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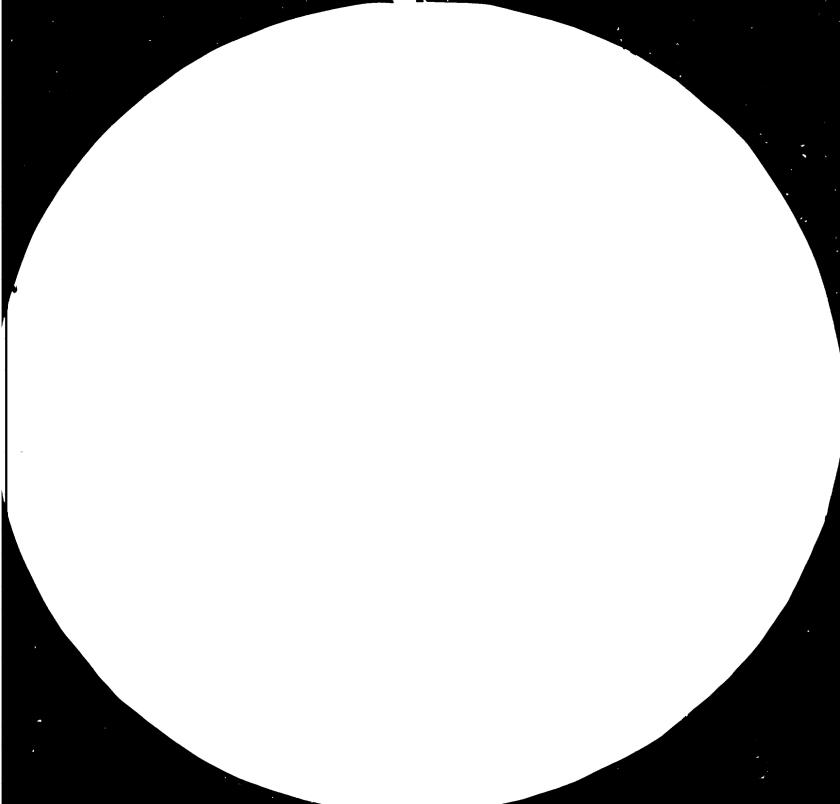
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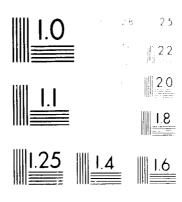
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LEATHER AND LEATHER PRODUCTS DEVELOPMENT.

DP/ETH/78/001

ETHIOPIA,

Terminal report\*

Prepared for the Government of Ethiopia by the United Nations Industrial Development Organization, acting as executing agency for the United Nations Development Programme

> Based on the work of various UNIDO experts, in the leather and leather products sector

United Nations Industrial Development Organization Vienna

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## ABSTRACT

Following a request from the Government of Ethiopia for assistance in the development of the leather and leather products industry sector, a large-scale technical assistance project entitled "Leather and Leather Products Development" DP/ETH/78/001, was approved by the United Nations Development Programme (UNDP) on 24 September 1979. The United Nations Industrial Development Organization (UNIDO) was designated as executing agency in association with the Food and Agriculture Organization of the United Nations (FAO). The Government implementing agency was the National Leather and Shoe Corporation (NLSC) under the Ministry of Industry.

The Government inputs were agreed to be birr 1,041,060 and UNDP inputs to be US\$ 1,521,900. The starting date of the project was September 1979 and the overall duration of the project was scheduled to be 36 months. The project became operational when the first Chief Technical Adviser (CTA) was fielded on 8 September 1979.

The development objective of the project was to increased, within the leather and leather products sector, the value added of the raw material resources, with the ultimate objective of processing all hides and skins into finished and semi-finished quality products, acceptable to the domestic and export markets.

The project was monitored through frequent tripartite review meetings. Such meetings were held on 15 October 1980, 16 July 1982 and 9 June 1983. The project was also subject to the UNIDO system of self-evaluation and a Project Evaluation Report (PER) was prepared for the period of January to June 1982.

Several rephasings and revisions of the original project document took place during the project's life. A major revision (F) was signed on behalf of the Government on 9 July 1981. This revision increased the UNDP inputs by US\$ 733,954 to US\$ 2,255,854 and introduced some changes and a now orientation to the project activities. The most important part of the new orientation was the introduction of a large machinery and equipment component for the establishment of a shoe last and unit sole pilot plant.

The recommendation for starting this pilot plant was originated by the Senior Footwear Adviser (report DP/ID/SER.A/278) and was presented at the tripartite review meeting of 15 October 1980.

Owing to severe delays caused by financial and administrative constraints, the Programme Allotment Document (PAD No. 82-0296), authorizing the expenditure of the Revision F allocation, was issued only on 1 March 1982. After discussing Revision F again at the tripartite review meeting of 16 July 1982, the final clearance to purchase the machinery was received only in August 1982 (UNDP telex misc.955 of 16 August 1982).

Preparatory action for the purchase of the machinery was initiated in early 1982 and the technical selection for the main part of the equipment was finalized after a study tour of the Technical Manager of the NLSC to the Pirmasens shoe machinery fair in May 1982. The orders could only be finalized in autumn 1982 and the majority of the equipment arrived in Ethiopia late 1982 and early 1983; but because of the protracted release of the equipment from customs and problems in organizing transport to Addis Ababa, the machinery and equipment was on the site not earlier than March 1983.

Since a suitable building has not been provided for a central pilot plant housing all the different pilot functions, such as design centre, woven leather manufacture, heel making, sole making, sandal production, and shoe last manufacture, it was decided to install, as an interim measure, the various components of the pilot equipment in different locations. The shoe last pilot plant installation was, however, delayed until early 1985 due to the lack of suitable facilities. It was intended to declare the project completed at the end of 1984, but owing to the above-mentioned setbacks the mission of the last manufacturing expert was postponed to 1985 and will be completed by end of March.

In order to provide accurate data for the manufacture of shoe lasts for the local population, a thorough foot measurement programme was conducted by the project through subcontracted services. This component of the project provided the NLSC with complete data on the frot anatomy of the population in the various provinces of Ethiopia, computer-analysed length and width tables for shoe last size grading and a sample set of all sizes of shoe lasts.

One of the major achievements of the project are the training results obtained. In addition to counterpart training and several training courses and seminars conducted by the different project experts, the project provided fellowship training in various areas to 30 individual fellows for the total amount of US\$ 458.687, and some US\$ 20,586 were spent on four study tours. The total training component of US\$ 479,273 represents 21 per cent of the total project inputs. Most of the fellows selected for the training showed results ranging from acceptable to good, and a few of the fellows had an outstanding performance.

In summary, the project provided the following services (as per end of year account 1984, Appendix I):

| Expert component   | 211.5 man-mont | ths US\$ 1,205,275 |
|--------------------|----------------|--------------------|
| Subcontract        |                | 39,409             |
| Training           |                | 479,273            |
| Equipment          |                | 542,156            |
| Sundries           |                | 21,647             |
|                    |                | US\$ 2,287,760     |
| - uncommitted bala | ance           | 1,157              |
| Total allotment    |                | US\$ 2,288,917     |
|                    |                |                    |

The report summarizes the findings and recommendations of the various project experts and suggests that an in-depth evaluation of this large-scale project be conducted by an independent serior consultant. This consultant should also have the task of recommending appropriate follow-up action and assisting in the preparation of an integrated development plan for the Ethiopian leather and leather products sector in accordance with the recommendation of the UNIDO Third Consultation on the Leather and Leather Products Industry (Innsbruck, April 1984).

#### I. INTRODUCTION

## 1. Project background and justification

The livestock population of Ethiopia is estimated at 26 million cattle, 24 million sheep and 18 million goats. Using estimated annual slaughtering rates of 7 per cent for cattle and an average of 35 per cent for sheep and goats, the estimated annual production is 1.9 million hides, 8 million sheep skins and 7 million goat skins.

However, the actual supply of hides and skins reaching the market is only 819,000 hides and 11 million skins (sheep and goat skins together). The rest, about 1.1 million hides and some 4 million skins, are partly used in rural areas and partly unaccounted for, including those smuggled to neighbouring countries on the hoof livestock or as hides and skins. During the fiscal year of 1976/1977 (1969 Ethiopian calendar) the quantities industrially processed within Ethiopia were 236,000 hides or 29 per cent and 3.1 million skins or 28 per cent of the actual supply. The rest, 583,000 hides and 7.9 million skins, was exported in the raw state. Only 40 per cent of the processing capacity of eight local tanneries, estimated at some 600,000 hides and about 7.8 million skins was utilized in 1976/1977 leaving some 60 per cent of the existing installed production capacity unused.

## Original arrangements and contribution

Early in 1979, the Government of Ethiopia requested the United Nations Development Programme (UNDF) for assistance in the overall development of the leather and learner products industry sector, including assistance in the collection of raw materials; improvement of processing technologies in tanneries, footwear and other leather products industries; developing a nucleus of trained manpower and experienced management staff; and establishing marketing strategies for the local market and for export. The project entitled "Leather and Leather Products Development" (DP/ETH/78/001) was approved on 24 September 1979. The United Nations Industrial Development Organization (UNIDO) was designated as executing agency and the Food and Agriculture Organization of the United Nations (FAO) as associated executing agency, providing the services of a hides and skins expert to the project. The Government's implementing agency would be the National Leather and Shoe Corporation (NLSC) under the Ministry of Industry.

The Government inputs were agreed to be birr 1,041,060 and UNDP inputs to be US\$ 1.521,900. The starting date was agreed to be September 1979, the overall duration of the project scheduled for 36 months.

## 3. Project staff

The project included the services of eleven experts and three shortterm consultants in the functions listed below. Terminal and technical reports of these experts are listed in Appendix II.

#### 30.6 man-months Post 11-01 Chief Technical Adviser Sept.1979 - Sept.1980 Mr. J.W. Hietaniemi (Finland) Dec. 1981 - July 1983 Mr. O. Birkhaug (Norway) 34.1 man-months Post 11-02 Leather Manufacturing Expert March 1980 - Oct. 1982 Mr. W. Scott (U.K.) 33.8 man-months Post 11-03 Tannery Machinery Engineer Oct. 1981 - July 1984 Mr. M.H. Imam (India) 42.5 man-months Post 11-04 Shoe Technologist Dec. 1979 - Nov. 1981 Mr. S. Klatil (U.K.) May 1982 - Dec. 1983 Mr. T. Niklas-Salminen (Finland) 13.0 man-months Post 11-05 Shoe Designer/Pattern Cutter Dec. 1979 - Feb. 1981 Mr. K. Longman (U.K.) Post 11-06 Shoe Machinery Maintenance Engineer 10.8 man-months Feb. 1980 - March 1981 Mr. A. Baker (U.K.) 5.0 man-months Post 11-07 Leather Finishing Expert Jan. 1982 - June 1982 Mr. R. Hermoso (Philippines) Post 11-08 Hides and Skins Improvement Expert 30.0 man-months May 1980 - Oct. 1982 Mr. D.W. Sellwood (U.K.) 3.0 man-months Post 11-09 Shoe Last Manufacturing Expert Jan 1985 - March 1985 Mr. U.S. Paul (India) Post 11-50 Consultants 2.0 man-months

- 11-51 Senior Footwear Adviser Mr. J.W. Parkinson (U.K.)
- 11-52 Tannery Chemicals
  Mr. P. Hanumanta Rao (India)
- 11-53 Tannery Effluent Treatment Mr. D. Winters (U.K.)
- 11-59 Leather Manufacturing Mr. P.B. Buit

- Oct. 1980 Nov. 1980
- 1.5 man-months March 1981 - Apr. 1981
- 3.2 man-months (split mission) March 1981 - Apr. 1981 Oct. 1981 - Dec. 1981
- 2.0 man-months
  Jan. 1980 Feb. 1980

## 4. Project progress

The project was subject to frequent tripartite monitoring and the UNIDO self-evaluation system. Tripartite review meetings were held on 15 October 1980, 16 July 1982 and 9 June 1983 (terminal review) and a Project Evaluation Report was prepared in June 1982. Several project rephasings and revisions were carried out during the project's life. The most important of these revisions was Revision F, which increased the total UNDP inputs to US\$ 2,255.854. Revision F introduced several changes and modifications to the project activities. A new project element, namely, the establishment of a pilot plant for shoe lasts and various shoe components (such as unit soles, heels, woven leather, shoe design, cutting dies and sandal parts) was introduced.

The recommendation to establish such a pilot plant originated from the mission of the Senior Footwear Adviser, Mr. J.W. Parkinson, and was presented at the cripartite review meeting of 15 October 1980 and officially requested by the Government on 9 July 1981. Because of financial constraints and administrative delays, the pilot plant question was again discussed at the tripartite review meeting of 16 July 1982. It was noted that in order to start the pilot plant urgent submission of documents was needed from the NLSC to the Supreme Council. The meeting further recommended that the procurement process for the m chinery of the pilot plant should be continued. Most of the equipment was selected during the study tour of the Technical Manager of NLSC, accompanied by the project's CTA, to the Pirmasens International Shoe Machinery Exhibition in May 1982. Although Revision F finally received validity through issuance of the Programme Allotment Document (PAD No. 82-0296) on 1 March 1982, releasing funds for the equipment, and the selection of the majority of the equipment had been made, the procurement process was discontinued through a telex instruction from UNDP on 20 July 1982 (telex misc.834). This process could again be started in August 1982 after receipt of telex misc. 955 from UNDP on 16 August 1982.

These delays and changes of policy were a severe impediment to the execution of the project. The main part of the equipment was, however, finally shipped late 1982 and delivered to Addis Ababa around March 1983 (List of equipment in Appendix III).

The original concept was that a centralized shoe component plant would be started to provide pilot services in the manufacture of various components to the shoe industry sector, including the manufacture of shoe lasts, unit soles, heels, shoe designs and cutting dies, woven leather uppers, etc. The Government was, however, unable to provide a suitable building for such a centre. As an interim measure the various machines were installed in several different locations. The installation of the shoe last manufacturing pilot plant was, however, delayed until early 1985 due to the lack of suitable facilities and raw materials. The Shoe Last Manufacturing Expert and the installation engineer from the equipment supplier were fielded in January 1985.

# II. SUMMARY OF WORK CARRIED OUT BY THE EXPERTS

The work carried out by the various project experts is documented in the technical and terminal reports of the experts as listed in Appendix II.

## 1. Post 11-01 Chief Technical Adviser

## (a) Mr. J.W. Hietaniemi

The CTA supervised and co-ordinated the work of five experts and one consultant. During the initial period of his assignment the CTA established contacts with the various agencies involved in the project and visited several factories enabling him to serve as a link between the project staff and these bodies. The implementation of the training programme at that time was well ahead of the schedule and the CTA recognized that in view of the importance of this component it should continue to be given priority. After having overcome some initial difficulties such as lack of vehicles for the transportation of the experts and lack of sufficient understanding, confidence and co-operation between the experts and their counterparts, the implementation of the objectives started during the second half-year of the CTA's assignment. He recommended specific measures to be implemented by the various tanneries and shoe factories, as well as the establishment of a sales organization for footwear and other leather products.

After one year of service the Government decided to discontinue this post after September 1980 and have the project operate without a CTA.

#### (b) Mr. O. Birkhaug

After a fourteen-month break, the second CTA joined the project in December 1981. At his arrivel he found that the equipment delivered through UNIDO for the training school was still not installed. In order to utilize the machinery for training and production, a suitable place was temporarily found at the National Productivity Centre (NPC). By repairing certain additional, old, unutilized equipment it was possible to start up a small production-cum-training plant for children's sandals. As of April 1982 the production of children's sandals, utilizing pieces of waste leather, was about 100 pairs per day with a work force of 18 people. The sandals were sold at 12-14 birr per pair, which is a very reasonable price.

This small children's sandal training and production unit was moved in November 1982 to the NPC's new shoe workshop building. The shoe workshop was originally designed for the training of only shoe upper manufacturing, however, the layout was changed to include the following activities:

- training of upper manufacturing
- centre for design, pattern making and cutting die manufacture
- production of children's sandals
- production of ladies' sandals.

All the above activities have been started and are producing the expected results, especially the centre for design has given very valuable support services to the shoe industry. These support services consist of preparation of complete new model collections for the shoe factories, including the pattern making, tooling and complete product documentation. A panel for the preparation of shoe collections was also established and started to operate under the chairmanship of the Technical Manager of NLSC.

The CTA was actively involved in the planning and selection of machinery for the various pilot plants. The original concept of one building housing all the pilot plants was not feasible and the installation of the various equipment items was carried out as follows:

sandal production - new NPC shoe workshop

TR sole units - Anbessa Shoe Factory

plastic heels - Anbessa Shoe Factory

interwoven leather - Ethiopia Tannery
last manufacturing - Manpo Shoe Factory

The last manufacturing pilot plant was delayed for various reasons and the CTA was only able to have the machinery unpacked and placed on the floor. The actual installation and starting up was deferred until all materials were available.

The CTA, in co-operation with the Shoe Technologist and national counterparts, worked on the introduction of a quality control system for the shoe factories. The basis for the system is the quality control manual prepared by Ato Alemayehu Chuffa and Grima Milky. A training programme to introduce the quality control system in all departments was carried out. TC specialization of the shoe factories which has been recommended by the previous experts was worked out in concrete terms by the CTA and his team. New plant layouts were prepared for Anbessa Shoe Factory, Eritrea Shoe Factory and Ethiopia Footwear. All the layouts include semi-automatic conveyors and new machinery for certain key operations (backpart moulding, lining fusing, heat setting). The new plant layouts were based on the sales forecast presented by the Marketing Corporation and the production capacities of the new plant layouts were made for about double the present output.

# 2. Post 11-02 Leather Manufacturing Expert - Mr. W. Scott

The expert utilized the initial part of his assignment to familiarize himself with the tanning industry situation and to carry out on-the-spot extension services.

The first nine months of 1982 brought good improvements in the leathers produced at Awash Tannery. The most important was the change from a carton-like product to a more pliable and adaptable leather with better finishing, giving a finer crease-building in the footwear during use. Because the leather is better worked out, the cutting value has increased. Of new leathers especially semi-aniline sides for better walking shoes and moccasins should be mentioned. In lining leather from sheepskins the problem has been too hard a surface and little body, which gives lots of wrinkles in footwear. In this respect there have been improvements in surface and body of the lining, but there are still

improvements to be made, especially as far as yield is concerned by working the hides better out. The Dynavac process has been indicated as a possible solution.

A number of experimental lots of leathers, among them oil-treated upper leather for veldtschoen and stitched sandals, should be mentioned. Footwear from this type of leather could be an export article for Europe. Sample footwear was made.

Below are some of the more important papers and technical reports prepared by the expert and filed at NLSC:

- (a) List with specifications of re-agents and equipment required for quality control analysis at Awash Tannery.
- (b) An evaluation of "Ethiopian Institute of Standards Methods of Evaluation and Standardization of Leather".
- (c) A study of production capacities at Awash Tannery, as well as production control.
- (d) Chemical trials carried out at Awash Tannery for the purchasing/technical departments of NLSC.
- (e) Evaluation of wet-blue selections at Modjo Tannery.
- (f) Evaluation of cheaper fat liquor using Ethiopian Tannery process.
- (g) Manufacturing of chrome oxide at Ethiopian Tannery.
- (h) Technical reports on:
  - standardization of skins sizes
  - low grain problems of export pickle stock and at Modjo Tannery, Ethiopian Pickling, Awash and Ethiopian Tanneries.
- (i) Effluent treatment.

## 3. Post 11-03 Maintenance Engineer - Mr. M.H. Imam

During his assignment the expert introduced and implemented systematic plant maintenance to Awash and Addis Tanneries; established charts for successful implementation of preventive maintenance, such as lubrication charts for all machinery and equipment in Awash Tannery and for all the other tanneries; yearly overhaul programme charts to be executed at Awash. Addis and Qey Bahir Tanneries on a periodical basis. He further prepared a maintenance job manual for the existing thirty different types of tanning machinery, as well as a job manual for ceven machines, and assisted in overhauling various machinery in a number of tanneries.

The expert trained workers in tanneries as well as counterparts at NLSC on technical maintenance aspects. This was done especially in Awash, Qey Bahir and Addis Tanneries. Amongst his activities were also the installation of two locally made drums and one fleshing machine in Combolcha Tannery, and taking part in assessing the right machinery to be ordered for tanneries and giving technical specifications of the same. He also drafted training proposals suitable for maintenance staff to be trained abroad in specified fields.

## 4. Post 11-04 Shoe Technologist

#### (a) Mr. S. Klatil

The expert carried out a substantial amount of work and among other things prepared new plant layouts for the Anbessa Shoe Factory and Tikur Abaye Shoe Factory. The expert introduced also systems for material calculations, made draft plans for starting shoe last and unit sole factories and provided direct assistance to the various shoe factories. All the expert's work and detailed recommendations are well documented in his periodic reports. There is no final report as the expert passed away at his duty station prior to completing his assignment.

## (b) Mr. T. Niklas-Salminen

The shoe technology expert who continued the assignment assisted NLSC shoe factories in Asmara, Northern Ethiopia for one year and in Addis Ababa half a year. He helped the factories to establish some basic systems for marketing planning, production planning, work study and quality control. Also training was given in wage incentives, production methods and material economy. Together with the CTA the expert prepared a Systems Development Strategy to enable the staff to develop their operations themselves, including a rationalization plan for Asmara shoe factories on how to increase considerably the production volumes within existing factories.

Pilot machines for TR unit soles and plastic heels were installed. The expert initiated the preparations for the ladies sandal and the last manufacturing pilot plants, as well as preparations for the sports shoe production.

The expert helped the newly established Design Centre in NLSC in its efforts to introduce new products to the market. In designing of products as well as in planning and information systems some of NLSC's factories have already shown marked improvement. In fact, in most of the areas in which the project has provided assistance many of the factories are showing improvement. Under the Systems Development Strategy, the factories and some of the Corporation level staff are now capable of taking the development initiative into their own hands, but still need assistance in upgrading the technical level.

The expert, after completing this mission in December 1983, transferred to project ILO/ETH/77/009 as leather goods technology expert (shoes) attached to the Ethiopian Institute of Management to continue the training work as well as assisting other areas mentioned above.

## 5. Post 11-05 Shoe Designer/Pattern Cutter - Mr. K. Longman

The shoe designer proposed in his work programme to design in co-operation with his counterpart a range of about 30 different models of footwear for production in the Anbessa Shoe Factory. This programme was approved by the CTA, NLSC and the Anbessa Shoe Factory, the only alteration being that the Factory Manager requested the range be finished already by mid-July and not by end-July as originally proposed. At a meeting, held on 14 July 1980, a total of 28 designs was submitted for consideration out of which 23 designs were accepted for production. The shoe designer was later engaged in preparing these designs for production. The expert's contract was extended by one and a half month to carry out a shoe designer training course. Seven students attended this course.

# 6. Post 11--06 Shoe Machinery Maintenance Engineer - Mr. A. Baker

During the initial stages of his mission the expert carried out a number of extension service assignments to the various shoe factories in order to assist in <u>ad hoc</u> repairs of the shoe machinery. He also assisted in the rehabilitation of the Anbessa Shoe Factory's mechanic workshop. In the later stages of his assignment he worked at NLSC headquarters to assist in the preparation of preventive maintenance systems, and machinery and spare parts purchasing and control systems.

As a result of this work his main recommendations were the following:

The NLSC Engineering Section should continue with the guidelines laid down in his report dealing with suggested procedures, building a strong technical staff to install the systems, and working as a supervisory as opposed to an advisory administration. This should be well within the economic resources of the NLSC and will finance itself over a period of time, approximately three years being anticipated for the completion of the department function, with a further two years for any anticipated real term results from maintenance planning. Results on purchase of machinery and spares will become immediately evident upon completion of the relevant purchasing department.

It is the expert's opinion that the recommendation for a centralized workshop should be dropped, unless this is evaluated in terms of a self-supporting function taking in general engineering work from outside sources to make it economically viable, i.e. a separate technical business organization.

Engineering fellowships should be selected and planned by the NLSC Technical Department in relationship to specialized requirements for new and upgraded machinery, and should be manufacturers' courses with a preplanned set of requirements and an examination conducted by the manufacturers to qualify the expertise gained from such a course. Alternatively, should this not come under the criteria for fellowship requirements, such courses should be arranged by the NLSC direct with the manufacturer at the time of purchase negotiations when terms are obviously liable to be bereficial to both parties. The manufacturer's installation engineer should be used at all times when new technology, high capital cost machinery is being installed for the first time. This cost, in conjunction with familiarization courses, should also be keenly negotiated during the purchase procedure. Service calls, after purchase and installation, are costly and usually are caused by poor installation. It must be strongly emphasized that this procedure does not reflect on the knowledge or expertise of the indigenous engineer, rather it reflects the wish to absorb the manufacturer's obviously broad experience. Installation charges are high but are normally open to negotiation depending on capital involvement, but, as said before, are normally cheaper in the long term.

#### 7. Post 11-07 Leather Finishing - Mr. R. Hermoso

The expert introduced some significant improvements both in upper as well as lining leather presently used by the factories under the NLSC. The expert's activities consisted of:

- (a) setting up a colour laboratory and training personnel in colour matching and familiarizing them with pigment and dye solutions used during finishing;
- (b) acquiring samples for retannage, fat liquoring and finishing from various suppliers;
- (c) producing new types of shrunken grain side leather suitable for moccasins of good quality; full grain semi-aniline upper leather in Europe-fashion colours for better class shoes and moccasins as well as chevreaux upper leather for ladies shoes and strap sandals;
- (d) making samples and batches of much better lining leather with more body, better surface appearance and better worked out;
- (e) finishing of stocks of rejected leather built up over the years in two-tone colours and selling them at a profitable price for sandal production;
- (f) producing white leather with a mellow and fine break and nonyellowing quality; this leather could either be exported in crust or in finished leather:
- (g) preparing formulae for the production of all sample leather as well as retannage of the various leathers.

The expert strongly recommended the procurement of some particular finishing materials both for hides and skins which are required if exports of finished leather or shoes are to be realized. At Ethiopian Tannery there has been continuing improvement in finishing which gives hope for export of finished leather and footwear.

#### 3. Post 11-08 Hides and Skins Improvement Expert (FAO) - Mr. D. Sellwood

Technical reports covering all aspects of the work carried out by the expert as well as manuals of instruction and project proposals can be found at the project's headquarters. The majority are also on file at NLSC headquarters and the Hides and Skins Improvement Service of the Ministry of Agriculture.

The expert made the following recommendations:

## (a) National Leather and Shoe Corporation

The expert found that although it has long been accepted that a centralized purchasing system for hides and skins is required, the relevant action to implement this has yet to be taken. It should be a matter of priority that decisions are taken at top level regarding the methods of financing such a system and the basic systems of control. Details cannot be worked out until such aspects have been clearly delineated.

The centralized system should eliminate competition between tanneries, ensure a higher quality standard of purchases, and enable tanneries to obtain the types and weight ranges they require. Regional stores have been in existence for two years, but have never been properly utilized for the purpose intended. Buying at these centres should be instituted as soon as possible.

In anticipation of a central buying organization being set up, the NLSC Purchasing Department should already be active in the following matters:

- (i) obtaining detailed figures for tannery requirements, both quantitative and qualitative;
- (ii) building a dossier on all regular suppliers to each tannery covering normal supplies, advances given, credit rating, etc.;
- (iii) drawing up guidelines for purchasing hides and skins through regional centres; this should include all relevant documentation;
- (iv) drawing up plans for the centralized purchase and distribution of salt;
- (v) implementing as soon as possible the standardization of grading, and giving training where necessary;
- (vi) building up a data bank on all aspects of raw hides and skins marketing, as at present very little information is readily at hand.

## (b) Hides Improvement Services

The importance of national specialists at the Services' headquarters being able to go into the field to visit their supervisors and technicians cannot be over-emphasized. These visits give great encouragement and it is noticeable that the areas most visited are also those with the highest standards.

As soon as finances allow, the number of technicians should be increased in accordance with the number authorized. Training should be given before they are sent outinto the field.

Emphasis should be placed on attendance at as many agricultural shows as possible, as well as visits to meetings of farmers' cooperatives and peasant associations. However, in order to achieve
a beneficial result, it is necessary that first-rate training aids
are prepared well in advance and that the contact expert is both
capable as a lecturer and well versed in his work.

Owing to lack of transport and per diem allowance at regional level, major improvement is noted in urban areas whereas the rural areas lag behind in standard of hides and skins improvement. Every effort must be made to convince team leaders at regional and district level of the importance of getting the improvement officers out of the office and into the countryside.

Training courses for junior technicians might be better organized inside the Services than by the National Productivity Centre. The present course covers many aspects of the leather trade which are only of indirect importance to the technician in the field, whereas the important practical aspects appear to receive insufficient coverage. The broader based and more theoretical course would be better understood and appreciated by technicians who have had a couple of years of practical application in the field. By this time a better assessment of each technician's capability to absorb the course could be made so that a selected group can receive this higher level of training.

## 9. Post 11-09 Shoe Last Manufacturing Expert - Mr. U.S. Paul

The expert has not completed his assignment at the time when this report was being prepared. In his preliminary report he proposed the following action plan:

- (a) change machinery layout plan;
- (b) prepare draft for technical seminar;

- (c) visit factories in the Addis Ababa area;
- (d) conduct the seminar;
- (a) evaluate results of seminar:
- (f) carry out installation of equipment;
- (g) organize and co-ordinate trial runs;
- (h) start trial production with existing materials;
- (i) training of counterparts during trial production;
- (i) hand-over of technical documents;
- (k) final report.

# 10. Post 11-51 Senior Footwear Adviser - Mr. J.W. Parkinson

The expert carried out his two-month assignment after the first year of project operation and soon after the departure of the first CTA. In summarizing the situation in the shoe industry and in considering the aim of the country in the leather and leather products development, he recommended that:

- (a) The NLSC, through the Ministry of Industry, make strong proposals to the Government for greater control over the export of raw hides and skins, to enable the tanneries to obtain a better quality of hides and skins for processing into pickle, wet blue, crust and finished leather for added value in foreign currency.
- (b) The NLSC institute a central sales and retail organization for the production of all leather uppered shoe factories, and that the manager of this organization be classified as the range builder for the production of the factories.
- (c) A fully qualified, experienced technical expert in leather, shoes and leather products be appointed as Chief Technical Adviser in charge of the UNIDO Leather and Leather Products project. The experts definitely need a leader, used to international aid projects with knowledge of UNIDO and UNDP requirements in the field.
- (d) The factories make an inventory of all shoe lasts held and in the next budget year replace with more modern shapes those which are out-dated. The UNIDO shoe group can advise on widths and shapes.
- (e) The NLSC consider the purchase of a twelve-station PVC injection moulding machine to be housed in Addis Ababa (preferably Rubber and Canvas Shoe) to produce a low-priced plastic coloured wellington for children, ladies and men. This type of footwear is wanted during rainy season, and is well suited for rough country-wear.

- The rubber chemist based at Rubber and Canvas Shoe should be requested by NLSC to advise the leather-uppered shoe factories' management on change in compound to make translucent (gristic) unit soles, and also to prepare the background for the making of micro-cellular rubber.
- The management of Tikur Abaye Shoe consider to change over from tack lasting the forepart and sides of army boots to a pulling over and cement lasting machine and side laster, both using hot melt (thermoplastic), as well as new tack seat laster for better quality army boots.
- (h) The handcutters in Anbessa and Dahlak factories be provided with wooden cutting boards for more efficient cutting of leather.
- (i) The policy advocating the upgrading of technical persons with experience and ability from the factory floor should be adopted as an immediate and temporary measure until trainees from abroad return. The UNIDO shoe group to assist in this task.
- The general managers should make routine visits to the factory floor for policy reasons, and should remain at one factory for at least five years to provide continuity and to be able to provide experienced management.
- (k) The UNIDO shoe groups should assist in planning for the specialization of the factories to avoid excessive tooling up and adjustments which are required when a change has to be made in switching production from men's to ladies' to children's. An organized central sales unit (as recommended in paragraph (b) above) would assist in this matter.
- (1) The NLSC should seek a joint venture project in the manufacture of cements used in the shoe industry. Owing to these cements having a limited shelf life, imported cements (as being used, are often deteriorated due to long shipping time and damage to containers in transit.
- (m) The shoe factories are advised to adopt in the near future the use of thermoplastic shoe counters and toe puffs to achieve clean quarter linings and shoe uppers. This is more important when suede on suffed leather is used.
- (n) The NLSC should give great consideration to the eventual transfer of the Anbessa Shoe Factory to more suitable premises in order to benefit workers and in general all aspects of shoe manufacturing.
- (o) It must be realized that exports of finished leather shoes and other leather products basically depend on the availability of good quality leather with good shoe lasts and other components, together with using up-to-date methods. This can be done in the short term and consolidated and established in the medium term. During the medium term, planning should be directed towards large expansion in the long term. Good quality finished leather in large quantities is the key, whether it be hide, goat or sheep.

- (p) The UNIDO shoe group should make a time table and include four to six weeks in each shoe factory in order to reorganize the technical issues which are required to update the methods of production and act as advisers to the general manager. NLSC counterparts should accompany the UNIDO shoe group during these visits for training and orientation in the practical issues as applied in shoe technology.
- (q) The NLSC should establish a sandal manufacturing factory for the production of about 300,000 pairs of various types of sandals per year. The UNIDO shoe technologist should be requested to prepare a suitable plant layout, recommend machinery and suggest prototypes for the production.
- (r) A pilot plant should be established for last and unit sole manufacture as requested in the draft project revision attached to the report of the tripartite review meeting held on 15 October 1980.
- 11. Post 11-52 Tannery Effluent Treatment Consultant Mr. D. Winters

  The consultant accompanied three officers of the NLSC on an eighteenday study tour, visiting four countries in Europe and Africa to examine
  the technologies employed in mitigating pollution and environmental
  degradation due to tannery effluents.

On their return to Ethiopia the three NLSC officers and the consultant jointly agreed on the appropriate technology for tannery effluents to be employed in Ethiopian tanneries and based on this jointly prepared an outline design for a treatment plant suitable for Combolcha Tannery. It is suggested that the NLSC officers could, when necessary, adapt such design for other tanneries.

Following a brief visit to the tanner is at Modjo and Edjersa, the consultant offered advice regarding the strategy to be employed at the Ethiopian Tannery S.C. in order to better utilize the effluent treatment plant already installed there.

# 12. Post 11-53 Tannery Chemicals Consultant - Mr. H.P. Rao

The consultant worked with the NLSC for one and a half months to study the current and prospective situation of the leather tanning industry and assessed the chemical requirements of the industry up to 1990. The consultant concluded that it would be possible and economically feasible to produce vegetable-tanning extracts and fat liquors to replace the full range of these chemicals imported at present. Steps should be taken immediately to ensure an adequate supply of raw materials by planting

tannin-bearing trees. The production of other tannery chemicals might become feasible if all available hides and skins were processed into finished leather in Ethiopia. Even then it would depend on a sufficiently large demand and on the availability of raw materials. The situation should be reviewed at a later stage.

## 13. Post 11-59 Tannery Consultant - Mr. P.B. Buit

The consultant had been assisting the leather sector in Ethiopia since 1973 and was attached to project DP/ETH/74/013, a forerunner to the present project, until end-1979. He continued his work under the above post of the subject project for a period of two months beginning 1980 in order to assist the new project staff and to make his experience available to the new project.

In addition to the above experts the project DP/ETH/78/001 supervised partly the assignments of three experts under project SI/ETH/77/801. Leather Garment Manufacturing. The following technical reports have been presented by the experts under this project:

Ms. K. Hellemaa
Leather Garments and Leather Goods Manufacture

DP/ID/SER.A/237

Mr. F. Schmel
Leather Garments and Leather Goods Technologist

DP/ID/SER.A/228

Mr. R.G. Bowey
Leather Garments and Leather Goods Marketing

DP/ID/SER.A/238

The work and the reports of the above-mentioned experts formed the basis for starting up a leather goods manufacturing plant.

## III. TRAINING

One of the major contributions of the project is the large and well executed training programme. During the life of the project thirty individual fellows received training abroad. The total training time was 329 months and the training subjects varied from leather and shoe technology training to training in machinery maintenance and production and designing of shoe lasts.

Ten of the fellows received two full academic years of training in the best known leather and shoe technical colleges. Most of the students received very favourable reports from their place of study and in some cases the performance of the fellows was judged to be "outstanding' by the training institute. A detailed list of the training activities is presented in Appendix IV.

## IV. PROJECT RESULTS AND OUTPUTS PRODUCED

The last CTA of the project (Mr. C. Birkhaug) was repatriated in June 1983 in spite of the strong recommendation of the backstopping officer to keep the CTA on the project (see Appendix V). Owing to this fact and that the report had to be compiled by the backstopping officer based only on the experts' reports and not on first-hand field experience, it was not possible to make a comparative evaluation of the projects outputs/achievements in this report.

It should, however, be noted that according to the tripartite review reports (last report available to UNIDO dated 16 July 1982), the project seems to have made reasonable progress and the chairman of the tripartite review meeting concluded that:

"generally speaking the project implementation during the last year has been most satisfactory"

and the National Project Director reported to the meeting that the cooperation between the international experts and the counterparts was good and that the technical competence and motivation of international experts were commendable.

It is suggested that an independent senior consultant should be fielded on a two-month mission to evaluate the project's achievements; assist in preparing an integrated development plan for the leather, footwear and leather products sector and to elaborate a suitable proposal for follow-up action.

It should be noted that the project experts have provided some very valuable individual outputs and in accordance with the recommendations of the UNIDO Third Consultation on the Leather and Leather Products Industry, these different individual outputs and recommendations should be consolidated by an experienced senior expert in co-operation with national experts. The objective and expected result would be an integrated development plan for the entire leather, footwear and leather products sector in Ethiopia, in line with the recommendation endorsed by the participants of the UNIDO

Third Consultation in which the representatives of the Ethiopian Government played an active part. The plan would take also into consideration the regional aspects both in training as well as in production of components and chemicals. The draft terms of reference for such a mission are enclosed as Appendix VI.

## V. RECOMMENDATIONS

- 1. The leather, footwear and leather products industry of Ethiopia is based on an abundant supply of inherently good raw material, hides and skins. As this sector is the second most important export revenue earner and has a great potential to increase these earnings through higher value added products, it is strongly recommended that additional funds will be allocated from the Ethiopian country programme for further development of this sector. A project concept concentrating on the consolidation of the results of the forerunner projects and providing inputs for the development of exportable manufactured articles is enclosed as Appendix VII.
- 2. It is important that an evaluation of the projects results of project DP/ETH/78/001 will be carried out and that an individual senior evaluator will be fielded to provide an integrated development plan for the entire leather, footwear and leather products sector.

RUN-DATE: 1985-03-07 UNIDO - UMAPO1/2 PROJECT TITLE: LEATHER AND LEATHER PRODUCTS DEVELOPMENT BUDGET DESCRIPT. ALLOTMENT

PRIOR YEAR EXP.

CURR YR PHASING

PROJECT CODE: PROJECT REVISION PROJECT STATUS PPCSA CODE

DP/ETH/78/001 8 - DN-BOTHB 3170

PAGE - 1.034

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CURR YR DISB.

RUN-DATE: 1985-03-07 UNIDO - UMAPO1/2

MONTHLY REPORT ON PROJECTS AS AT 1985-02-28

PROJECT CODE:

PAGE - 1,036 DP/ETH/78/001

PROJECT TITLE: LEATHER AND LEATHER PRODUCTS DEVELOPMENT

PROJECT REVISION PROJECT STATUS PPCSA CODE

8 - 0N-601NO

| BUDGET DESCRIPT.   | AL LETALINT                               | CURR YR PHASING                 | PRIOR YEAR EXP.   | CURR                            | YR DISB.                       | BAL, CUR                        | R YR OBL,             | COMMITTED        | BOLANCE | BALANCE  |
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| 51-00<br>51-11<br>51-40<br>51-41<br>51-43<br>51-45<br>51-99 SUNDRIES | 21,699<br>0<br>0<br>0<br>0<br>0<br>21,699 | 0.0<br>0.0<br>0.0<br>0.0<br>0.0 | 0 0.0 969<br>0 0.0 98<br>0 0.0 5300<br>0 0.0 3350<br>0 0.0 3672 | 0.0<br>0.0<br>0.0<br>0.0<br>0.0 | 0<br>166<br>0<br>0<br>0<br>168 | 0 0<br>0 0<br>0 0<br>0 0<br>0 0 | 0<br>0<br>0<br>0<br>0 | 0<br>0<br>0<br>0 | 166-    | 21.699<br>969-<br>264-<br>5,300-<br>3,350-<br>155-<br>11,661 |
| 52-01<br>53-01<br>53-02<br>53-09                                     | 0   | 0.0<br>0.0<br>0.0               | 0 0.0 1792<br>0 0.0 6800<br>0 0.0 3184<br>0 0.0 9984            | 0.0<br>0.0<br>0.0<br>0.0        | 0<br>0<br>0<br>0               | 0.0<br>0.0<br>0.0<br>0.0        | 0<br>0<br>0           | 0<br>0<br>0      | 0       | 1,792-<br>6,800-<br>3,184-<br>9,984-                         |
| 59-99 MISCOSTS   | 21,699                                    | 0.0                             | 0 0.0 21648   | 0.0                             | 166                            | 0,0                             | 0                     | 0                | 166-    | 115-   |
|  | 2,288,917                                 | 0.0                             | 0 200.5 2269371   | 2.0                             | 9428                           | 1.0                             | 10,457                | 0                | 19,885- | 339-   |

## APPENDIX II

## LIST OF PROJECT REPORTS

| Author                             | <u>Title</u>   | Symbol/Date                     |
|------------------------------------|--|---------------------------------|
| 1. International                   | Experts  |                                 |
| J.W. Hietaniemi                    | Technical Report: Report of Chief<br>Technical Adviser   | DP/ID/SER.A/282<br>19 Nov. 1980 |
| O.W. Sellwood (FAO)                | Terminal Report: Hides and Skins<br>Improvement  | DP/ID/SER.B/358<br>6 Oct. 1982  |
| P. Hanumanta Rao                   | Technical Report: Study on the Develop-<br>ment of an Industry for Tanning Materials<br>and Chemicals      | DP/ID/SER.A/328<br>17 June 1981 |
| J.W. Parkinson                     | Technical Report: Assessment of the Assistance to the shoe Industry of Ethiopia                            | DP/ID/SER.A/278<br>5 Feb. 1981  |
| D. Winters                         | Technical Report: Tannery Effluents  | DP/ID/SER.A/334<br>14 Jan. 1982 |
| K.H. Longman                       | Terminal Report: Shoe Designing and Pattern Cutting  | February 1981                   |
| A.G. Baker                         | Final Report: Shoe Machinery Engineering   | March 1981                      |
| O. Birkhaug                        | Terminal Report: Based on the Work of<br>the Experts under the Direction of the<br>Chief Technical Adviser | December 1982                   |
| O. Birkhaug/<br>T. Niklas-Salminen | Technical Study for Ethiopian, Eritrean and Dahlak Shoe Factories  | 12 May 1983                     |
| W. Scott                           | Final Report: Leather Manufact:ring  | 30 August 1982                  |
| S. Klatil                          | Six-month Report: December 1979 -<br>June 1980   | June 1980                       |
|                                    | Six-month Report: June 1980 -<br>December 1980   | December 1980                   |
|                                    | Six-month Report: December 1980 -<br>June 1981   | June 1981                       |
|                                    | Report on Visit to Asmara, Ethiopia<br>Shoe Factory  |                                 |

| Author                               | <u>Title</u>   | Symbol/Date                      |
|--------------------------------------|--|----------------------------------|
| M.H. Imam                            | Maintenance Strategy and its Impact on Production  | 23 November 1983                 |
|                                      | Approach to Best Buying of Plant's Equipment   |                                  |
| T. Niklas-Salminen                   | Technical Report: Enhance the Capabilities of the National Leather and Shoe Corporation's Shoe Factories | 30 January 1984                  |
|                                      | Technical Study for Ethiopia Footwear Factory  |                                  |
|                                      | Technical Study for Eritrea Shoe Factory   |                                  |
|                                      | Dahlak Shoe  |                                  |
|                                      | Notes on Quality Control   |                                  |
|                                      | Standard Time Data for Cutting   |                                  |
|                                      | Instructions for Production Planning and Control   |                                  |
|                                      | Wages Incentives System  |                                  |
|                                      | Work Study Course/Work Measurement   | 4 August 1982                    |
|                                      | Time Studies for Comparison  |                                  |
|                                      | Anbessa Shoe Factory; Some Improvement<br>Possibilities in Production Methods,<br>Visit 17-19 May 1982   |                                  |
|                                      | Factory Survey in National Leather and<br>Shoe Corporation's Factories in Asmara,<br>Ethiopia            | 2 July 1982                      |
|                                      | Upper Leather Assessment and the Supplement  | 17 August 1982<br>30 August 1982 |
| Niklas-Salminen/<br>Alemayehu Chuffa | Factory Survey in Anbessa Shoe Factory   | 9 August 1983                    |

## 2. National Counterparts

| Getachew Zewde                   | Notes on Quality Control                              |
|----------------------------------|---|
| Alemayehu Chuffa/<br>Girma Milky | A Brief Quality Control Manual for Shoe<br>Production |
| Abye Assefa                      | Quality and Quality Control Circle (Amharic)          |

| Author           | <u>Title</u>                                     | Symbol/Date            |
|------------------|--|------------------------|
| Tesfaye Wolde    | Marketing Planning Process, Three-Stage Approach | <b>22</b> October 1983 |
| Alemayehu Chuffa | Adhesives for Sole Attaching                     |                        |
|                  | General Advice on Hazards in Glue<br>Manufacture | 26 Sept. 1983          |



## UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION ORGANISATION DES NATIONS UNIES POUR LE DEVELOPPEMENT INDUSTRIEL

VIENNA INTERNATIONAL CENTRE CENTRE INTERNATIONAL DE VIENNE P.Q. BOX 300, A-1400 VIENNA, AUSTRIA TELEPHONE: 26 310

B.F. 300, A-1400 VIENNE (AUTRICHE)

TELEPHONE: 28 310

TELEGRAPHIC ADDRESS: UNIDO VIENNA TELEX: 136612

ADRESSE TELEGRAPHIQUE : UNIDO VIENNE TELEX : 135612

#### APPENDIX III

REFERENCE: PAC/DG/jc

DATE: 12 April 1985

Subject: DP/ETH/78/001 - Leather and Leather

Products Development Transfer of Title

Dear Mr. King,

Further to previous correspondence on the above subject, please find attached:

four copies of the Transfer of Title documents and four copies of the records of non-expendable property.

The Transfer of Title documents have already been signed on behalf of UNIDO. You are hereby kindly requested to effect the transfer of title and to return to this office two sets of each of the above-mentioned documents, duly signed by the Government and yourself. The signatures are requested also on the records of non-expendable property. One of each of the remaining sets is for the files of the Government and the other for your own files.

Kindly note, in accordance with your request, the Transfer of Title does not include the four project vehicles which will be transferred to project DP/ETH/83/013.

Thank you very much in advance for your co-operation.

Head

Purchase and Contract Service Division of Industrial Operations

Mr. K. King Resident Representative United Nations Development Programme P. O. Box 5580 Addis Ababa Ethiopia

# UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION ORGANISATION DES NATIONS UNIES POUR LE DEVELOPPEMENT INDUSTRIEL

VIENNA INTERNATIONAL CENTRE CENTRE INTERNATIONAL DE VIENNE P.O. BOX 300, A-1400 VIENNA, AUSTRIA B.P. 300, A-1400 VIENNE (AUTRICHE)

TELEPHONE: 26 310 TELEPHONE: 26 310
TELEGRAPHIC ADDRESS: UNIDO VIENNA TELEX: 136612 ADRESSE TELEGRAPHIQUE: UNIDO VIENNE TELEX: 136612

REFERENCE:

PAC/DG/jc

DATE: 12 April 1985

TRANSFER OF TITLE OF EQUIPMENT FROM THE UNITED NATIONS DEVELOPMENT PROGRAMME TO THE GOVERNMENT OF ETHIOPIA

WE CERTIFY THAT THE QUANTITIES OF NON-EXPENDABLE EQUIPMENT RECEIVED, LESS THE QUANTITIES OF NON-EXPENDABLE EQUIPMENT WRITTEN-OFF, REFLECT THE PHYSICAL COUNT OF THE ITEMS ON HAND. THE UNITED NATIONS DEVELOPMENT PROGRAMME HEREBY TRANSFERS, AND THE GOVERNMENT OF ETHIOPIA HEREBY ACCEPTS, FULL TITLE AND OWNERSHIP OF THE NON-EXPENDABLE EQUIPMENT LISTED IN THE ATTACHED NON-EXPENDABLE PROPERTY CONTROL RECORD FORMS HAVING A TOTAL VALUE OF US\$ 372,210.-. TRANSFER OF TITLE AND OWNERSHIP IS MADE ON THE UNDER-STANDING THAT SUCH EQUIPMENT SHALL BE SOLELY USED FOR THE PURPOSE, IN THE MANNER AND IN THE PLACE FOR WHICH IT WAS PROVIDED.

THE EQUIPMENT REPRESENTS ASSISTANCE OF THE UNITED NATIONS DEVELOPMENT PROGRAMME UNDER INDUSTRIAL SERVICES FUND TO THE GOVERNMENT OF ETHIOPIA IN CONNEXION WITH THE PROJECT "LEATHER AND LEATHER PRODUCTS DEVELOPMENT, DP/ETH/78/001" AND ITS TRANSFER IS IN ACCORDANCE WITH THE PROVISIONS OF THE BASIC ACREEMENT OF INDUSTRIAL SERVICES AS SIGNED BY THE UNITED NATIONS DEVELOPMENT PROGRAMME AND THE GOVERNMENT OF ETHIOPIA.

GOVERNMENT OF ETHIOPIA

Ву Authorized Representative

Date:

UNITED NATIONS DEVELOPMENT **PROGRAMME** 

Authorized Representative

Date:

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Authorized Representative

D. Gardellin

Head

Purchase and Contract Service Division of Industrial Operations

Date: 12 April 1985 Vienna, Austria

UNITED NATIONS WILLIAM NATIONS UNITED

Country ETHIOPIA

Project No. DP/ETH/78/001

Page 1 of 6

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANISATION

Project Title LEATHER AND LEATHER PRODUCTS DEVELOPMENT

Period ending DATE OF TRANSFER

NON - EXPENDABLE PROPERTY CONTROL RECORD

| на           | Item | 0:   |      | Description                                       | US Dollar  | P.O./Shipping |      |     |          |      |      |                 |  |  |  |  | Condi |  | Oty. | Remarks |
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| 80/3         |      |      |      | SEWING MACHINES:                                  |            |               |      |     |          |      |      |                 |  |  |  |  |       |  |      |         |
|              | 1    | 4    | EA   | PFAFF 463-944/01-BL                               | 3,303      | 15-0-00751    |      |     | <u> </u> |      |      |                 |  |  |  |  |       |  |      |         |
|              | 2    | . 4  | EA   | PFAFF 491-755/03-725/04-940/02-913/52<br>BL ¥ 1.2 | 13,553     | - " -         |      |     |          |      |      |                 |  |  |  |  |       |  |      |         |
|              | 3    | 1    | EA   | PFAFF 418-49/01-900/51-910/04-925/01<br>BL X 10.0 | 2,964      | _ "           |      |     |          |      |      |                 |  |  |  |  |       |  |      |         |
|              | 4    | 1    | EA   | PFAFF 192-61/09-913/52 BL X 10.0                  | 2,435      | - "           |      | l   |          |      |      |                 |  |  |  |  |       |  |      |         |
|              | 5    | 4    | EA   | PFAFF 191-705/03-BL                               | 8,288      | - " -         | 1    |     | 1        |      |      |                 |  |  |  |  |       |  |      |         |
| 1            | 6    | 1    | EA   | PFAFF 335-H3-17/01-BL                             | 1,572.~    | - " -         |      |     |          |      |      | •               |  |  |  |  |       |  |      |         |
|              | 7    | 1    | EA   | PFAFF 38-45/12-915/02-CL X 6                      | 1,600      | _ " _         |      |     | }        |      |      | ω<br><b>(</b> 4 |  |  |  |  |       |  |      |         |
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UNITED NATIONS

Page 2 of 6

Country ETHIOPIA Project No. DP/ETH/78/001

LEATHER AND LEATHER PRODUCTS DEVELOPMENT Project Title ...

Period ending DATE OF TRANSFER

NON - EXPENDABLE PROPERTY CONTROL RECORD

| но           | illem! |      | Description | US Doller P.O./Shipping  | R          | eceive      | xd   | Condi- | Oty. | Remarks |          |                     |
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| 80/2         | 5,6    | 2    | EA          | MODEL 138 "TOGO" PERFORATING AND EYELETTING MACHINE OPERATED BY FOOL                             | 305        | 15-0-00839  | ,    | 1      | 81   |         |          |                     |
| 80/2         | 7      | 1    | EA          | ADHESIVE APPLYING MACHINE  | 1,931      | 15-0-00934  | 1    | 2      | 81   |         |          | }                   |
| 80/2         | 2      | 1    | EA          | RP67/T UPPER THERMOCEMENTING AND FOLDING MACHINE, COMPLETE UNIT WITH TABLE AND MOTOR VOLT 380/50 | 3,186      | 15-0-00935  | 1    | 2      | 81   |         |          |                     |
| 80/2         | 1      | 1    | EA          | FORTUNA SKIVING MACHINE MODEL V 50 S   | 2,352      | 15-0-00936  | 1    | 8      | 81   |         | }<br>!   |                     |
|              | 9      | 1    | EA          | FORTUNA SPLITTING MACHINE MODEL AS 320 NO. 5454  | 9,305      | 15-0-00936  | 1    | 8      | 81   |         |          |                     |
| 80/2         | 3      | 1    | EA          | MCDEL 102 B-60 UPPER DESIGN MARKING MACHINE SERIAL NO. 2197                                      | 595        | 15-0-00942  | ,    | 2      | 81   |         |          | 33 -                |
| 80/2         | 8      | 1    | EA          | ELECTRO-HYDRAULIC SWING ARM CUTTING PRESS "ATLANTA" II, NO. H 2258                               | 5,407      | 15-0-01085  | 1    | 8      | 81   |         |          |                     |
|              |        | 6    | EA          | ""DANNY" MOULDS, SIZE 31-42  | 1,654      | FP0.001238  | 6    | 4      | 83   |         | j        | unot-emissed-yet-   |
|              | j .    | 4    | EA          | INDUSTRIAL CHAIR "PROFI 2"   | 606        | FP0.003537  | 4    | 12     | 82   |         |          | -4 <del>982</del> - |
|              |        | 4    | EA          | DISIGN TABLES  | 425        | LFP         | 4    | 2      | 83   | ł       |          | recorded form pat   |
|              |        | 1    | EA          | TABLE AND ONE SHELF  | 178        | LFP         | 1    | 2      | 83   |         |          |                     |
|              |        | 1    | EA          | SHELF WITH SLDING GLASS DOOR   | 607        | LFP         | 1    | 2      | 83   | }       |          | <del></del>         |
|              |        | 3    | EA          | SHELVES  | 905        | LFP         | 3    | 2      | 83   | }       | <b>,</b> |                     |
|              |        |      |             | INGERSOLL-RAND 253 H MODEL TYPE 30 AIR COMPRESSOR  | 4,049      | LFP         | 1    | 2      | 83   |         |          |                     |
| 82/4         | 6      | 1    | EA          | ROUCHING MACHINE TYPE PORA HS II   | 3,127      | 15-2-0870   | 1    | 4      | 83   |         |          |                     |
|              |        |      |             |  |            |             |      |        |      | ļ       | }        |                     |
|              |        |      |             |  |            |             |      |        |      | <u></u> | <u> </u> | <u>i</u>            |

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Country ETHIOPIA Project No. DP/ETH/78/001

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANISATION

Project Title LEATHER AND !.EATHER PRODUCTS DEVELOPMENT

DATE OF TRANSFER Period ending \_

# NON-EXPENDABLE PROPERTY CONTROL RECORD

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| 82/4 | 13   | 1    | EA     | STRAP CUTTING MACHINE TYPE BSM.04.Z                               | 555        | 15-2-0874     | 1    | 4       | 83   |        |      |         |
| 82/8 |      | 1    | EA     | ELECTRICAL MACHINE FOR HELICAL LEATHER STRAP CUTTING              | 4,149      | 15-2-0886     | 1    | 4       | 83   |        |      |         |
|      |      | 1    | EA     | MACHINE TO GLUE LEATHER STRAPS                                    | 2,257      | _ '' _        | 1    | 4       | 83   |        | 1 1  |         |
|      |      | 1    | EA     | AUTOMATIC SKIVING MACHINE WITH ROTATIVE KNIFE                     | 10,051     | _ " -         | 1    | 4       | 83   |        |      |         |
|      |      | 1    | EA     | AUTOMATIC MACHINE KN-6 FOR WEAVING                                | 27,026     | - " -         | 1    | 1       |      |        | 1    |         |
| 82/4 | 2    | 1    | EA     | INSOLE COVERING MACHINE RP68TE                                    | 2,997      | 15-2-0855     | }    |         |      |        |      |         |
|      | 3    | 1    | EA     | THERMO CEMENTING AND FOLDING MACHINE RP67TE                       | 2,997      | _ " _         |      |         |      |        |      | !       |
| 82/4 | 7    | 1    | EA     | SOLE ACTIVATING UNIT NO. 2015                                     | 997        | 15-2-0806     |      | {       |      |        | 1    | •       |
| l    | 10   | 1    | EA     | HEEL SCOURING MACHINE NO. 79                                      | 2,683      | _ " _         |      |         |      |        |      |         |
| 1    | 5    | 1    | EA     | BUSMC SKIVING MACHINE MODEL MA 12                                 | 1,331      | _ " _         | 1    | 1       |      |        |      |         |
| {    | 8    | 1    | EA     | SOLE ATTACHING MACHINE MODEL 800                                  | 4,759      | _ " _         | 1    | 1       | }    | }      |      |         |
|      | 104  | 1    | EA     | FILTER UNIT NO. 116   | 2,766      | _ " _         | Ì    | 1       | İ    | }      | }    | •       |
| ļ    | 12   | 1    | EA     | MARGINAL CEMENTING MACHINE NO. 1339                               | 2,767      | _ " _         | Ì    |         |      |        |      |         |
| İ    | 9    | 1    | EA     | UPPER ROUGHING + SCOURING MACHINE                                 | 3,895      | - " -         |      |         |      |        |      |         |
| ]    | 1    | 2    | EA     | SWING BEAM CUTTING MACHINE GBS 1318                               | 5,838      | _ " _         |      |         |      | j      |      |         |
| 82/2 | 1    | 1    |        | MACHINE MODEL VILOR SP/45 WITH 2 WORKING STATIONS AND 2 INJECTORS | 36,377     | 15-2-0696     | 1    | 4       | 83   |        |      |         |
| }    | 2    | 1    | EA     | REFRIGERATION UNIT MOD. R/6 (6000 FRIG./II)                       | 5,000      | _ " _         | 1    | 4       | 83   |        |      |         |
| 82/6 | 1    | 1    | EA     | ROUGHING MACHINE FAGUS FOR ONE PAIR<br>OF SHOE LASTS              | 7,114      | 15-2-0720     | 1    | 3       | 83.  |        |      |         |
|      |      |      |        |   |            |               |      |         |      |        |      |         |
| Ì    |      |      |        |   |            |               | ļ    |         | ļ    | Į į    |      |         |

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Country ETHIOPIA Project No. DP/ETH/78/001

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Project Title LEATHER AND LEATHER PRODUCTS DEVELOPMENT

Period ending DATE OF TRANSFER

NON - EXPENDABLE PROPERTY CONTROL RECORD

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| 82/7         |             | 1    | EA   | AMF - MACHINE TO DRILL THE MODELS  | 1,560      | 15-2-0743     | 1    | 3      | 83   | }      |      |         |
|              |             | 1    | EA   | SF80/4S FINISHING LATHE MACHINE FOR SHOE<br>LASTS WORKING 2 PAIRS WITH MANUAL DEVELOPM | . 44,097   | _ " _         | 1    | 3      | 83   |        |      |         |
|              |             | 1    | EA   | TFS DRILLING MACHINE WITH 2 DRILLS   | 6,306      | _ '' _        | 1    | 3      | 83   |        |      |         |
|              |             | 1    | EA   | SN700 BAND SAW Ø 700   | 2,289      | _ " _         | 1    | 3      | 83   |        |      |         |
|              |             | 1    | EA   | ATSV UNIT FOR THE CUT OF THE "S" EQUIPED WITH DEVICE TO CUT "V"                        | 2,756      | - " -         | 1    | 3      | 83   |        |      |         |
|              |             | 1    | EA   | CC/1 CHAIN SLOTTING MACHINE W.1 SHOE LAST  | 6,073      | _ " _         | 1    | 3      | 83   |        |      |         |
|              |             | 1    | EA   | PNO HORIZONTAL BOUBLE BAND-POLISHING MACH.   | 2,195      | _ '' _        | 1    | 3      | 83   |        |      | ,       |
|              |             | 1    | EA   | PUL/AB9 SPECIAL POLISHING MACHINE FOR TOE EQUIPED WITH 2 PADS                          | 2,709      | _ " _         | 1    | 3      | 83   |        |      | 35      |
|              |             | 1    | EA   | SN/800 BAND-SAW FOR THE CUT OF WEDGE Ø 800   | 2,803      | _ " _         | 1    | 3      | 83   |        |      | ·       |
|              |             | 1    | EA   | TFB DRILLING MACHINE WITH VICE AND PNEUMATIC FEED                                      | 7,240      | - " -         | 1    | 3      | 83   |        |      |         |
|              |             | 1    | EA - | FBL/AB19 MILLING MACHINE   | 467        | { _ '' _      | 1    | 3      | 83   |        |      |         |
|              |             | 1    | EA   | MRP PNEUMATIC HANMER TO RIVET AND REBATE THE PLATE                                     | 467        | - " -         |      |        |      |        |      | ,       |
|              |             | 2    | EA   | PNEUMATIC VICES  | 934        | _ '' _        | 2    | 3      | 83   |        |      |         |
|              |             | 1    | EA   | PROF.150 TO CONTROL PROFILE OF LASTS + 300   | 109        | _ " _         | 1    | 3      | 83   |        |      |         |
|              |             | 1    | EA   | GAM 2 C EXHAUSTOR FOR RAW MATERIAL   | 1,869      | - " -         | 1    | 3      | 83   |        |      |         |
| 82/3         | 1-9,1       |      | }    | DIE MAKING EQUIPMENT   | 15,139     | 15-2-0787     | 1    | 4      | 83   |        |      |         |
| 82/4         | 13-23<br>11 | 2    | EA   | MACHINE FOR LISTING STRAPS AND SANDAL VAMPS REF. 1430 No. 148-139                      | 2,615      | 15-2-0871     |      |        |      |        |      |         |
| 82/9         | 1           | 1    | EA   | SHOE PATTERNS MEADURING MACHINE "CENTIPLAN" TYPE                                       | 4,118      | 15-2-0934     | 1    | 6      | 83   |        |      |         |
|              |             |      |      |  |            |               |      |        |      |        |      |         |

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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANISATION

Project Title LEATHER AND LEATHER PRODUCTS DEVELOPMENT

Period ending DATE OF TRANSFER

NON-EXPENDABLE PROPERTY CONTROL RECORD

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| 82/4         | 14   | 6    | EA   | SEWING MACHINES 191-705/03-726/14-BL<br>COMPLETE WITH STAND, PEDAL AND THREE-PHASE<br>MOTOR 220/380V, 50 CYCLES        | 21,290     | 15-2-0869     | 6    | 5      | 83       |        |      |              |
| 82/10        | 1    | 1    | EA   | HEELMATIC MACHINE COMPLETE WITH CAROUSEL AND SPRUE EXTRACTOR, WITH SPARE PARTS   | 45,000     | 15-2-1377     | 1    | 9      | 83       |        |      |              |
|              | 2    | 6    | EA   | HEEL MOULDS WITH CUTTING KNIVES  | 3,125      | - " -         | 6    | 9      | 83       | }      |      | }            |
| 83/1         | 1    | 1    | EA   | ATLAS COPCO PISTON COMPRESSOR TYPE LE 7 E<br>250 - MOUNTED ON AIR RECEIVER 2501, 380V,<br>50 Hz., REF.NO. 8115.1356.03 | 1,863      | 15-3-0330     | 1    | 4      | 83       |        | ·    |              |
|              |      | ı    | EA   | 7.5 HP COMFRESSOR  | 4,030      | LP            | 1    | 4      | 83       |        | 1    | OD.19-2-4604 |
|              |      | 6    | EA   | "ROCCA" MOULDS, SIZE 6-11 1/2  | 1,250      | FPO. 001237   | 6    | 4      | 83       |        |      | 36<br>I      |
|              |      |      |      | ·  |            |               |      |        |          |        |      | ·            |
|              |      |      |      |  |            |               |      |        |          |        |      |              |
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Country ETHIOPIA Project No. D. ETH/78/001 Page 6 of

Project Title \_\_ SEE PAGE ONE

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| COVE         | HHEHT | COUNT | ERPAR | (eignature)   |                           |               | Date |        | đ    | ie of | trans | (er      |
|              |       |       |       | •   |                           |               |      |        |      |       |       |          |
|              |       |       |       |   | •                         |               |      |        |      |       |       | •        |

APPENDIX IV
TRAINING ACTIVITIES

| Code   | Name  | Subject   | Training Place   | US<br>dollars  | Time Period                        | Months   |
|--|---|---|--|--|------------------------------------|--|
| 31-01<br>31-02<br>31-03<br>31-04<br>31-05<br>31-06<br>31-07<br>31-10<br>31-13<br>31-14<br>31-15<br>31-16<br>31-17<br>31-18<br>31-20<br>31-21<br>31-23<br>31-24<br>31-25<br>31-26<br>31-27<br>31-28<br>31-31<br>31-32<br>31-34<br>31-35 | Mr. Tezera Katema Mr. Urga Workneh Mr. Mesfin Tefera Mr. K. Ayen Mr. M. Nigatu Mr. A. Asres Mr. T. Kumbi Mr. B. Dibabe Mr. R. Fayssa Worri Mr. B. Chukala Mr. M. Ghebru Mr. Solomon Endale Mr. Gedelu Kebede Mr. Alemu Mamo Mr. Yitbarek Tsige Mr. B. Habteyes Mr. A. Mekuria Mr. Bemnet Keleta Mr. S. Belayeneh Mr. L. Gebeyehou Mr. F. Kebede Mr. S. Tesfamariam Mr. T. Bogale Mr. H.M. Hailu Mr. Abreham Ghebre Mr. Alem Goitom Mr. Feleke Tesema *) Mr. Naizegi Dawit Mr. Sisay Gurmu Mr. Tewodros Algeda | Shoe Designing Leather Technology Shoe Technology Shoe Mach. Maint. Shoe Mach. Maint. Shoe Mach. Maint. Tannerv Mach. Maint. Tannery Mach. Maint. Leather Technology Leather Production Leather Production Shoe Production Shoe Production Leather Goods Tech. Tannery Machinery Instructor/Training Shoe Mach. Mechanics Shoe Manufacture Shoe Ind. Management Shoe Technology Leather Technology Tannery Machinery Shoe Technology Leather Technology Last Manufacture Last Manufacture | Cordwainers College, U.K. Nene College, U.K. Cordwainers College, U.K. BUSMC, U.K.; Italy BUSMC, U.K.; Italy BUSMC, U.K.; Italy Investa, CSSR Investa, CSSR; Italy Nene College, U.K. Romania Brazil Hungary Cordwainers College, U.K. Hungary Cordwainers College, U.K. Ottogalli, Italy Cordwainers College, U.K. Ottogalli, Italy Cordwainers College, U.K. Cordwainers College, U.K. Cordwainers College, U.K. Cordwainers College, U.K. Cordwainers College, U.K. Cordwainers College, U.K. Moenus, FRG Cordwainers College, U.K. Moenus, FRG Cordwainers College, U.K. Incoma, Italy Incoma, Italy Incoma, Italy Incoma, Italy Incoma, Italy Incoma, Italy Incoma, Italy Incoma, Italy Incoma, Italy Incoma, Italy Incoma, Italy Incoma, Italy Incoma, Italy Incoma, Italy Incoma, Italy | 37,581 37,207 35,470 3,651 3,651 4,424 4,424 37,217 6,412 5,631 12,255 34,704 12,256 30,611 5,559 6,377 5,132 15,353 26,865 29,640 37,793 5,559 30,779 4,728 4,728 4,728 5,288 5,248 | 1.5.83-29.10.83<br>1.5.83-29.10.83 | 3.0<br>12.0<br>22.0<br>22.0<br>22.0<br>3.0<br>23.0<br>4.0<br>4.0<br>2.0 *<br>4.0 |
|  |   |   |  | 460,429  |                                    |  |

(average \$ 1,398 per month)

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#### APPENDIX V

#### MISSION REPORT

## DP/ETH/78/001

### J. BERG

The purpose of the short stop-over was to participate in the Tripartite Review Meeting of the subject project, which was held in the office of the National Leather and Shoe Corporation on June 9, 1983 at 9.00 am.

The meeting was held in constructive spirit and most useful discussions took place. Emphasis was placed on the utilizations of the project inputs, especially to the effective installation of the machinery and equipment. The details of the TRP meeting are reflected in the meeting report (to be attached).

The machinery and equipment situation is now as follows:-

# 1. Last Manufacturing Pilot Plant

The equipment has arrived, unpacked and placed in position, ready for installation at the Manpo Factory. Due to poor storing and insufficient protection by grease, the machinery was badly rusted. The rust has now been removed and the machines cleaned and oiled. The machine contract includes installation, engineer services (fully paid) for thirty days. It is suggested that the engineer will be called to start the work from 1st Sept. At that time the skilled workers, now in training in Italy, have returned. Materials for plastic blocks have been ordered. The starting up of the manufacturing operations will need expert services as the one month installation engineer services are foreseen only for the commissioning of the plant.

#### 2. Unit Sole Moulding

The machine, which was shipped in early February, is still at the Assab Port. Arrival to Addis is expected soon. Moulds for the machine have arrived. The installation and starting up the machine was planned to be carried out by the CTA. No installation engineer foreseen from supplier. The machine has been decided to be placed in the Anbessa Shoe Factory.

3. Die Making Equipment has arrived and is installed at the Design and Pattern Making Center. The operators have received initial training and two sets of dies have already been delivered.
Additional training is needed.

# 4. Manufacture of Woven Leather

The machinery has arrived and is being presently installed at the Ethiopian Tannery by the KADIC mechanic.

No problems expected in starting up this new product line. All materials are available and Ethiopian Tannery has given their best co-operation.

# 5. Sandal Manufacturing Equipment

All the machines, except two clicking presses, have arrived. The machines have been unpacked at the Manpo plant. Due to present shoe upper production there, which was scheduled to be moved to Anbessa Shoe Factory, no place available presently to start the installation. The starting up of the production will need services of an experienced practical shoe technologist. List of material needs for starting up the production has been made up but not yet ordered by the Anbessa Shoe Factory.

heelmatic, Heel Moulding Machine is at Assab Port and should be arriving shortly to Addis. The final decission on the placement of this machinery is still pending. The CTA has recommended that the equipment should be installed at Eritrea Shoe Factory. The recommendation is based on the fact that the need of heels is much greater by the Asmara Shoe factories than in Addis. There is, however, different view point presented by the NLSC. Under the present circumstances I am in agreement with the CTA's recommendation. No installation services by supplier mechanics are foreseen and the starting up of this machinery was scheduled to be carried out by the CTA.

For clarification, it should be pointed out that the original idea of starting up a pilot centre for shoe last and shoe component manufacture, including the last making, unit sole making, heel

manufacture and a cutting die making plant was conceived in October 1980 during a substantive officers backstopping mission. and approved by the following TRP meeting. The technical framework was then discussed with the NLSC management and project personnel, and all the above equipment was planned to be installed in one pilot center, for which building would be made available. This pilot center should later, with local funding, be expanded to full size production unit capable of producing last and components for the entire Ethiopian shoe industry and possibly exports to neighbouring countries. Due to unavailability of suitable building these plans had to be modified and the machinery and equipment placed to various production units. This should in my opinion be only considered as a temporary solution and the development of the shoe industry in Ethiopia needs separate last and component manufacturing plant which will be for the service of the entire shoe sector.

#### Recommendation

From the substantive point of view, in order to achieve the most effective installation and starting up of all the subject equipment, it is strongly recommended that the present CTA, Mr. 0. Birkhaug (Norway) whose present contract is expiring end of June 83 (scheduled to leave Ethiopia on 11.6.83) is contracted for the period 1st September 1983 to mid-December 1983.

The terms of reference of this contract should be as follows:-

To carry out the installation and starting up the production of the following machinery and equipment:-

- 1. -Shoe last manufacturing plant, including manufacture of last for the Ethiopian market in accordance with the foot measurement survey conducted and lasts for suitable export footwear (to be copied from foreign lasts).
- 2. -Unit sole manufacturing including recommendations for new moulds needed for the local and export markets.
- 3. -Heel manufacturing with the Heelmatic machine.
- 4. -Sandal production with new type of sandals for the local market.

The reason for recommending Mr. O. Birkhaug very strongly for this assignment is that he is fully familiar with all the equipment in question, and it would be very difficult to find another qualified expert who would be capable to carry out this demanding task and who would be available at short notice. A new expert would loose long time to familiarize himself with the local conditions and would certainly need much longer time period to complete this task or we might have to contract two to three specialists for a shorter periods. Mr. Birkhaug has indicated his willingness to undertake the assignment provided that he is assured full co-operation from the national authorities and provided he will be given the necessary materials, counterpart staff, mechanics and workers to be trained in time to facilitate effective implementation.

In interest of the very pressing needs of the Ethiopian shoe sector, I hope that the above points will be taken carefully into consideration.

#### APPENDIX VI

# TERMS OF REFERENCE FOR A SENIOR CONSULTANT/EVALUATOR

In order to consolidate the outputs and results of the forerunner project in the leather and leather products industry sector in Ethiopia, the senior consultant/evaluator shall provide. during a two-month mission, the following services in co-operation with national experts:

- Evaluation of results obtained by project DP/ETH/78/001, Leather and Leather Products Development;
- Consolidation of the recommendations of the individual experts and preparation of an integrated development plan for the entire leather, footwear and leather products sector of Ethiopia;
- 3. Preparation of the follow-up assistance document based on the findings of the mission, experience gained from project DP/ETH/78/001 and taking into consideration the recommendations of the UNIDO Third Consultation on the Leather and Leather Products Industry (Innsbruck, April 1984), especially concerning the regional aspects in training and production of components and chemicals.

#### APPENDIX VII

#### PROJECT CONCEPT

# FOR ASSISTANCE IN THE INTEGRATED DEVELOPMENT OF THE LEATHER, FOOTWEAR AND LEATHER PRODUCTS SECTOR

## 1. Development Objective

To increase the value added of raw hides and skins and rough tanned leather with the ultimate objective of processing all hides and skins into manufactured products such as footwear, footwear components, leather garments and leather goods.

# 2. Immediate Objectives

To implement an integrated development programme with the following immediate goals:

- increased raw material availability through an improved collection network:
- improved raw material quality through a hides and skins improvement programme;
- increase of export income and creation of additional employment opportunities by development and production of exportable leather-based products with higher value added;
- reduction of imports by developing a domestic shoe component and auxiliary industry.

# 3. Background and Justification

The leather, footwear and leather products industry of Ethiopia is based on an abundant supply of inherently good raw materials, hides and skins. The sector is the second most important export revenue earner and has great potential to increase these earnings through higher value added products. Several international assistance projects, both multiand bilateral, have provided valuable inputs in this sector in the past.

One of the forerunner projects, DP/ETH/78/001 - Leather and Leather Products Industry Development, provided during several years expert inputs, training and equipment for pilot plants. The individual inputs of the

experts, both national and international, involved in the project have made a positive impact on the development of the sector and provided an excellent basis for putting into effect an "Integrated Development Plan" for the entire leather, footwear and leather products sector in Ethiopia, in line with the recommendations of the UNIDO Third Consultation on the Leather and Leather Products Industry.

A detailed project document should be drafted by a senior consultant, who would also evaluate the results of the forerunner projects in order to fully draw from the experience gained during the previous projects' work.

## 4. Expected Outputs

- (a) Strengthened institutional framework for the NLSC with better trained national personnel. The NLSC is expected, with the assistance of the subject project, to be able to cope with the integrated development approach and lead, menitor and develop the whole leather, footwear and leather products sector to the following standard:
  - (i) process all the available raw hides and skins into well tanned and finished leathers for the domestic leather products industry market as well as for exports;
  - (ii) produce an exportable quantity of leather footwear and leather goods from the domestically available finished leathers and components;
  - (iii) produce suitable footwear components and accessories, such as lasts, insoles, counters, unit soles, etc., for the domestic market and for exports to neighbouring countries. The component manufacturing will be organized under one roof and one technical management.
- (b) Strengthened and rehabilitated manufacturing plants for leather, footwear and leather goods production. Individual rehabilitation and re-organization plans for the various production plants will be put into active operation.

## 5. Estimated UNDP/UNIDO Inputs

| <ul><li>(a) Expert Component</li></ul> |
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36 m/m Chief Technical Adviser 96 m/m Experts 24 m/m Consultants \$ 1,300,000 156 m/m 500,000 (b) Training 700,000 (c) Equipment 50,000 (d) Sundries \$ 2,550,000 Estimated total

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