consultants, and a subcontract component are foreseen, as well as training abroad of Indonesian specialists and some equipment for the laboratory and pilot plant activities of the institute.

Provision of industrial size machinery and equipment for the institute's industrial plants is not included in the project, but is strongly recommended for Government financing.

Several additional recommendations are also presented which are aimed at improving and further developing the leather and leather products industries in Indonesia.

## INTRODUCTION

The official request for this preparatory mission was received by UNIDO on 5 April 1975 by cable misc. 1023 from UNDP, Jakarta. My release for a period of maximum three weeks was confirmed by the Executive Director of UNIDO on 29 April 1975, and I arrived in Jakarta on Monday 5 May 1975 and stayed in Indonesia up until Tuesday 20 May 1975.

During this stay I met with several Government officials concerned with industrial development, with the Director and staff of the Leather Research Institute, with the Chairman and members of the board of Asosiasi Perkulitan Indonesia (AKI), the Federation of Indonesian

Leather Association, as well as a number of representatives of the leather and shoe industry in Indonesia, and with staff of the UNEP/UNIDO office in Jakarta. A list of the persons contacted during this mission is attached as Annex 2.

I visited a total of sixteen leather factories and three shoe factories in Central and East Java and in Jakarta. A planned visit to Bandung in West Java unfortunately had to be cancelled due to lack of time. The time schedule and itinerary of my visits are given in Appendix II of the preliminary mission report.

Upon return to Vienna the appended draft project document for the proposed UNEP/UNIDO large-scale project was elaborated (Annex 1).

In view of the Leather Research Institute's lack of outside contacts it was proposed to include in this project an orientation tour by the Director of the institute to leather research institutes and other institutions concerned with the development of the leather and leather products industries in various developed and developing countries, to initiate the direct contact between these institutions and the institute in Yogyakarta. Letters have been sent to a number of institutes in preparation for this orientation tour (see list in Annex 3).

UNIDO publications and other documents were requested by the Director of the Leather Research Institute and have been forwarded to him, as detailed in Annex 4.

A report on the factory visits made during my mission is being prepared.

Tentative prices on the industrial size equipment required by the Leather Research Institute in addition to the equipment component included in the proposed large-scale project, will be obtained and when collected this information will be forwarded to the Director of the institute.

## FINDINGS

During the visits to the tanneries and shoe factories, and from the discussions held with the representatives of the Government, industry and the Leather Research Institute, the following impressions from and information about this industrial sector were obtained.

### 1. The Leather Industry

There are sixty tanneries in Java and a few more in other parts of Indonesia, producing sole leather and upper leather mainly for local consumption using cattle hides and buffalo hides as raw material, as well as sheepskins and goat skins, of which approximately 80 per cent are exported as pickled skins, and a limited amount of reptile and specialty leather.

The tanneries range from the most primitive rural sole leather tanneries to modern upper leather and skin leather factories with up-to-date machinery and production techniques.

Since early 1974 when the export of raw hides and skins from Java was banned, there evidently has been a considerable upswing of industrial tanning activities. Several new plants have been or are being constructed. Some of the factories are, however, hampered considerably by lack of capital to purchase necessary machinery. Most of the factories work at considerably less than full production capacity, due to not sufficiently developed export markets and changes in the production lines.

### 2. The Leather Products Manufacturing Industry

The footwear and leather goods manufacturing industries are to a considerable extent of the cottage and home industry scale. Of the shoe manufacturing units only some 10 per cent are mechanized. There exist four relatively large factories for the production of canvas shoes, for export as well as for local consumption. The production of leather footwear is estimated at only some 6 million pairs annually.

There are still many problems to be solved before a significant improvement and expansion of the footwear and leather goods manufacturing industries can be obtained. However, the scope for expansion of this industrial branch is considerable.

3. Organization of the Leather Research Institute, Agartala

The institute is well organized and directed, is orientated towards practical tasks and has a well established contact with the leather and allied industries. This good direct contact with the industries was confirmed during the plant visits made. Many leather factories have technical staff trained at the Academy of Leather Technology (ALT) and/or were previously attached to the Leather Research Institute. In addition to that, in several of the factories visited technical staff of the institute was engaged in carrying out short-term consultancy work. Such direct practical work in the industry is very important for an institute like this and should be further strengthened and developed. Contracted production work is further carried out for clients in the industrial plant at the institute.

The institute buildings are spacious and suitable. However, the equipment and machinery of the testing and analysis laboratories, experimental and development work department and of the industrial units within the institute, need considerable modernization and upgrading.

The most serious drawback of the institute, however, is its relative isolation from outside impulses and up-to-date technical and general information, and its lack of contact with similar institutes in other countries, developed and developing. It is also short of scientific and technical books and technical literature dealing with the leather and leather products industries.

The need for expert assistance and impulses from abroad in practically all activities of the institute is evident, as is also the need for upgrading the training programmes at the institute itself and the Academy of Leather Technology.



## RECOMMENDATIONS

### A. Particularly concerning the Leather Research Institute

1. A large-scale UNDP/UNIDO project is recommended for technical assistance in the modernization of the Leather Research Institute, for a duration of two years, and involving a total UNDP contribution of US\$ 243,950. A tentative estimate of the Government counterpart contribution amounting to 27.5 million Rupiahs is included, but the counterpart contribution has to be agreed upon in detail between the Government authorities concerned and the UNDP/UNIDO office in Jakarta. The proposed starting date for this project is 1 April 1976, to coincide with the beginning of the Government's financial year. The draft project document (Annex 1) gives detailed information on this project.

2. Production equipment and machinery for the industrial units at the institute and the pilot plant at the Academy of Leather Technology in Yogyakarta should be provided in addition to that existing now, in order to obtain the required upgrading of these units. It is strongly recommended that funds for the purchase of such industrial machinery be allocated through the development budget of the Leather Research Institute.

3. The research activities at the institute should, in the next few years, be kept on the applied research level, with emphasis on the development of processes and production types suitable to the specific conditions in Indonesia, as well as the development of products based on available local raw materials.

### B. Additional Recommendations

4. Development work should be intensified at the institute as well as in the industry itself.

5. A detailed survey of the entire leather industry sector should be carried out in order that complete and reliable data can be obtained, which will permit the planning of a well balanced development of this industrial sector.

6. The contacts between producers of leather and leather products in Indonesia and buyers in various importing countries should be strengthened.

7. Participation of Indonesian leather and footwear manufacturers at international fairs and exhibitions should be promoted. Particular attention should be given to the possibility of organizing and setting up an Indonesian stand at the important international fair Semaine du Cuir in Paris.

8. Local production of certain types of tools, equipment and machinery to be used by the leather and leather products industries should be encouraged.

9. The possibility of establishing a leather board factory in Indonesia should be investigated in order to ensure a profitable utilization of waste leather and scraps from tanneries and shoe factories.

10. The possibility of establishing in Indonesia a factory for the production of vegetable tanning extracts from locally available vegetable tanning materials (acacia, mangrove, etc.) should be examined.

11. Efforts should be made towards further co-operation between the five ASEAN countries on leather industry research and training activities, with the Leather Research Institute possibly acting as a regional centre.

Annex 1

UNITED NATIONS INDUSTRIAL DEVELOPMENT PROGRAMME  
PROJECT OF THE GOVERNMENT OF  
INDONESIA

Title: Modernization of the Leather Research Institute, Yogyakarta

Number: DP/IND/75/XXX/M/11/37 Duration: Two years

Sector: Industry (35)

Sub-sector: Establishment and extension of manufacturing industries (3521)

Government Contribution Agency: Ministry of Industry Executing Agency: United Nations Industrial Development Organization (UNIDO)

Date of Submission: Starting Date: 1 April 1976

Government Contribution: 37.5 million Rupiahs UNDP Contribution: US\$ 348,950

Approved:

\_\_\_\_\_  
On behalf of the Government  
(signature)

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
On behalf of Executing Agency  
(signature)

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Date

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On behalf of UNDP  
(signature)

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

I. RAW HIDES AND SKINS PRODUCTION AND EXPORTS

A. Justification for the Project

1. The leather producing sector:

According to information provided by The Federation of Indonesian Leather Association, Asosiasi Perkulitan Indonesia (API), there exist sixty tanneries in Java and a few more in other parts of Indonesia, producing sole leather and upper leather for local consumption, using cattle hides and some buffalo hides as raw material, as well as semi-processed and finished leather from sheepskins and goat skins, of which approximately 80 per cent are exported mainly as pickled skins. A limited amount of reptile and specialty leather are also produced.

The total production of hides and skins is estimated at approximately 850,000 cattle hides (= 4,300 tons), 190,000 buffalo hides (= 2,100 tons) and more than 5 million goat and sheepskins (= 2,500 tons). Due to lack of reliable information about slaughtering of the different types of animals, these data are only to be considered estimates, and it is probable that actual figures are even higher.

The number of tanneries and their production capacity are reported to be as follows:

<u>Province</u>	<u>Number of tanneries</u>	<u>Estimated production capacity (monthly)</u>	
		<u>Tons, Dried hides</u>	<u>Pieces, Skins</u>
West Java	19	330	95,000
Central Java	19	175	300,000
East Java	22	410	215,000
Celebes	1	20	10,000
Other provinces	<u>a few</u>	<u>n.a.</u>	<u>n.a.</u>
Estimated total: More than 61		935	620,000

This corresponds to a total annual production capacity of approximately 10,000 tons hides (dried) and approximately 7 million goat and sheepskins.

The tanneries range from primitive rural sole leather tanneries to modern upper leather and skin leather factories with up-to-date machinery and production techniques.

Since early 1974 when the export of raw hides and skins from Java was banned, there has been a considerable upswing of industrial tanning activities, most pronounced in the production of pickled sheep and goat skins for export. Several new plants have been or are being constructed.

Some of the factories are, however, hampered considerably by lack of capital to purchase necessary machinery which would enable them to advance from production of pickled or wet-skin skins and hides to finished leather. Further, most of the factories work at considerably less than full production capacity, due to not sufficiently developed export markets and change production lines, for instance, in some cases from sole leather to upper leather or even to skin leather production. This change necessarily takes time to reach full output and involves technical and managerial problems which have to be overcome. Particular attention will have to be given to expanding and improving leather finishing techniques and methods.

## 2. Leather products industries:

The footwear and leather goods manufacturing industries are to a considerable extent of the cottage and home industry scale. Of the shoe manufacturing units only some 10 per cent are mechanized. There exist four relatively large factories for the production of canvas shoes, for export as well as for local consumption. The production of leather footwear is estimated at only some 6 million pairs annually.

There is scope for considerable improvements and expansion of the footwear manufacturing industry. However, at present there are still many problems to be solved before a significant improvement can be obtained, namely,

- (1) manufacturing methods and techniques,
- (2) tooling and spare parts,
- (3) equipment and machinery, and
- (4) materials and components.

## 3. The Leather Research Institute:

The existing Leather Research Institute is entrusted by the Government, and expected by the leather industry sector, to play an important role in advancing leather and leather products technology in general and in servicing and assisting the expanding leather industry sector, which is directed towards import substitution as well as increasing exports.

The Institute is oriented towards practical tasks and has a well established contact with the leather and allied industries. LRI technical staff are engaged in carrying out short-term consultancy work in improving production methods, assisting in putting into operation new factories or new production lines, etc. Contracted production work is further carried out for clients in the industrial plant at the Institute. The LRI buildings are spacious and suitable. The equipment and machinery of the testing and analysis laboratories, experimental and development work department, and of the industrial units within LRI, however, need considerable modernization and upgrading.

A serious drawback of the LRI is its relative isolation from outside impulses and up-to-date technical and general information and its lack of contact with similar institutes in other countries, developed and developing. The LRI is short of scientific and technical books and technical literature dealing with the leather and leather products industries.

There is a need for expert assistance in practically all activities of the Institute, including the management of the training programmes at LRI and at the Academy of Leather Technology (ALT).

B. Institutional Framework

1. Organization of the Leather Research Institute:

The Institute has five departments, with five sections each, as follows:

- I. Research and Scientific Development - (1) Process and Product Research; (2) Testing and Standardization; (3) Experimentation Laboratories; (4) Data Compilation and Analysis; (5) Patent Research.  
This department has a staff of 24.
- II. Technical and Product Development - (1) Process and Product Technology; (2) Handicraft - Design and Production; (3) Leather Technology; (4) Synthetics and Plastic Technology; (5) Industrial Leathers and Plastics.  
This department has a staff of 72.
- III. Industrial Development and Economics - (1) Statistics and Data Analysis; (2) Industrial Affiliation; (3) Planning and Programming; (4) Industrial Development and Market Research; (5) Law and Regulations.  
This department has a staff of 16.
- IV. Scientific Technical Information and Training - (1) Library and Technical Documentation; (2) Exhibitions and Information Services; (3) Training and Upgrading of Skill; (4) Publication; (5) Extension Services.  
This department has a staff of 13.
- V. General Administration - (1) Finance; (2) Personnel; (3) Buildings, etc.; (4) Supply and Logistic; (5) Power and Technical Maintenance.  
This department has a staff of 66.

The total staff of the LRI is at present 191, of which 88 (= 46 per cent) have received a high level of education. There are 158 men and 33 women.

The Director of the Leather Research Institute is also Director of the Academy of Leather Technology in Yogyakarta, where formal training in leather technology is provided through courses of three and a half years duration. Each year about 60 students are taking part in these courses.

The LRI's sources of income are threefold: (1) operational budget; (2) development budget (based on a tax levied on exports); and (3) earned income (including tanning on contract for clients, fees charged for certification of export quality level and for technical assistance direct to the industry).

4. Industry associations:

The Federation of Indonesian Leather Associations, known as the Indonesian Leather Industry (AKI), was established early 1974 on the basis of a decision made by the Ministry of Commerce, in order to merge all the leather organizations into one organization which will implement all aspects and Government policies in connexion with the leather and allied industries in Indonesia.

The following organizations form part of AKI:

- (a) Indonesian Hides, Skins and Tanners Association (IHISTA)
- (b) Union of Leather Manufacturers of Indonesia (GAPPI)
- (c) Union of Leather Handicrafts Industry for Whole of Indonesia (GIKESI)
- (d) Union of Shoe Manufacturers of Indonesia (IPSI)
- (e) Shoe Co-operation of Indonesia (KOPSI)
- (f) Union of Shoe Manufacturers of Indonesia (GAPERSI).

C. Government Follow-up

The Government will ensure that the project's recommendations and follow-up actions agreed upon be carried out as scheduled and be given the necessary support by the authorities concerned.

D. Other Related Activities

No UNDP/UNIDO technical assistance to the leather industry sector has so far been provided in Indonesia. A UNIDO staff member visited Indonesia for approximately two weeks in May 1975 to assist in the preparatory work on this project. An FAO SIS project dealing with hides and skins improvement, and processing and better utilization of animal by-products is to some extent related to the present project, and its findings and recommendations will be duly taken into consideration.

The successful execution of the project is expected to stimulate substantial and widespread interest in the production of leather as well as in the manufacture of leather footwear and other leather products, especially to increase further the contribution of these industries to the export earnings of Indonesia. However, the extent of the investment likely to result cannot be assessed at this stage.

E. Future UNDP Assistance

Further UNDP/UNIDO technical assistance to the leather and leather products industries in Indonesia may be identified during the implementation of the proposed project and will be decided upon towards the end of this project.

## II. OBJECTIVES AND SCOPE

This project is expected to be included in the Country Program of Indonesia.

### A. Long-range objectives

The long-range objective of the project is to bring the activities of the Institute in line with the increasing and rapidly changing requirements of this industrial sector and thereby contribute substantially to the leather industry sector's impact on the economic growth of the country.

### B. Immediate objectives

The immediate objectives of the project are to:

1. Assess the present and future needs of the Institute as to staff, equipment and facilities required to put the Institute in the appropriate position to assist in upgrading and expanding the leather industry sector's activities and achievements;
2. Assist in establishing an appropriate system of extension services to the leather and allied industries;
3. Provide direct technical assistance to tanneries as well as to shoe factories in updating production techniques and methods;
4. Assist and advise on immediate changes in plants and on the future planning of this industrial sector to achieve the requirements of modern products acceptable to world standards;
5. Train counterparts on the various activities carried out by the project, including the training abroad of selected candidates.

## III. WORK PLAN

The project will be implemented on the basis of the following work plan and in accordance with the provision of Annex I attached.

Preparatory activities are to be carried out by the Government agency concerned, in order to ensure timely implementation of the project.



A. Description of the proposed activities

<u>Project activities:</u>	<u>Location</u>	<u>Proposed duration and start date</u>
1. Assignment of the Chief Technical Adviser to start up the project, working with counterparts. Later on implement the work programme with other project personnel, co-ordinating all activities of the project towards modernization of the Leather Research Institute and intensification of the Institute's co-operation with the leather industry sector.	Yogyakarta with travel within the country as required	Two years from 1 April 1976
2. Assignment of the expert in the marketing of leather, to work with counterparts in advising on appropriate marketing methods in the industry, in governmental organizations as well as in the LRI.	Yogyakarta with travel within the country as required	Six months from 1 September 1976
3. Assignment of the footwear manufacturing expert to work with counterparts in introduction and application of appropriate footwear manufacturing methods and processes in the industry as well as in the LRI.	Yogyakarta with travel within the country as required	One year from 1 April 1977
4. Assignment of the shoe designer to work with counterparts in introduction and application of appropriate shoe design and pattern cutting in the industry as well as in the Institute itself.	Yogyakarta with travel within the country as required	Three months from 1 September 1977
5. Assignment of short-term consultants as required on matters like (a) socio-economic development of the leather sector, (b) planning of training programmes, (c) research policy, etc.	Yogyakarta and other locations as required	A total of Six man-months starting in 1976

Training:

(a) Orientation tour by the Director of LRI to research institutes for the leather and leather products industries in other countries, developed as well as developing	France, India, Iran, Italy, U.K., Netherlands, FRO, Poland, CSSR, Hungary and Turkey	Three months in 1976
(b) Training abroad of one selected candidate on leather technology	U.K., FRO, or Netherlands	Ten months in 1977
(c) Training abroad of one selected candidate on shoe technology	U.K., FRO, or Italy	Ten months in 1977

<u>Training (continued):</u>	<u>Location</u>	<u>Proposed Duration and Starting Date</u>
(d) Training abroad of three selected candidates on the design and pattern cutting	U.K. or Italy	Six months, of which 4 months in 1977 and 2 months in 1978
(e) Training abroad of one or more selected candidates in the specialized fields of activity to be decided upon	To be decided	In 1977 and 1978

The selection of personnel to be sent abroad on fellowships should be made in consultation with the UNIP Chief Technical Adviser and the UNIP technical experts concerned with each particular activity.

B. Description of UNIP Experts

1. <u>Assignment of international staff:</u>	<u>Location</u>	<u>Starting Date and Proposed Duration</u>
(a) <u>Chief Technical Advisor (leather industry expert):</u> The expert should have extensive experience in technical as well as in managerial and economic aspects concerning the leather industry, and experience in the operation of leather research institutes. He will be expected to supervise the activities of the other experts attached to the project and co-ordinate the efforts of all concerned towards the implementation of a programme for close co-operation between the Institute and the public and private leather industry sector of the country. He will also advise the Institute on all technical aspects, particularly in finishing techniques, and on managerial and economic matters concerning the Institute's activities in the field of the leather producing industry, and will train national counterparts on these matters, together with whom he will also provide direct technical assistance to the industry concerned.	Yogyakarta and travel within the country as required	1 April 1976 Two years
(b) <u>Expert in marketing of leathers:</u> The expert should have extensive experience in all aspects of the marketing and export of various types of leather, and an up-to-date knowledge of world markets for these items. He will advise and assist the industry and Government authorities concerned on these subjects, as well as train counterparts at the Institute on marketing of leather.	Yogyakarta and travel within the country as required	1 September 1976 Six months

Assignment of international staff (cont'd):

(c) Footwear manufacturing expert:

The expert should have extensive practical experience in the manufacture of footwear as well as thorough knowledge of world market requirements for footwear. He will advise and assist on appropriate manufacturing methods and will also train national counterparts on these matters, together with whom he will also provide direct technical assistance to the industry concerned.

Location:

Yogyakarta and other locations within the country as required

Start date:

1 September 1976

Three months as required

(d) Shoe designer:

The expert should have extensive experience and up-to-date knowledge concerning shoe designing and pattern cutting. He will advise and assist local shoe manufacturers on shoe design and pattern cutting and train counterparts on these matters, together with whom he will also provide direct technical assistance to the industry concerned.

Yogyakarta and other locations as required

1 September 1976

Three months

(e) Consultants:

The services of one or more short-term consultants may be required to carry out tasks which need very specialized experience and knowledge.

Yogyakarta and other locations as required

In 1976 and 1977 as may be decided for a total of six man-months

2. Provision of sub-contractual services:

Sub-contracts will be established with selected leather institutes and other institutions in other countries to make available information and experiences regarding areas of activity like (1) effluent treatment and environmental problems; (2) introduction of new production methods and processes; (3) market surveys; and (4) technical information services, etc. Such sub-contracted services are expected to lead to a more lasting linkage between the LRI and the foreign institutes selected.

Total of US\$ 45,000 to be used in 1976 and 1977

3. Training provision:

Provision is made for an orientation tour by the Director of the LRI to the most important centres and institutes dealing with research and development work in leather and leather products industries in other countries, developed as well as developing, in order that he can make direct contact with the directors and staff of these institutes. During his visits to these institutes the Director of the LRI will be in a position to select the best available centres for further training of selected staff from LRI to be carried out under fellowships included in the project. These

fellowships are: three of ten-month duration each and one of six-month duration, as specified under project activities, and are to be at special level institutes or of in-plant training character in selected plants in the countries suggested.

4. <u>UNDP equipment, supplies and equipment:</u>	<u>Location</u>	<u>Delivery Date</u>	<u>Cost US\$</u>
(a) Disposable equipment, to be specified after the site of Technical Adviser has assessed the requirements.	Yogyakarta	1976 and 1977	20,000
(b) Non-disposable equipment for additional testing and analysis equipment essential to enable the IRI to carry out its comprehensive testing and standardization work, as well as a limited amount for experimental and development work (small plastic films, etc.) as specified in the equipment list - Annex II.	Yogyakarta	1976 and 1977	40,000
(c) Two motor vehicles to be used by the project, and to be returned to the UNDP Resident Representative in Jakarta upon completion of the project.	Yogyakarta	1976	13,000
(d) Books, technical literature, etc.	Yogyakarta	1976 and 1977	20,000
5. <u>Mid-project review:</u>	<u>Location</u>	<u>Starting Date and Proposed Duration</u>	
Mission costs are included to cover participation of one representative each of UNDP and UNIDO in the mid-project review foreseen for 1977.	Yogyakarta and Jakarta and other locations as required	In mid-1977, for two weeks	
6. <u>Miscellaneous:</u>			<u>Cost US\$</u>
(a) Operation and maintenance of equipment			<u>9,000</u>
(b) Reporting costs			2,000
(c) Sundry			<u>1,000</u>
<b>Total component cost</b>			<b>11,000</b>

C. Description of Government Contribution

1. Assignment of Government Staff:

(a) Government staff: The Director of the IRI will be the formal counterpart to the Chief Technical Adviser who will, in addition, be provided with technical counterparts, namely, one specialized in washing operations and one specialized in leather finishing operations, who will both accompany the Chief Technical Adviser on his visits to the factory. The other technical experts will also be provided with suitably qualified counterparts, and preferably with more than only one national counterpart per expert.

(b) Office facilities and secretarial assistance will be provided by the Government co-operating agency.

2. Training provided:

Maintenance of trainees will be ensured.

3. Government provided equipment:

The existing machinery and equipment available at the IRI's technical departments will be utilized when required for the successful implementation of the project, and in addition to the equipment provided by UNDP, equipment and industrial machinery will be provided by the Government in accordance with the needs and budgetary possibilities. A detailed list of equipment and machinery to be provided by the Government will be established when the Chief Technical Adviser has assessed the requirements and budgetary considerations have been clarified.

A preliminary amount for Government provided equipment to the project has been included into the budget for the Government counterpart contribution.

4. Miscellaneous:

The Government will provide drivers and petrol for project vehicles for work done on the project and be responsible for the maintenance of the vehicles. Necessary domestic travel, office stationary and communications, as well as customs clearances of vehicles and equipment will be the responsibility of the Government.

**PROJECT BUDGET COVERING UNDP CONTRIBUTION**

(in US dollars)

**Country:** INDONESIA

**Project No.:** DP/INS/75/xxx/A/11/37

**Title:** Modernization of the Leather Research Institute, Yogyakarta

	F/M	US\$	m/m	1976	US\$	1977	US\$
Total							
<b>10. Project Personnel Component</b>							
<b>11. Experts:</b>							
11-01 Leather industry expert (Chief Technical Adviser)	24	72,000	9	27,000	12	36,000	3,000
11-02 Expert in marketing of leather	6	18,000	3	9,000	3	9,000	-
11-03 Footwear manufacturing expert	12	36,000	-	-	3	27,000	3,000
11-04 Shoe designer	3	9,000	-	-	3	9,000	-
11-05 Consultants	6	18,000	2	6,000	4	12,000	-
<b>11-99 Sub-total</b>	<b>51</b>	<b>153,000</b>	<b>14</b>	<b>42,000</b>	<b>31</b>	<b>93,000</b>	<b>15,000</b>
<b>16. Mission costs:</b>							
16-11 Mid-project review	0.5	3,000	-	-	0.5	3,000	-
One UNIDO staff member	0.5	3,000	-	-	0.5	3,000	-
One UNDP consultant	1.0	6,000	-	-	1.0	6,000	-
<b>16-99 Sub-total</b>	<b>2.0</b>	<b>12,000</b>	<b>-</b>	<b>-</b>	<b>2.0</b>	<b>12,000</b>	<b>-</b>
<b>19. Component total</b>	<b>52</b>	<b>159,000</b>	<b>14</b>	<b>42,000</b>	<b>33</b>	<b>105,000</b>	<b>15,000</b>
<b>20. Sub-contract Component</b>							
<b>29. Component total</b>		<b>45,000</b>		<b>15,000</b>		<b>30,000</b>	<b>-</b>
<b>29. Component total</b>		<b>45,000</b>		<b>15,000</b>		<b>30,000</b>	<b>-</b>

	1976		1977		1978	
	m/m	US\$	m/m	US\$	m/m	US\$
<b>30. Training Component</b>						
<b>31. Fellowships:</b>						
31-01 Orientation tour of the Director of LRY	3	3,150	3	3,150	-	-
31-02 Leather technologist	10	10,500	-	-	10	10,500
31-03 Shoe technologist	10	10,500	-	-	10	10,500
31-04 Shoe designer	6	6,300	-	-	4	4,200
31-05 To be specified (technical information, etc.)	10	10,500	-	-	6	6,300
<b>39. Component total</b>	<b>39</b>	<b>40,950</b>	<b>3</b>	<b>3,150</b>	<b>32</b>	<b>33,000</b>
<b>40. Equipment Component</b>						
41. Non-expendable equipment		40,000		10,000		30,000
42. Expendable equipment		20,000		5,000		15,000
43. Two motor vehicles		13,000		13,000		-
44. Technical literature, books, periodicals, etc.		20,000		10,000		10,000
<b>49. Component total</b>		<b>93,000</b>		<b>38,000</b>		<b>55,000</b>
<b>50. Miscellaneous Component</b>						
51. Operation and maintenance of equipment		5,000		2,000		3,000
52. Reporting costs		2,000		-		2,000
53. Sundry		4,000		1,000		3,000
<b>59. Component total</b>		<b>11,000</b>		<b>3,000</b>		<b>3,000</b>
<b>99. GRAND TOTAL</b>		<b>348,950</b>		<b>101,150</b>		<b>222,000</b>





	1976		1977		1978	
	m/m	Rs. millions	m/m	Rs. millions	m/m	Rs. millions
<b>40. Equipment Component</b>						
41. Non-expendable equipment (to be specified)						
(a) Tannery unit		14.0		6.0		8.0
(b) Leather products unit		6.0		-		5.0
<b>42. Expendable equipment</b>						
(a) Tannery unit (chemicals, materials, etc.)		3.0		1.0		0.5
(b) Leather products unit (materials, components)		2.0		-		1.5
<b>49. Component total</b>		25.0		7.0		16.0
<b>50. Miscellaneous Component</b>						
51. Operation and maintenance of equipment		1.0		0.3		0.2
53. Sundry, e.g. transport and handling of equipment, import and customs clearance, storage and related expenses, insurance after delivery to site, etc.		1.5		0.5		0.5
<b>59. Component total</b>		2.5		0.8		1.0
<b>99. GRAND TOTAL</b>		37.5		10.8		22.5
						4.2

UNITED STATES GOVERNMENT PRINTING OFFICE

<u>A. Equipment for Physical Testing</u>	<u>Quantity</u>	<u>Price in US\$ (estimated)</u>
1. Bally penetrometer with accessories	1	2,200
2. Bally flexometer with accessories	1	2,700
3. Abrasion tester with accessories	1	2,500
4. Dow Corning shoe tester with accessories	1	4,000
5. Adhesive tester (SAMBA) for testing gluing between shoe soles and upper parts	1	300
6. Photometer-microscope with accessories	1	300
7. Microtone crystal with accessories	1	2,500
Sub-total		<hr/> 14,500
 <u>B. Equipment for Chemical Testing</u>		
a. Nitrogen analyzer macro model (Coleman type)	1	3,000
b. Analytical balance, semi-micro (Mettler type)	1	3,600
c. Cutting mill (Wiley) standard model	1	1,450
d. Photoelectric colorimeter with accessories	1	850
e. Viscosimeter	1	100
f. pH-meter, general purpose model	1	600
g. Shaker, wrist action type (eight places)	1	250
h. Thermometer (Pt-resistance)	1	200
i. Electric stirrer	1	250
j. Heating mantle, various capacities (250-1000 ml)		500
Sub-total		<hr/> 10,800
 <u>C. Various Other Equipment</u>		
i. Small experimental drums (plastic)	5	4,000
ii. Leather conditioning apparatus	1	400
iii. Glass blowing equipment		2,000
iv. Other equipment (to be specified)		2,300
Sub-total		<hr/> 8,700
Total equipment		<hr/> 34,000
+ 15% freight charges		6,000
(Component) Total Cost		<hr/> 40,000
		US\$ <hr/> <hr/>

Annex 2

LIST OF PERSONS CONTACTED

A. UNDP/UNIDO Office, Jakarta

Mr. G. Kastengren	UNIDO Senior Industrial Development Field Adviser
Mr. P.M. Daems	UNIDO Assistant Industrial Development Field Adviser
Mr. J.S. Svendsen	UNDP Assistant Resident Representative
Mr. C.J. Fairbanks	UNIDO Adviser Metalworking Industry
Mr. R. Hawkey	UNIDO Consultant, Grain Storage
Mr. R. Berky	UNIDO Expert, Product Adaptation
Mr. J.B. Otnes	ITC Adviser, Trade Fairs and Exhibitions

B. Ministry of Industry, Jakarta

Mr. Ahmad Slamet	Secretary General of Industry
Mr. Benito Kediya	Adviser to the Secretary General of Industry
Mr. Soegiri Soemodarsono	Director-General for Light Industries and Handicraft
Mr. Arifin Nursalin	Director for Leather Industries, Directorate General for Leather Industries
Mr. Gatot Soedomo	Pusat Penelitian and Pengembangan, Aneka Industri and Kerajinan, Cempaka Putih

C. Leather Research Institute, Yogyakarta

Mr. Pietoyo Soekarbowo	Director, Leather Research Institute and Academy of Leather Technology, and his staff
Mr. Ronald Black	International Programs, Denver Research Institute, University of Denver, USA

D. Representatives of the Industry

Central Java

Mr. R.J. Suratno	Pres. Director, P.T. Budi Makmur Joyo, Yogyakarta
Mr. Sutanto Handoko	Director, P.T. Budi Makmur Joyo, Yogyakarta
Mr. Ambar Soedardjo	Owner of the Sinar Obor Tannery, Yogyakarta
Mr. Arum Mojo	Manager, Complex P.D. Kulit Mertoyudan, Magelang
	Technical Manager, Complex P.D. Kulit Mertoyudan, Magelang

Mr. and Mrs. General	C.V. General, Liong
Mr. Budiman	C.V. Tjipta Budi, Semarang
Mr. Anwar Hamid	Sandoz Limited, Indonesia, Jakarta
Mr. Soebikti	Kepala Dinas Perindustrian, Propinsi Jawa Tengah, Semarang
Mr. Chan Chan Yun	Director, Famous Shoe Factory, Semarang
Mr. Jatchurrohman	Manager, Penyamak Kulit Mesin "P.K.M.", and other members of P.K.M., Pekalongan
Mr. Yuwono	Director, TBT, C.V. Tegal Baru, Tegal
Mr. Sukariono	Technical Manager, TBT, C.V. Tegal Baru, Tegal

East Java

Surabaya:

Mr. H. Aminullah Thalib Karim	Chairman of AKI (Federation of Indonesian Leather Associations)
Mr. Vita	Secretary to Mr. Aminullah
Mr. Noehman Gultom	Pabrik Kulit Wonocolo
Mr. Soeisno Djogosoedarso	Pabrik Kulit Wonocolo
Mr. H.A. Rusydy Rachbini	Director, P.T. Rachbini Leather
Messrs. Wong Brothers	

Malang:

Mr. R. Soediro S.H.	Assistant Director, p.t. Bison Shoe Factory
Mr. T. Nagasawa	President Director, P.T. Pagina Cita
Mr. Gunawan Nugroho	Assistant Director, P.T. Pagina Cita
Mr. Zacharia	Director, P.T. Kasin

Jakarta:

Mr. Sjarifudin Siregar	Director, P.T. Tjakung Leather Factory
Mr. Ishak Noor	Director, Firma Natraco, National Tannery, In Charge of Marketing Section AKI
Mr. Jabar Junaidi	Owner Panvici Tannery, and his son - Technical Manager
Mr. H. Ramlie	Director, C.V. "Ramlie", Reptile Leather and Goods
Mr. Kwok San Soe (Hasan Kartarahardja)	Director, Leather Tannery Makmur Santosa and Co.

Annex 3

LIST OF INSTITUTES APPROACHED

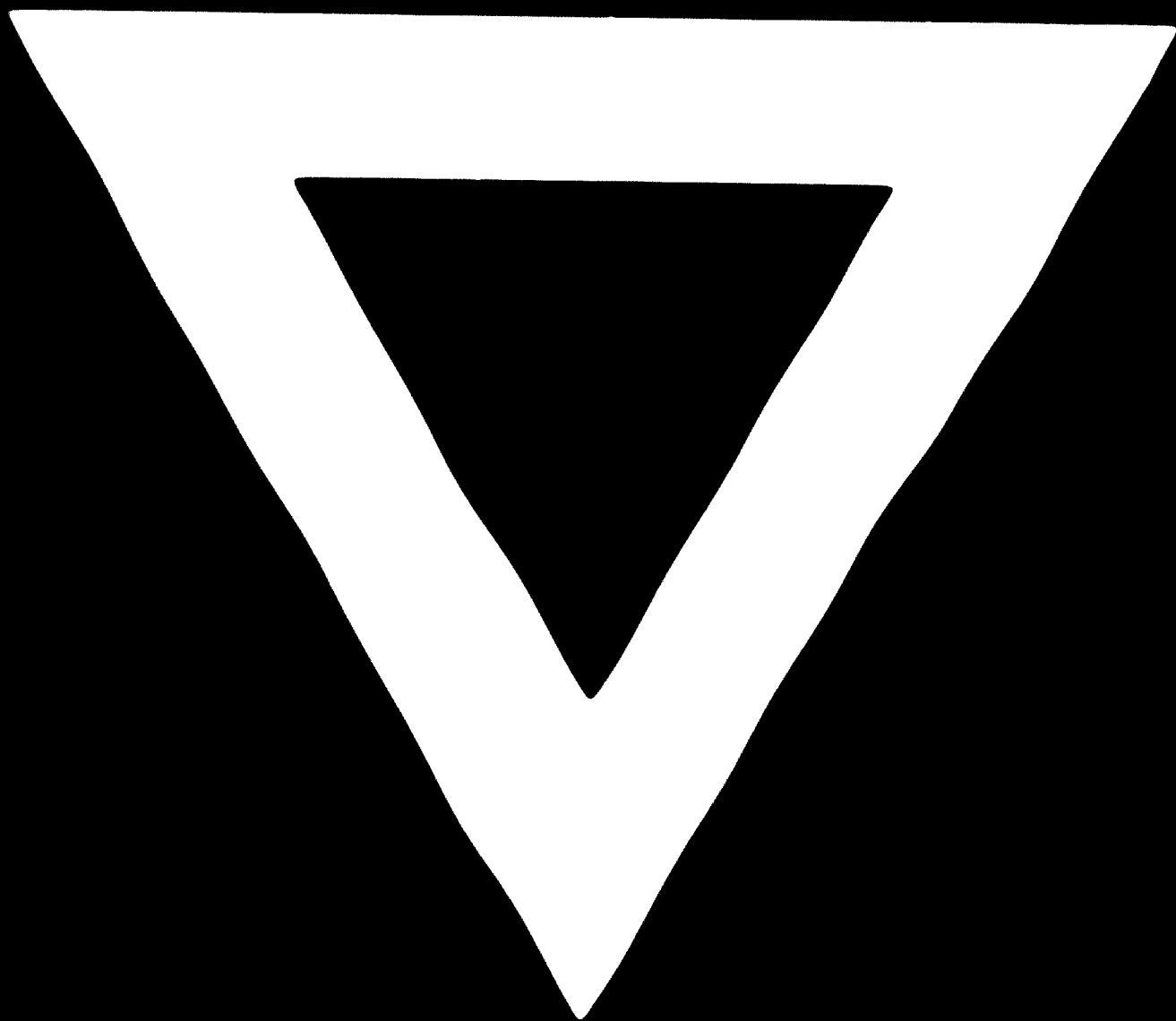
1. Mr. M. Soroudi  
Director-General  
Institute of Standards and Industrial Research of Iran  
P.O. Box 2937  
Teheran, Iran
2. Mr. A.R. Payne  
Director  
Shoe and Allied Trades Research Association  
Satra House, Rockingham Road  
Kettering, Northants  
England
3. Mr. P.J. van Vlimmeren  
Director  
Instituut voor Leder en Schoenen TNO  
Mr. van Coothstraat 55  
Waalwijk, Netherlands
4. Mr. W. Pauckner  
Director  
Westdeutsche Gerberschule Reutlingen  
Postfach 303  
741 Reutlingen, Federal Republic of Germany
5. Mr. O. Fischer  
Director  
Prüf- und Forschungsinstitut für die Schuhherstellung  
Dürerstrasse 3  
678 Pirmasens, Federal Republic of Germany
6. Mr. A. Simoncini  
Director  
Stazione Sperimentale per l'industria delle pelli e delle  
materie concianti  
Via Poggioreale, 39  
80143 Naples, Italy
7. Mr. G.P. Muggiani  
Director, ARS SUTCRIA  
Istituto Tecnico Internazionale Arte Calzaturiera  
Via Ippolito Nievo 33  
20145 Milan, Italy
8. Mr. S. Pilawski  
Instytut Przemysłu Skórsanego  
ul. Zgierska 73  
Łódź, Poland
9. Mr. L. Kocur  
Zentrallabor für Schuhindustrie in Krakow  
Piotrkowska str. 260  
Łódź, Poland

10. Mr. János Beránt  
Director  
Research Institute of the Leather, Artificial Leather and  
Footwear Industries  
Fakas József u.  
Budapest 11, Hungary
11. Mr. N. Sipahi  
Co-Director  
Leather Research and Training Institute  
P.O. Box 26  
Pendik, Istanbul  
Turkey
12. Mr. J. Horák  
Director  
National Research Institute for Shoe, Leather and Allied  
Industries  
Gottwaldov, Czechoslovakia
13. Mr. R.L. Sykes  
Director  
British Leather Manufacturers' Research Association  
Milton Park, Stroude Road  
Egham, Surrey TW 20 9UQ  
England
14. Mr. G. Vallet  
Director  
Centre Technique du Cuir  
181, avenue Jean Jaurés  
69007 Lyon, France
15. Prof. M. Santappa  
Director  
Central Leather Research Institute  
Adyar - Madras 20  
India

ANNEX 4

LIST OF DOCUMENTS FORWARDED

- Papers presented at the 1970 Hungarian Congress on the Leather Industry, Volumes 1.a, b, 2
- A Survey of Modern Vegetable Tanning, published by the Tanning Extract Producers Federation, London
- Papers presented at the 1971 Seminar on the Development of the Leather and Leather Products Industries in Developing Countries (Series ID/WG.79/ - Nos. 13, 15, 18, 20 to 22, 26 and 27, however, were out of print)
- Papers presented at the 1973 Workshop on Leather Industry Development in Developing Countries (Series ID/WG.157/)
- Papers presented at the 1974 Seminar on the Development of the Footwear Manufacturing and Leather Goods Manufacturing Industries in Developing Countries (Series ID/WG.169/)
- Publication ID.90 - Marketing and Export Possibilities for Leather and Leather Products Manufactured in Developing Countries
- Publication ID.92 - A Fancy Leather Goods Factory for Developing Countries
- Publication ID.93 - The Growth of the Leather Industry in Developing Countries: Problems and Prospects
- Publication ID.99 - The Interrelationship between Parameters of the Leather Industry
- Publication UNIDO/LIB/SER.D/ - Information Sources on the Leather and Leather Goods Industry
- Proceedings of the First National Footwear Industry Workshop-Convention, held in the Philippines, September 1974.



**76.02.03**