



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

20267

Distr.
RESTRICTED

ODG/R.14
6 July 1993

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

ORIGINAL: English

54p.
table

**ASSISTANCE TO THE LEATHER TECHNOLOGY
CENTRE, SHANGHAI**

US/CPR/85/130

PEOPLE'S REPUBLIC OF CHINA

Report of the ex-post evaluation mission*

Prepared in cooperation with
the Government of the Federal Republic of Germany and
the United Nations Industrial Development Organization

* This document has not been edited.

TABLE OF CONTENTS

	Page
Explanatory notes	3
Summary of conclusions and recommendations	4
Introduction	5
Preface	6
I. PROJECT CONCEPT AND DESIGN	
A. Socio-economic and institutional context of the project	7
B. Project document	11
II. PROJECT IMPLEMENTATION	
A. Delivery of inputs	12
B. Implementation of activities	13
III. PROJECT RESULTS AND ACHIEVEMENT OF OBJECTIVES	
A. Outputs	14
B. Achievement of the immediate objective	16
C. Contribution to the achievement of the development objective	17
D. Monitoring and backstopping	17
IV. CONCLUSIONS	18
V. RECOMMENDATIONS	19
VI. LESSONS LEARNED	21

Annexes

Annex 1	Terms of reference
Annex 2	Key persons consulted
Annex 3	Location of non-expendable equipment

EXPLANATORY NOTES

Unless otherwise indicated, the term "dollar" refers to the currency of the USA. The monetary unit of the People's Republic of China is the Yuan Renminbi (Y RMB). During the time of the mission, the United Nations operational rate of exchange was 1 US\$ = 5.72 Y RMB.

The following acronyms were used in this report:

BMZ	Bundesministerium für Wirtschaftliche Zusammenarbeit und Entwicklung (Ministry for Economic Cooperation and Development), Bonn
CTA	Chief Technical Adviser
IRSI	Industrial Research and Service Institute
LTC	Leather Technology Centre (Shanghai)
NDP	National Project Director
PPER	Project Performance Evaluation Report
R&D	Research and development
SLC	Shanghai Leather Corporation
TOR	Terms of reference
TPR	Tripartite Review
Y RMB	Yuan Renminbi

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

The project achieved transfer of production technology to several plants of the Shanghai Leather Corporation, in particular pig leather tanning and finishing, as well as mechanization of shoe production. However, little outreach has been achieved outside the SLC and none outside China.

The LTC established by the project has considerably decreased operations upon termination of the project. The pilot plants are essentially used for production. Formal training and R&D work has practically terminated.

Participation of women in the production lines (except in tanning) is usually above 50 per cent, but the percentage drops considerably at management levels. The project did not address gender issues neither at design nor at implementation levels.

If the SLC is to reach increasing productivity and meet higher quality and design standards, it should reactivate LTC, which should undertake an aggressive R&D programme as well as structured formal training on various subjects. Foreign exchange should be allocated to the LTC to meet costs of visits to fairs and upkeep and amortization of equipment. It is difficult to foresee the provision of further grant money to the SLC since, in line with open market conditions, this introduces an element of market distortion. The LTC should operate as a separate cost centre and charge for services within and outside the SLC.

The LTC should have two types of functions:

- Research and service (the latter including formal structured training);
- Regulatory functions such as certification of quality and eventual issuance of seals of quality.

The amount of sludge produced by the Da Chang Tannery constitutes a serious environment hazard. The previous association of UNIDO and the German Government with this tannery implies a certain responsibility for both to find and implement a solution to this important social problem.

INTRODUCTION

1. The purpose of the mission was to undertake an ex-post evaluation of the project US/CPR/85/130 'Assistance to the Leather Technology Centre, Shanghai (LTC)' essentially to assess project impact and sustainability¹. The field visit to Shanghai and Beijing took place from 12-21 May 1993. The team was composed as follows:

- Mr. Georg von Koppenfels, Head of Division, Ministry for Economic Cooperation and Development, Federal Republic of Germany
- Mr. Oscar Gonzalez-Hernandez, Head, Evaluation Staff, UNIDO
- Ms. Bärbel Chambalu, Coordinator, Integration of Women in Industrial Development Unit, UNIDO
- Mr. Ricardo Klapp, Technical Adviser.

2. In the vast majority of cases, evaluation missions have only two external participants representing respectively the donor and the executing agency. In this case, the interest of this particular project and the subject covered made the presence in the mission of the representative of the German Government important, in order to check in the field impact and sustainability of the project. The UNIDO Coordinator of the Integration of Women in Development Unit participated in the evaluation as a pilot case to check on gender issues in a technical assistance project, as foreseen in the UNIDO programme for the integration of women in industrial development 1990-1995 (GC.3/CRP.3), which calls for the participation of women in development, specially in the evaluation of selected technical cooperation projects in the area of agro-industries and small-scale industry. Her participation was funded by support provided to the UNIDO Plan of Action for the Integration of Women into Industrial Development by the Government of Norway, which, *inter alia*, includes the participation of WID expertise in the evaluation of technical cooperation projects.

3. The mission consulted with the present and former Directors of the LTC and other staff members of the Centre, the Management and staff of the Shanghai Leather Corporation (holding) and some of its production plants, officials of the Government of China (The China International Centre for Economic and Technical Exchanges, Ministry of Light Industry, Ministry of Foreign Trade and Economic Cooperation and the Shanghai Municipality), the UNDP Resident Representative and the UNIDO Country Director and his staff.

4. The mission is especially grateful to Mr. Zhao De Zeug, the General Manager of the Shanghai Leather Corporation; Mr. Feng Yu Lin, the Director of the LTC; and Ms. Song Xian Wen, Section Chief of the LTC, for their ongoing support in Shanghai, Mr. Ian Davies, UNIDO Country Director in China, and Mr. J. Nygard, Junior Professional Officer, UCD Office, for the excellent preparation of all appointments in Shanghai and Beijing and their detailed briefing and information provided to the mission.

5. The mission owes Mr. Ping a debt of gratitude for the lot of efficient interpretation he did in Shanghai.

¹ The terms of reference for the mission are contained in annex 1.

PREFACE

6. The Government of the Federal Republic of Germany and UNIDO consider it important to undertake ex-post evaluations of German financed projects executed by UNIDO to assess project impact and sustainability and draw lessons for future use in technical cooperation. For this purpose, the umbrella project US/GLO/90/265 was approved, also being financed by the German Government, which foresees a series of ex-post evaluations.

7. In two previous missions the following three projects have already been evaluated:

- ✦ Castor meal detoxification technology, Thailand (US/GLO/87/125);
- ✦ Footwear and Leather Goods Industry Centre, Philippines (US/PHI/85/109);
- ✦ The setting up of a rural small capacity coconut processing model scheme, Indonesia (US/RAS/86/191).

The present evaluation report refers to the project 'Assistance to the Leather Technology Centre, Shanghai', China (US/CPR/85/130). This project was approved shortly after the UNDP financed project "Leather Technology Centre" (DP/CPR/83/004) had commenced. Many parts of both projects are overlapping. It is therefore difficult to assign certain findings exclusively to the project under evaluation.

I. PROJECT CONCEPT AND DESIGN

A. Socio-economic and institutional context of the project

The economy.² The participation of women in the industrial workforce.

8. From 1988 to 1992 the average annual growth rate of the gross national product of China was 7.9 per cent. Industrial production increased considerably. Over these five years, the total value of industrial output rose at an average annual rate of 15 per cent. Manufactured consumer goods grew more rapidly than capital goods and were produced in greater variety and quality than heretofore.

9. During the period under review, the volume of imports and exports doubled, amounting to US\$ 165.6 billion in 1992. Also, the country's foreign exchange reserves have increased. Over the five-year period, the country's total investment in fixed assets amounted to Yuan 2,617.4 billion. A great number of large key projects in basic industries and infrastructure were completed. Major strides were made in reform and opening of economy to the outside world, both in terms of trade and investment. People's income rose and their living standards continued to improve.

10. Overall, the participation of women in the industrial workforce of China is significant. In 1987, 40.9 per cent of the industrial workforce were women (Women in China, 1990). However, women may not be able to uphold this position in a fast growing industry and in a labour market to which flexibility has been introduced. Even though state enterprises still have a large number of regular (permanent) workers who are controlled by administrative rules, they can also avail themselves of the "contract labour system", which enables them to hire workers through contracts and dismiss them upon contract completion. Furthermore, state ownership of enterprises is declining and joint ventures, private/township and village enterprises now produce nearly 50 per cent of the total value of industrial output (UNDP).

11. Since the contract labour system gives managers hiring flexibility they often refuse to hire women, one reason being that they consider the welfare provisions for women too costly. In their report "Women in China, Facts and Figures", Beijing, 1990, the All-China Women's Federation states:

1. *"Female employees are not welcome by work units. Since the implementation of reform measures enabling enterprises to recruit workers themselves, in place of the original policy, by which the state allocated employees' jobs on their behalf. Some units now discriminate against women, setting much higher standards for women than men, when recruiting employees. As a result, women fare worse than men in the competition for jobs."*

2. *"Women account for the majority of those rejected by working groups within enterprises. Since the system of competition for jobs has been adopted: that is, employees can arrange their work-unit themselves, there are inevitably some applicants who are not accepted by any work groups. Most of these are women."*

12. Already in 1987, 64 per cent of the surplus labour in industry was female (Beijing Review, October 1988). A certain amount of discrimination against women exists in vocational training, retraining, promotion, in retrenchment and forced resignation practices.

² See Li Peng, Premier of the State Council, In: Report of the Government (delivered at the First Session of the Eighth National People's Congress on March 15, 1993).

13. China has so far been able to avert most of the social consequences experienced by some Eastern European countries. Deliberate measures will be necessary to maintain women's position in industry and to avoid the situations that have occurred in Eastern Europe, where women have lost a large measure of the gains achieved under centrally planned economies, are overproportionally affected by unemployment up to 80 per cent in Belarus, have lost social benefits, and are faced with massive closing down of childcare facilities, so that even if jobs for them become available, they are unable to take them because of childcare responsibilities.

14. The Government is aware of this situation and has issued many directives and legislation regarding the protection and rights of women adopted by the Seventh National People's Congress in April 1992. The institutional and managerial capability of public sector institutions to enforce these directives and legislation will need to be enhanced.

15. Chinese women have fully and actively participated in the transformation of Chinese society of the last 40 years. Economic and social reforms for sustainable development will need to take gender needs into consideration. Policies for a sustainable development of the industrial sector which is currently witnessing particularly high growth rates (20 per cent annually) are clearly interlinked with policies for sustainable development for the social sector. In both areas, measures to reduce gender disparities need to be foreseen. This is particularly valid in the area of education and training (according to the All-China Women's Federation, more than 80 per cent of the illiterate are women and discrimination against women exists in access to vocational training, on-the-job training and retraining), in the area of poverty alleviation (the situation would greatly deteriorate if women are deprived of employment and income generation), and in the area of social welfare. The provisions of a new social welfare system replacing that given by state enterprises, must include provisions to protect women's reproductive functions, above all provisions for maternity leave and child care facilities.

16. UNIDO's assistance to China towards sustainable industrial development needs to be sensitive to the consideration of women and support the Government's endeavours in this respect. UNIDO's pipeline project US/CPR/93/105 "Training Programme to promote women's participation in the modernization process of China" is a first step in this direction. Gender sensitive project design in new interventions will be a necessity.

17. The most important industrial branches according to value of output (1992) are:

- machinery (27 per cent);
- textile (15 per cent);
- food processing (12 per cent);
- chemical (11 per cent);
- metal (8 per cent).

Public enterprises are "assigned" to special Ministries according to their specific branch - leather companies to the Ministry of Light Industry, which has in the meantime been substituted by a council or association. Presently this body has retained the functions of the former Ministry but it is clear that its official status is lower than before and his "dirigiste" role towards industry will continue to decline. Until 1984, production, finance, supply of material, cost accounting and pricing were subject to central planning. Since then, there have been changes in the way public enterprises are operating and are now much freer to choose production, sources, markets and prices despite certain controls, particularly regarding foreign exchange.

18. In the context of the establishment of a "socialist market economy" with a private sector as a supplement, reforms of the Government are speeding up along the following lines:

- separating the functions of the Government from those of the enterprises;
- straightening out the relations between ownership and management of the enterprises; and

- turning enterprises into legal entities responsible for their own decisions about operations for their own profits or losses.

19. In the last years, many public enterprises have been facing enormous economic and financial difficulties. Only one third of them are making profit, the others still depend heavily on subsidies, many of them are technically bankrupt.

Development problems of the light industry sector (with special reference to the leather branch)

20. Different from infrastructure (transport, communication) and agriculture (food security) light industry does not belong to the priority areas for Chinese policy although the sector contributes substantially to the gross national product, to foreign exchange earnings and to the employment.

21. The development problems affecting the sector do not concern so much production and marketing. The export shares of Chinese products from the sector have gone up substantially given the good ratio quality/price. (The total output value of the leather industry rose annually from 1990 to 1993 by 18.7 per cent.)³ However, the leather industry has to make efforts to increase continuously the quality of its production and to develop new markets. In her production policy, China should be endeavouring to shake off the reputation that demand for Chinese products is based solely on their low price. Access to foreign exchange to import the appropriate machinery, the necessary spare parts, know-how in quality and design and attending of fairs is a prerequisite for further development.

22. The Chinese leather industry is made of four main trades including leather making, leather shoes, leather goods and fur and several trades consisting of leather chemical materials, mechanical equipment, shoe making materials and hardware fittings. The industry commands over 17,000 enterprises and 1 million workers. In 1992, the industry earned US\$ 4.7 billion of foreign exchange from exports.

23. Enterprises in China's leather industry are mostly of middle and small size and spread all over the country, the east coastal areas being more flourishing. The middle and west areas are the key points for future development because there are rich leather resources as well as factors and potentials to develop this branch.

24. The Government realizes already the need of a strategy⁴ for the Leather Branch:

- Developing production bases of good quality pig, cattle and sheep;
- Increasing the output of good quality raw hide;
- Improving mechanization level and processing technology;
- Improving precision and the finishing process;
- Enlarging international economic and technical cooperation to attract foreign investors.

³ Figure provided by the Ministry of Light Industry.

⁴ Material from the China Leather Industry Association.

Situation of women within the LTC and leather companies assisted by the LTC within the framework of the project

25. From UNIDO's project work in the leather sector it seems that the position of women in the leather industry in China is superior to that of women in this sector in most other developing countries.

(i) Leather Technology Centre

26. 38 per cent of the staff of LTC are women. One of three Vice-Directors is a woman, and three out of seven section chiefs are women. The Deputy Director of LTC is a woman. The three women section chiefs are in charge of chemicals, shoe design and the testing laboratory and are fully qualified for the jobs they hold.

(ii) LTC project assisted enterprises

27. Within the leather processing plants, which have directly benefitted from the project (one ladies' and one men's shoe factory, one leather goods factory plus one leather garments factory), between 60 to 70 per cent of the workforce are women⁵. Certain operations are almost exclusively carried out by women, particularly stitching operations, but also cutting, design and finishing. There are also a number of women supervisors and women deputy managers in these companies. In the tannery, women account for 20 per cent of the workforce because of the heavy nature in this work. Women were also reported as heading the trade unions of companies. No women were found in top company management positions.

(iii) Employment in the LTC

28. The state-owned enterprises of the LTC draw their manpower mainly from school leavers (at the age of 19), which are assigned to the industry by the municipality. They are required to undergo specific tests (particularly eye-sight for stitchers) before they are given a three months trial period. After this period, they can be turned back to the municipality, if they do not meet minimum requirements, or they receive a five-year contract which in the past was generally renewed at the end of each five-year period or converted into a life contract, unless extremely serious short-comings occurred. Training is generally on-the-job and takes between one to three months. The industry is also assigned graduates from the light industry college, which has classes on leather technology. 50 students graduate annually from the College, 20 of them on average are girls. Male graduates are said to be absorbed faster than female graduates.

29. Men and women receive the same wages/salaries. There is only a small difference in the wages/salaries of workers and managers. There are, however, special benefits for managers. Promotion to supervisory/managerial position is based on experience and on attendance of adult education classes. Women are well represented among medium level supervisors and deputy managers. Only young people (men and women) were observed as working on the production lines. The explanation given was that workers generally move on to design, quality control, packaging and administration functions.

30. All workers/employees are entitled to a two-weeks holiday per year. Women have one additional day, 8 March, International Women's Day. Women are also entitled to one day off per month. After childbirth, they are entitled to one year maternity leave, with approximately 80 per

5

	Total no. of employees	women %
Shanghai Shoe Factory No.1	400	65
Bao Ji Shoe Factory	1100	60
Leather Goods Factory	250	70
Leather Technology Centre	105	35
Shanghai Leather Corporation	2816	38

cent of their wages/salaries paid by the employer. In view of China's "one child" policy, women are expected to use contraceptives after one birth, which are free of charge. If, in spite of these use, they become pregnant, they are obliged to have an abortion after which they are entitled to two weeks sick leave with full pay. If no contraceptives are used, no paid sick leave is granted.

31. Another point worth mentioning here are the physical working conditions in all production plants visited, which were extremely good in terms of space, light and fresh air per work unit and are superior to those existing in many cooperatively owned village or township industries in China.

B. Project document

32. The project was designed in 1983/1984 when the economy of the country was still centrally planned, although certain moves towards a market economy had started. The approach to establish a Leather Technology Centre to service the tannery and leather industry of China within that economic framework seems correct. The Shanghai Leather Company was chosen to sponsor the proposed Leather Technology Centre (LTC) in view of the relatively high level of development of the company - it was considered the best in the country - and it housed already the Leather Industry Research Institute of China.

33. The regional (South-East Asia) context of the project did not make sense from the beginning, although it is recognized that this was a recommendation of UNIDO's System of Consultations. The size of the Chinese leather industry or of the Shanghai Leather Corporation alone justified full utilization of the LTC services. Logistic problems do not favour regional centres for this type of industry. At most, networking of national centres should have been pursued.

34. The project under evaluation was designed subsequent to a UNDP-financed project - DP/CPR/83/004 -, which had a similar structure (objectives, outputs, activities) as well as a regional outreach. The rationale for the US project was given in the project document as the need to supplement the DP project, which had been reduced from a proposed US\$ 1,200,000 to an actual US\$ 750,000 external contribution. With this reduction it could not be expected that the DP project could *"have the impact needed for creating a well-functioning regional institute and, therefore, additional inputs were required"* (quoted from the project document of US/CPR/85/130). Within the above context and abstracting from the impossible objective to have a regional outreach, the project was well designed.

35. The immediate objective and outputs were stated explicitly. Although the function of the project was not stated in the project document, it can be assumed that it was meant to be institution-building. The objectives and outputs were in accordance with this function. Outputs (d), (f) and (g) should have been grouped together. Targets for the objectives and outputs were indicated, but no quantification was given in respect of the training materials to be produced and personnel to be trained by the project. Relations between inputs - activities - outputs were adequate. The list of activities contained in the project document was adequate. On the basis of this list, a workplan was prepared by the CTA and kept updated at intervals.

36. The project document stated no assumptions or risks. However, at the time of writing the project document, this was not a requirement. No mention was made to beneficiaries. The comment under the previous paragraph also applies here. However, it is clear that the intended beneficiaries were the tanneries and leather industries (of South-East Asia, China or the Shanghai Leather Corporation depending on the extent of the LTC's outreach).

II. PROJECT IMPLEMENTATION

A. Delivery of inputs

UNIDO Inputs

37. External inputs at the occasion of the project approval and at completion were as follows:

	Approved		Delivered	
Budget line 19 Personnel	\$ 324,475	40.0 m/m	\$ 411,911	36.9 m/m
Budget line 39 Study tours	\$ 143,000		\$ 34,755	
Budget line 49 Equipment	\$ 460,000		\$ 473,988	
Budget line 59 Miscellaneous	\$ 6,275		\$ 9,153	
SUB-TOTAL	\$ 933,750	40.0 m/m	\$ 929,807	36.9 m/m
13% support cost	\$ 121,387		\$ 120,875	
GRAND TOTAL	\$ 1,055,137	40.0 m/m	\$ 1,050,682	36.9 m/m

38. The drastic reduction in budget line 39 is not a reflection of a reduction of study tours undertaken, which were financed instead under the sister project DP/CPR/83/004. Higher expert costs are explained by the exclusive use of split missions, which have much higher travel costs.

39. The inputs provided by the project were the following:

(a) Personnel

BUDGET LINE	EXPERT	M/M	NAMES
11-01	Chief Technical Adviser (split missions)	9.7	Mr. O. Klötzer
11-02	Leather Technologist	4.0	Mr. B. Svensson
11-03	Footwear Technologist	6.2	Mr. T. Niklasalmien
11-04	Footwear Designer	3.0	Mr. H. Bender
11-05	Leather Goods Expert	4.4	Mr. E. Chewan
11-06	Marketing Expert	3.0	Mr. S. Scheller
11-07	Shoe Engineer	3.0	Mr. O. Birkhaug
11-51	Consultant for Regional Cooperation	0.4	Mr. D. Tracy
11-52	Computer Specialist	1.0	Mr. F. Schmel
11-53	Senior Management Consultant	2.2	Mr. O. Klötzer

The quality of personnel supplied by the project was in general of a high quality.

Training

(b) Study tours

40. 16 technologists and technicians of the Centre were sent for training to institutes and factories in Germany, the Philippines, Switzerland and Hungary. Six of them are with the SLC, three left, one is with the Ministry, one retired and only four are still with the LTC.

41. The first National Project Director and his successor went on study tours to Germany, the Netherlands, Austria, France, Pakistan and the Philippines and were accompanied by the CTA during the European tour.

42. In general, the training provided by the project was relevant, well undertaken, and the knowledge acquired is being mostly used in production.

(c) Equipment provided

43. Please see annex 3 for list of equipment provided under the project, its location and present status. There were no significant problems regarding the delivery and installation of equipment. More information on the utilization of the equipment is indicated under "Outputs".

44. The equipment was marshalled in setting up the following units:

1. Pilot plant for leather processing
2. Pilot plant for men's shoes
3. Pilot plant for ladies' shoes
4. Leather goods pilot plant
5. Design studio
6. Mechanical workshop
7. Information unit
8. Training.

Government inputs

45. Reference to Government inputs in the project document is made in general terms with the total quantification of 4 million Yuan RMB.

46. As far as the mission could ascertain, there were no problems regarding the timely provision of Government inputs, be them personnel, premises or installation of equipment, although no quantification was made by the mission.

B. Implementation of activities

47. The activities, as listed in the project document and related work plans, were completed satisfactorily with exception of activity (j) related to the regional outreach. For the implementation of these activities of the project, there was good cooperative work between international and national staff. The activities related to (d) "elaboration of the organization structure of the centre and preparation of guidelines for its operation" were, as far as the evaluation could ascertain, well directed by the project. However, because the LTC was completely integrated in the SLC and of the primordial preoccupation of the latter with production output, the Centre could not maintain its status as a sustainable R&D centre beyond the life of the project. As a consequence, the mission makes a recommendation to reactivate the SLC.

III. PROJECT RESULTS AND ACHIEVEMENT OF OBJECTIVES

A. Outputs

48. Seven outputs were foreseen by the project document. The production of such outputs as analyzed by the evaluation is as follows:

- (a) **A well equipped pilot plant for leather processing, specialized in utilizing locally available raw hides and skins.**

This is the tannery pilot plant which is installed in the premises of the LTC. This pilot plant is well laid out and equipped but underutilized. The machines look more or less clean, but the maintenance could be quite better considering their high value. In order to increase its capacity utilization, the pilot plant should be moved out to the large tannery at Da Chang to service it as well as for training purposes.

The plant was originally oriented to carry out basic training, further vocational training, research and demonstrations of new tanning technologies. A small-scale production of various types of leathers made from pork, bovine and goat skins, including leather made from chicken legs, was made. It serves as a common facility for the tanneries in the Shanghai area whose workers can use the machines for upgrading their leather quality and at the same time receive training in the operation of the equipment. LTC management confirmed that good results have been obtained mostly in the applied research and product development of new types of pig skin based leathers for footwear uppers and garments.

- (b) **Well equipped pilot plants for footwear, leather goods and glove manufacturing, including a well equipped and suitable organized design studio with all the facilities required for range building, pattern engineering, grading, designing and a well equipped tool-making workshop for producing cutting dies, perforating matrices and small metallic and/or plastic tools.**

LABORATORIES

- **Chemical Laboratory:** It is located on two of the upper floors of the LTC building and is well equipped, mostly with Chinese made pieces and is used regularly although not to capacity.
- **Leather Technology Laboratory:** Located on the ground floor is also well equipped, but apparently less used. The main objective of this laboratory is to check the physical qualities of the leather concerning the strength, flexibility, softness, impermeability, friction resistance, perforation, etc.
- **Footwear Technology Laboratory:** Mostly equipped with equipment made in China contributes to a quality control of samples in order to extend certificates of footwear specification.

PILOT PLANTS FOR FOOTWEAR

- **Shanghai Bao Ji Leather Shoes Factory:** This is one of the pilot plants located outside the LTC. It is set up at the Shanghai Bao Ji Leather Shoes Factory. This factory produces 1,700 pairs of ladies' shoes a day and approximately 2.5 million of pairs per year. Forty per cent of the production is for export to the USA and Taiwan. In the Pilot Plant Division of this factory the following personnel was trained in the job, according to the information provided by the management:

1988/89 over 100 people
 1990/91 over 100 people
 1992/93 over 200 people.

 Total: Over 400 people included supervisors, designers and personnel of the administration and management staff. 70 per cent women and 30 per cent men.

The Bao Ji Factory also uses the Technology Laboratory located in the LTC for the quality control of samples in order to obtain the corresponding certification.

- *Shanghai No.1 Shoes Factory:* This factory was founded in 1956 and is specialized in the manufacture of men's shoes and sport shoes for men and women. The production is about 1.8 million pairs per year, mostly stitch down type (140 models) and cemented. The exports are going to Australia, Japan, Korea and USA. They have trained in the job more than 200 people also in marketing, design, management and technology studies.

LEATHER GOODS PILOT PLANT

The leather goods pilot plant is now situated in the Shanghai Leather Luggage Factory. This well equipped plant covers a surface of nearly 3000 square meters and occupies 250 people. The production includes approximately 1.2 million pieces (300 different models). 75 per cent are for export (US\$ 3,500,000) to Japan, USA, Hong Kong and Europe. The Pilot Plant Section is equipped with 11 machines and was adapted for production and training on a surface of 200 square meters. It employs 27 people (three trainees and 24 normal staff workers). Nearly 300 people were trained in the job since 1991, also from the Jiangsu and Sichuan provinces.

The raw material is mainly from the own tannery (Shanghai Leather Corporation), but also some purchased outside is used. The factory uses own designs and copies samples sent by clients from foreign countries.

AUXILIARY UNITS

- *Design Studio:* In addition to the designers in the footwear and leather goods pilot plants, a design studio for footwear employing designers and technicians has been established. The studio is supposed to provide extension services to a number of shoe factories but does not seem in operation.

- *Mechanical workshop:* The mechanics in this workshop produce cutting dies and small tools and repair the equipment of the LTC. There are repair workshops in the factories that house LTC's pilot plants, such as Bao Ji Leather Shoe Factory and No.1 Leather Shoe Factory.

(c) **An information processing unit with electronic equipment, capable of rendering services and training in the provision of fashion, market and technical information, data and word processing.**

This unit was established and equipped by the project with a telex, word processor and several software. The library has over 9,000 items of technical material. The annual magazine 'PROGRESS' was issued in five copies under a separate external financial allocation. It is apparent that the functioning of this unit as well as the issuance of the publication is totally dependent on an external financial allocation, and now, that this has ceased, the unit has practically terminated operations.

(d) **A well equipped training department suitable for training of instructors and supervisors using the skill analysis training method, as well as for developing work methods, elaborating time standards and carrying out motion studies.**

(f) Well elaborated and tested on-the-spot training materials, syllabi, training aids, guidelines for testing and R&D activities, quality standards, computer programmes, etc., for continuous use.

(g) Suitably trained personnel capable of running training courses, rendering extension services and participating in R&D projects.

The observation made on the output (c) may be done for (d), (f) and (g) here. The three outputs belong in fact together, and in the project document only one output referring to the training department, its personnel and materials should have been mentioned.

Further to training abroad sponsored by the project, a number of people undertook formal training by the serving experts, as follows:

NAME OF EXPERT	SUBJECT OF COURSE	DURATION OF PARTICIPANTS	APPROXIMATE NUMBER
Nikiasalmien	Quality control	3 x 1 month	total of 20
	Design	1 month	20
Bender	Pattern cutting }	1 month	20
	Shoe last design }		
Scheller	Foreign marketing	1 week	50

Training materials on leather making and pattern cutting were translated into Chinese, as well as various technical papers prepared by the experts.

After the project, the only course provided by the LTC was on pattern cutting, in 1992, for about 1 month, where around 25 people participated. Therefore, this supports the statement that the training department has practically ceased formal training. By formal training we understand structured training or skill upgrading following a syllabus and appropriate timing.

Training continues at plant-floor level where apprentices are placed in the production and learn by doing. This seems to be the usual practice in China which is acceptable to place apprentices in production lines, but not for skill development and introduction of new or improved production techniques.

(c) An organization structure of the regional centre together with guidelines for its operation, with special reference to the international connections.

This was not prepared since the centre never operated as a regional centre.

B. Achievement of the immediate objective

49. The immediate objective of the project, i.e. developing the Leather Technology Centre into a centre able to fulfil an important role in the network of leather and leather products (within the Shanghai Leather Corporation) has been attained when the project and UNIDO's contribution were terminated.

50. This is, however, not the case with respect to the regional aspect of the project (extension of services to the South-East Asia and the Pacific Region), which was not achieved since the Centre did not have a regional outreach. Also, the LTC did not manage to have a sizeable outreach beyond the Shanghai Leather Corporation.

51. A transfer of technology to the LTC and via LTC to the tannery and the production plants of the Shanghai Leather Corporation has been achieved and is being used: work mechanization, modern production lines for large scale production, development of pig skin to improve quality, and design. However, improvements in leather finishing, mostly because of the nature of chemicals and dyes used, are still needed.

52. There has been, however, no further development of the LTC beyond the project's duration. The Centre is not too active and the sustainability of its capabilities depends on whether the Shanghai Leather Corporation is willing to revitalize its functions and makes it anew attractive for qualified staff as well as for customers within and beyond the corporation itself.

53. Given the demands of the export markets on quality and design of leather products, the need for a well functioning LTC is urgent. In any case, a revitalized LTC fits into Government plans to develop the leather sector and to continue improving its products.

C. Contribution to the achievement of the development objective

54. The development objective of the project was stated in the project document as follows:

The long-term development objective of the project is to improve the productivity and quality of, and increase the added value on, leather and leather products manufactured in South-East Asia and the Pacific Region through strengthening their industries. This will be done through manpower development, i.e. by upgrading the qualifications of technical staff employed in the leather and leather products manufacturing units, and through rendering services in the field of product development, technology and marketing.

55. The Leather Technology Centre improved the productivity and quality of, and increased the added value on, leather and leather products manufactured in different production plants of the Shanghai Leather Corporation. An impact on other companies of the country did not take place.

D. Monitoring and Backstopping

56. Technical backstopping was very good in technology issues but less so on institutional building aspects. These latter questions are those which lead to the sustainability of the LTC as an institution capable to continue upgrading the level of the SLC as a whole. Monitoring took place through TPRs; three were held and were prepared and undertaken. Four PPERs were prepared of a medium quality. No in-depth evaluation was undertaken although one was foreseen in the project document. The PPERs foresaw already difficulties in the LTC operating as a regional centre and noted the lack of a well designed research programme. The lack of institutional building was also noted by this report, as well as the use of "pilot" equipment for production purposes.

IV. CONCLUSIONS

57. The project achieved a transfer of production technology to the Shanghai Leather Corporation, which has had a positive impact on productivity and quality improvement. Particularly relevant were improvements in pig leather tanning and finishing and mechanization of production of ladies' and men's shoes.

58. The problem lies in the sustainability of the effort namely the continuation of transfer or development of technology. At the time of the evaluation LTC was doing little research work, and the improvements achieved by the project are not continuing. The institution-building aspect of the project has failed. This is a result of too much orientation in the design and implementation of the project to technological issues and little to institutional questions. During the project, the outreach of the LTC was limited to several plants of the SLC. The regional outreach is non-existent. In view of the nature of this industry and market for leather R&D services in China alone, it was overoptimistic to foresee the Centre to have a regional character. Compounded to this are language problems. At most, a networking of national institutions in several East Asian countries should have been pursued. The equipment for the pilot plants for leather goods has been well integrated in the production lines. The production lines are well laid out and equipped. The tannery pilot plant is little used and is too distant from the large Da Chang Tannery to be of use to them.

59. The project achieved impact on the people trained by the project, who are now usefully applying this knowledge in production. However, in line with the general lack of sustainability of the project, formal training by the LTC has ceased.

60. Participation of women in the production lines is high, less so when going up the management ladder. The project design did not address gender issues neither at design nor at implementation levels. A situation where only two out of 12 fellowships or 16 per cent were awarded to women, when the overall representation in the workforce is around 60 per cent (including technical supervisory and managerial positions) could have been avoided and would seem to demonstrate a bias against women, not in line with the official government policy regarding women's employment, promotion, and study abroad.

IV. RECOMMENDATIONS

61. The Shanghai Leather Corporation has to revitalize LTC so that it can sustain its assistance to increase productivity and quality of the Corporation. An aggressive R&D programme for LTC is needed, if it is to support the SLC in the continuous upgrading of its production. For this purpose, the management of LTC should be strengthened, foreign exchange allocated so it can get the necessary know-how from abroad, participate in foreign fairs and buy spare parts for its pilot and training equipment, and it should be organized as a separate cost centre being able to charge within and without the SLC for services at its real cost plus a small mark up. The mission foresees an important role of the LTC in two types of functions:

(a) **Research and Service Function.** To be provided within the SLC group, which is big enough to absorb a large amount of these services. However, the LTC should try to have an outreach to other plants outside the group. Such services could be on the whole gamut of operations from tanning to design and on to finished products. The important subject of CAD/CAM should be dealt with by the LTC for the future needs of SLR. Courses on selected subjects should be organized on a regular basis. For this purpose, the LTC has to constantly upgrade its know-how. The yearly publication PROGRESS should be continued without resorting exclusively to foreign financing. Income from advertisements and the publications sales should cover most of the costs of the publication. To increase market acceptance, the magazine has to publish updated articles of interest to the leather trade.

(b) **Regulatory functions, such as certification of quality and related issuance of seals of quality.** The LTC already possesses the legal mandate to certify quality of leathers and goods through physical and chemical testing. The mission could not ascertain the quantity of such work but it does not seem overwhelming. Such activities would be strengthened if accompanied by the issuance of a seal of quality. A campaign to launch the seal would have to be undertaken starting with the internal market proceeding to external markets. The seal would be issued for products and raw materials meeting quality standards. To properly undertake such regularly functions inside and outside the SLC, the LTC could have to possess a high degree of objectivity and independence.

The SLC disposes of a certain percentage of its foreign exchange earnings to pay for related expenditures (like equipment and travel abroad). However, it seems that for each item of expenditure a separate authorization by the Government within that percentage is still needed. It is recommended that this separate authorization be abolished as long as expenditures are within the allocated ceiling and for pre-selected groups of goods and services. A certain amount should be allocated for LTC mostly to attend specialized fairs and seminars.

62. The pilot plants provided by the project are so integrated in production that we see difficulty in using them again for their intended purpose (pilot operations) by the LTC. However, an effort must be made to use these plants for training purposes with the guarantee to teach a number of trainees per year. Nevertheless, the agreements between the LTC and the companies where the pilot plants are located should be revised with a view to get revenues to the LTC more in line with the value of the equipment provided.

63. In view of the low level of utilization of the pilot tannery plant and effluent treatment pilot plant at the LTC, it should be moved to the large Da Chang Tannery complex. Preferably, the pilot tannery plant should continue to be operated by the LTC for which suitable personnel should be detached to Da Chang and services (pilot and training courses) charged to the tannery and other users.

64. The large quantity of sludge, and its quality produced daily (about 50 tons) by the Da Chang Tannery constitutes a serious environmental hazard. The problem has to be studied and an appropriate solution found. The previous association of UNIDO and the German Government with the tannery through the project implies a certain responsibility of finding and executing a solution to the problem.

65. UNIDO should examine the present situation together with the Government of China to study possible options to be submitted to the BMZ for consideration.

66. The following specializations were quoted as being required in the future by LTC and its companies: (i) computer engineers; (ii) specialists in marketing, management (production and financial), and in product design. It will be important to ensure that equal opportunities will be given to women, when hiring this expertise.

VI. LESSONS LEARNED

67. In an ex-post evaluation two issues come up clearer than in other types of evaluations. This is because the evaluation is freer from implementation questions and concentrate on and verify in which conditions impact and sustainability of the technical assistance efforts are achieved. We have categorized the lessons learned from this evaluation as follows:

Institution building and Industrial Research and Service Institute (IRSI) projects

68. UNIDO conducted back in 1979 a major in-depth evaluation of the technical assistance programme dealing with industrial research and service institutes (IRSIs), to which group the LTC belongs. Its final report (ID/B/C.3/86, and Add.1 and 2) remains more valid than ever, particularly in the facing of decreased public subsidization to such institutes.

69. The adherence to the principles enunciated in the report would diminish considerably the flares regarding performance, impact and sustainability of IRSIs supported by technical cooperation.

70. Institution building projects, such as those related to IRSIs, require sustainability when the technical cooperation ceases, i.e. that the development impact continues beyond the projects' completion. To help ensuring sustainability, UNIDO developed a standardized method to describe outputs of institution building projects; the so-called "service module" concept which is described in documents UNIDO/PC.31/Add.3 and 4. The use of this concept in the design and implementation of institution building projects will go a long way in ensuring sustainability.

Regional outreach of IRSIs

71. The coverage of IRSI is normally limited to one country and even this objective is difficult to reach, particularly under present economic environments were such institutes have to generate income to supplement dwindling public subsidies. The end users of such institutes are normally composed of small and medium-scale industries. Distance between the institute and end users makes the outreach more difficult. Such difficulties obviously increase when institutes are supposed to have a multinational outreach, problem compounded by language barriers. Evaluations of various regional projects have shown that their outreach rarely exceeds national boundaries. A better solution to regional outreach seems to be networking of national institutes by exchange of information rather than creating regional centres.

Nature of pilot plants

72. This question was amply discussed in the IRSI evaluation mentioned above (para.68). Often technical cooperation projects embark on pilot plant without being sure as to their objective. As a result, the pilot plant may end up being used exclusively for production purposes or, worse, live idle. In the present case, project management (both international and national) defined clearly the purpose of the pilot plants, under the LTC (Annex II of the Report of the Tripartite Review of 11 April 1989), but they ended up being used almost exclusively for production purposes. It is therefore important to define at the outside the objectives and justification of the pilot plant and to ensure during implementation that the "raison d'être" of the pilot plant be adhered to.

Direct assistance to productive enterprises

73. The project was first designed under a centrally planned economy, where competition between plants play a reduced role. As demonstrated by this project, its impact is felt at the level of the SLC, the productivity and quality of which have increased. Under the present market economy conditions, where SLC is competing with other similar plants, either joint-ventures, public or private, this intervention may be questioned as a market distortion in favour of SLC, which received, as a grant, technology, equipment and training. Projects, the aim of which is the improvement of a particular company, create obvious situations of market distortion, which need previous analysis and special precautions.

Women in development

74. UNIDO's projects of assistance to the LTC were designed in the 1980s when design criteria did not call for consideration of women. If a project of this nature was to be designed now, given the high participation of rates of women in the industry, consideration would need to be given to the role and participation patterns of women in the formulation of the project, and a manpower analysis by gender would need to be undertaken as part of the design process and included in the description of the subsector. In the course of implementation, reports by the CTA regarding organizational structure, personal management and training activities will need to take into account gender considerations. For this, it is necessary that responsibility for gender considerations is reflected in the job descriptions of the CTA and of experts with training responsibility. Reporting on training activities within a project should breakdown the number of people trained by subject and gender, so that it becomes possible to monitor the impact of project activities on women and offset possible adverse effects on them.

**GOVERNMENT OF GERMANY
UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION**

US/GLO/90/265 - Ex-post Evaluations

**US/CPR/85/130 Assistance to the Leather Technology
Centre, Shanghai**

TERMS OF REFERENCE

1. Background

The umbrella project US/GLO/90/265 was approved to enable the Government of Germany and UNIDO to undertake ex-post evaluations of German-financed projects executed by UNIDO, to assess their impact and sustainability and to draw lessons for future use in similar projects. Heretofore, ex-post evaluations of projects were not undertaken regularly since no financial provisions had been allocated for this purpose under the respective projects.

It was decided there would be two evaluation rounds of two projects each. The first mission, in addition to evaluating two projects¹, also provided guidance to the approach for undertaking further ex-post evaluations. These findings were used in the preparation of the third evaluation, namely US/RAS/86/191 "The setting up of a rural small capacity coconut processing model scheme".

The present terms of reference cover the evaluation of the project US/CPR/85/130 "Assistance to the Leather Technology Centre, Shanghai".

The project US/CPR/85/130 aimed at developing in the Shanghai Leather Corporation a centre able to fulfil an important role in the network of leather and leather products centres of the South-East and Pacific Region. The project was operationally concluded in April 1990. In particular, at the end of the project, the centre was to be capable of offering and carrying out services in the following areas:

- Systematization and supply of information concerned with fashion, design, marketing, R&D, manufacturing methods, plant organization and management, work studies, problems of environmental protection, application of micro-electronics, economic aspects and trends of development in the leather tanning, footwear, leather goods, gloves, leather garment and sports goods industries;
- Training of managers, supervisors, instructors and technical staff (e.g., time study engineers, quality controllers);
- Quality control (extended laboratory experiments, sample checks, assessment of product or material quality) and elaboration of guidelines and standards for quality

¹ US/GLO/87/125 Castor meal detoxification technology and US/PHI/85/109 Footwear and Leather Goods Industry Centre.

control and for subcontracting the supply of leather and leather products (including substitutes);

- Applied R&D assignments focused on problems related to the specific characteristics of raw materials available, working conditions and techno-economic infrastructure of the region;
- Extension services to companies and/or governments upon request through contractual agreements.

This project is a follow-up and overlaps to a certain extent with the UNDP financed projects DP/CPR/80/007 and DP/CPR/83/004. The first one, under the title "Assistance to the establishment of a central laboratory in Shanghai", started in 1981, installed modern quality control and production laboratories and introduced testing and quality control methods. The second one, under the title "Leather Technology Centre", established small pilot plants for leather processing, research in footwear technology, development of prefabricated footwear components, leather products development and research on effluent treatment of tanneries.

2. Scope, purpose and methods of the evaluations

The primary purposes of the in-depth ex-post evaluations are as follows:

- (a) To assess whether the achievement of the projects' objectives have led or are likely to lead to a significant contribution to the projects' development objective.
- (b) To assess the relevance of the project and whether the problems that were to be addressed by the project were solved.
- (c) To assess the achievements of the projects against its objectives, including the utilization of outputs produced or results achieved, and the re-examination of the projects' design.
- (d) To identify and assess the factors that have facilitated the achievements of the projects' objectives as well as factors that have impeded the fulfilment of these objectives.
- (e) As part of the above-mentioned tasks, the mission will also review whether the approaches utilized by the projects have led to optimum results as or whether other approaches could have improved the results.
- (f) To identify internal factors which may have influenced the projects' objective achievement or non-achievement. For example, such factors could include project design, quality of expertise provided, adequacy of training, etc.
- (g) To identify external factors which may have influenced the projects' objective achievement or non-achievement. For example, such factors could include unexpected changes in government priorities, changed economic conditions, or new developments in technology.
- (h) To assess the extent to which the projects' results and any impact achieved continue to contribute to project and development objectives after its termination.
- (i) To record the effects the projects have had on their surroundings (institutional, technical, economic, social).

3. Project design

In ex-post evaluations the question of project design should be reviewed since the quality of adequacy of project design not only influences its management, implementation, efficiency and effectiveness but also a good design will help ensure a project's sustainability. To assess these aspects the following issues should be addressed:

- Was the project concept relevant to the needs of the country and appropriate to the country's socio-economic and technical content?
- Were the critical assumptions required for successful project completion and for sustainability adequately considered? To what extent did these proved correct?
- Were success criteria and milestones included in the project design by which project performance and impact of the project could be monitored and evaluated?
- Did the pre- and end-of-project status' descriptions prove correct?

4. Sustainability

Beyond the production of outputs and the achievement of objectives, the evaluation should address the following aspects to help determine whether the positive results of the project are likely to be sustained:

- ◆ Were the project achievements sufficient and of adequate quality to meet the needs of end users? Were the needs correctly identified and adequately translated into services to be produced by a strengthened counterpart institution?
- ◆ Did the demand forecasted for project-strengthened service capabilities and/or technologies developed materialize?
- ◆ Will the project assisted institutions be capable to continue meeting future demands?
- ◆ To what extent is the project's sustainability dependent on external factors which are beyond the immediate control of project management? How, if at all, have these factors affected sustainability?
- ◆ How is the counterpart institution integrated into its institutional framework? Does it co-operate with other similar national and/or international organizations to maximize project results?
- ◆ Were measures envisaged which would help ensure sustainability taken up by project and counterpart personnel?
- ◆ Were management systems and financial arrangements developed which would allow the continuation of activities previously supported by the project? Are government subsidies required? Examine the financing of the institutions assisted.
- ◆ Are linkages with industry well established? Is industry benefitting from the project? Should the project assisted organization market its services better? (Examine the report of the previous ex-post evaluation under private sector co-operation.)

5. Project specific issues

- Examine and analyze the pilot nature of the plants for leather and leather products processing established under the project.
- Analyze the services and training being provided by the information processing unit.
- Determine the quality and quantity of training provided by the centre including training materials developed under the project.
- Analyze the regional outreach capabilities of the centre (define "regional") and assess the centre's role (potential or actual) in the context of a regional network. Its relation to the Manila-based leather centre (US/PHI/85/109), evaluated during the previous round of ex-post evaluations, should be considered as well.

An assessment of these specific issues will require interviews with the counterpart institutions, other institutions in the countries covering the same subjects, applicable Government officials, trainees, industry representatives and generally end-users of the project.

6. Composition of the mission

The mission will be composed of:

- ✳ one representative of the Government of Germany;
- ✳ one representative of UNIDO;
- ✳ one expert on tanneries and leather goods.

These representatives should not have been directly involved in the design, appraisal or implementation of the projects.

7. Consultations in the field

The mission will maintain a close liaison with the UNIDO Country Director in China who will be requested to assist the mission in arranging visits to and interviews with the target groups of the project.

Although the mission should feel free to discuss with the authorities concerned all matters relevant to its assignment, it is not authorized to make any commitment on behalf of the Government of Germany or UNIDO.

8. Timetable and report of the mission

A time table for the mission is attached. The evaluation team will stay in China for around 11 calendar days. The mission will attempt to complete its work within the given time frame and, upon completion of the mission in the country should brief the authorities concerned on initial findings and conclusions. The technical expert will prepare his report one week after the termination of this mission. The final version of the evaluation report will be prepared by the representatives of the Government of Germany and of UNIDO in Vienna and will be submitted to UNIDO, the Government of Germany and the recipient country within three weeks after completion of the assignment.

KEY PERSONS CONSULTED**Project counterpart****Leather Technology Centre, Shanghai**

- Mr. Feng Yu Lin, Director
- Mr. Shi Xiang Lin, Senior Engineer with Professorship, former Director
- Ms. Song Xian Wen, Chemical Engineer, Section Chief
- Mr. Ye Hong Hi, Chief, Information Unit

Shanghai Leather Corporation

- Mr. Zhao De Zeng, General Manager
- Mr. Lan You Min, Chief Engineer
- Mr. Sun Shun Ping, Senior Economist, Director of Shanghai Leather Shoes Factory No.1
- Mr. Li Jian Wei, Deputy Director of Shanghai Leather Shoes Factory No.1
- Mr. Yu Ke Han, Engineer, Deputy Director of Shanghai Bao Ji Leather Shoes
- Mr. Cui Yi Zhi, Director of Shanghai Leather Luggage Factory
- Mr. Shen Bu Gang, Deputy Director of Shanghai Leather Suitcase and Bag Factory
- Mr. Wang Fu Sheng, Deputy Director of Shanghai Leather Garment's Factory
- Mr. Li Ding Gong, Deputy Director, Shanghai Leather Garment's Factory
- Mr. Wang Miao Xiang, General Manager, Da Chang Tannery

China Leather Industry Association

- Mr. Xu Long Jiang, Senior Engineer, First Vice Chairman

Government of China**The China International Centre for Economic and Technical Exchanges**

- Ms. Liang Dan, Deputy Director General
- Mr. Zhu Wengen, Director of Division II
- Ms. Wei Pingde, Senior Programme Officer
- Mr. Xiong Ju, Programme Officer

Ministry of Light Industry

- Mr. Guo Hua, Senior Engineer, Director of Department of International Cooperation
- Mr. Su Xian Hua, Programme Officer, Department of International Cooperation
- Mr. Ding Fu Rong, Section Chief, Foreign Economic Department

Ministry of Foreign Trade and Economic Cooperation

- Mr. Guo Xian Zhi, Deputy Director, Department of International Trade and Economic Affairs
- Mr. Zhang Mei Kun, Deputy Section Chief, No.1 Division
- Mr. Zhou Bing

Shanghai Municipality

- Mr. Cao Rong Chang, Deputy Director of Shanghai Second Light Industry Bureau
- Mr. Xu Jian Xing, Section Head, Foreign Financing and Project Department

All-China Women's Federation

- Ms. Wang Yujing, Director, International Liaison Department

UNIDO

- Mr. Ian Davies, UNIDO Country Director, China
- Mr. Jostein Nygard, Junior Professional Officer
- Mr. Dai Dong Cheng, Senior Programme Officer
- Mr. Ole Hybel-Hansen, Senior Industrial Adviser, UNIDO Centre for International Industrial Cooperation
- Mr. O. Klötzer, former CTA of the project US/CPR/85/130
- Mr. F. Chehwan, former expert of the project US/CPR/85/130 (interviewed by fax)

LOCATION OF NON-EXPENDABLE EQUIPMENT

Description	US dollar equivalent	Received			Present condition*	Present location
		Qty.	M	Y		
TOYOTA COROLA 1300 SEDAN. CHASSIS NUMBER ==> EE80-0182607 ENGINE NUMBER ==> 2E-0701931 REGISTRATION NO. => 77777	6,073.00	1	03	87	G	LTC
CL. 98-102 INDUSTRIAL SEWING MACHINE HEAD WITH STANDARD ACCESSORIES.	2,461.00	1	04	87	G	Bao Ji Leather Shoe Factory
CL. 69-72-E 42 INDUSTRIAL SEWING MACHINE HEAD WITH STANDARD ACCESSORIES.	1,754.00	1	04	87	G	"
CL. 268-NT-82-SUX INDUSTRIAL SEWING MACHINE HEAD WITH STANDARD ACCESSORIES WITH 380 VOLTS, 3-PHASE TRIMMING MOTOR AND PARTS.	11,695.00	3	04	87	G	"
CL. 98-2-8 INDUSTRIAL SEWING MACHINE HEAD WITH STANDARD ACCESSORIES.	2,223.00	1	04	87	G	"
214.1811.0+1+2 HEAT SETTER 1016 WITH HEAT AND MOISTENING ADJUSTMENT DAILY PRODUCTION 800-1000 PAIRS, S/N 64054.	9,658.00	1	05	87	G	"
214.1812.0+1+2 SOLE ACTIVATING UNIT RV1004 WITH TIME AND HEAT ACTIVATION WITH MACHINE STAND, S/N 64055.	1,903.00	1	05	87	G	"
214.1852.0+214.18130+1+2 HYDRAULIC FOREPART SIDE AND BALL CEMENT LASTING MACHINE COMPL. S/N 60725.	33,983.00	1	05	87	G	"
214.1814.0+1+2 FORPART MULLING AND ACTIVATING UNIT 331 D FOR SELECTIVE USE OF STEAM OR DRY HEAT, S/NOS. 63526 + 63527.	4,700.00	2	05	87	G	"
PNEUMATIC TOE-PUFF ATTACHING MACHINE WITH TOE BLOCKIGN DEVICE, MODEL 25/291.	1,093.00	1	04	87	G	"
HYDRAULIC AUTOMATIC TWO STATION SOLE ATTACHING PRESS SELF-ADJUSTING PADS, WITH MOTOR AND TIME CONTROL, MODEL 756.	6,432.00	1	04	87	G	"

* G = good, F = faulty

Description	US dollar equivalent	Received			Present condition*	Present location
		Qty.	M	Y		
SOLE SPLITTING MACHINE, WIDTH 200MM WITH MOTOR AND BENCH, MODEL 217/LGT.	1,498.00	1	04	87	G	Bao Ji Leather Shoe Factory
TWIN STATION MACHINE TO PRESS HEEL BREAST OF UNIT SOLES INTO HEELS, MODEL 807/V7D.	3,085.00	1	04	87	F	"
TWO STATION PNEUMATIC TOP-LINE FORMING MACHINE WITH HEEL MOULDS, TIME AND HEATING CONTROL, MODEL 86/52SR.	2,135.00	1	04	87	G	"
PNEUMATIC INVERTED STAPLING MACHINE FOR ORNAMENTS BY STAPLES, MODEL 40/P.	2,031.00	1	04	87	G	"
LASTED UPPER BOTTOM ROUGHING MACHINE WITH ABRASIVE BAND FOR 35-120MM WIOTH 31.19.19.	4,826.00	2	12	87	G	"
STEEL SHANK RIVETING MACHINE WITH AUTOMATIC RIVET FEED, COMPLETE WITH BENCH & MOTOR 42.05.07.	2,247.00	1	12	87	F	"
TWIN STATION HYDRAULIC INSOLE MOULDING MACHINE 42.08.01.	4,911.00	1	12	87	G	"
ALUMINIUM MOULDS.	363.00	1	12	87	G	"
HEAVY-DUTY BELLKNIFE SKIVING MACHINE WITH TWIN FEED ROLLERS FOR HARD MATERIALS 40.02.10.	1,811.00	1	12	87	G	"
INSOLE BACKPART TRIMMING AND BEVELLING MACHINE 42.09.02.	2,753.00	1	12	87	G	"
MECHANICAL SHANK SEAT SLOTTING MACHINE 42.04.01.	2,293.00	1	12	87	F	"
PNEUMATIC LAMINATING PRESS FOR ATTACHING PRECEMENTED REINFOCING BACKERS TO UPPERS.	1,961.00	1	12	87	G	"
BACK-SEAM RUBBING, LEVELLING AND TAPING MACHINE 23.05.36.	3,583.00	1	12	87	F	"
ALUMINIUM MOULDS FOR LADIRS BALLERINA LAST.	363.00	1	12	87	G	"
ELECTRONIC TYPEWRITER MODEL OLIVETTI ET-112.	764.00	1	03	87	G	LTC

* G = good, F = faulty

Description	US dollar equivalent	Received			Present condition*	Present location
		Qty.	M	Y		
CUTTING BLOCK ADJUSTING MACHINE 147 COMPL..	3,197.00	1	01	87	G	Bao Ji Leather Shoe Factory
UPPER LEATHER SPLITTING MACHINE AB-320 COMPL..	17,078.00	1	01	87	G	"
AUTOMATIC SOLE EDGE PROFILING MACHINE SKF-N WITH PROFILING TOOLS.	6,370.00	1	01	87	G	"
HEAT SETTER 1016 WITH HEAT & MOISTENING ADJUSTMENT.	8,397.00	1	01	87	F	No.1 Leather Shoe Factory
UPPER LEATHER SKIVING MACHINE TYPE AV-2 S/N 64684-64688.	10,622.00	5	01	87	G	Bao Ji Leather Shoe Factory
PATTERN CORNER CUTTING AND BINDING MACHINE MODEL 101/A.	602.00	1	06	87	G	"
PATTERN BINDING MOULDING MACHINE MODEL 24.	2,546.00	1	06	87	G	"
MACHINE MODEL 330/STM MOTORIZED VACUUM FORMING WITH PLASTIC MATERIAL.	1,859.00	1	03	87	G	"
PNEUMATIC SEMI-AUTOMATIC HEEL NAILING MACHINE MODEL 191/SDV.	4,301.00	1	03	87	G	"
TANNOX 2200 B TANNING VESSEL WITH 2 SPEEDS FOR 500KG DRIED WET BLUE OR 1000KG PELT.	23,473.00	1	12	87	G	LTC
DIPEL 1800MM ROTARY PHOTO-GRAVURE TOP LACQUERING MACHINE.	26,381.00	1	12	87	G	"
UPPER EDGE INKING MACHINE COMPLETE WITH MOTOR AND ACCESSORIES.	1,120.00	1	12	87	F	Bao Ji Leather Shoe Factory
UPPER CEMENTING MACHINE WITH STEEL ROLLER.	1,282.00	1	12	87	F	"
PFAFF CL.563-944/01 BL SINGLE-NEEDLE LOCK STITCH HIGH SPEED SEWING MACHINE.	5,515.00	5	11	87	G	"
PFAFF CL.244-944/01 BL X 1,8 TWO NEEDLE LOCKSTITCH FLATBED SEWING MACHINE.	6,818.00	3	11	87	G	"
PFAFF CL.294-944/01 BL X 1,8 TWO NEEDLE POSTBED SEWING MACHINE.	5,499.00	2	12	87	G	"

* G = good, F = faulty

Description	US dollar equivalent	Received			Present condition*	Present location
		Qty.	M	Y		
PAFF CL. 293-944/01 BLN SINGLE NEEDLE LOCK STITCH POSTBED SEWING MACHINE.	4,705.00	2	12	87	F	Bao Ji Leather Shoe Factory
CLUTCH MOTOR PKD 341.	355.00	1	11	87	G	"
VOLTAGE STABILIZER TYPE ISMET FOR 3-PHASE CURRENT. TYPE NR03 COM PLETE.	5,851.00	1	11	87	G	"
PAFF CL. 1246-706/05-6/01 CL X 6.4 PMN 1WQ NEEDLE LOCKSTITCH FLATBED SEWING MACHINE WITH UNISON FEED.	2,899.00	1	12	87	G	"
PAFF CL. 1245-706/07-6/01 GLPMN SINGLE NEEDLE LOCKSTITCH FLATBED SEWING MACHINE.	2,377.00	1	11	87	G	"
PNEUMATIC LINING MACHINE FOR STAMPING BS 32/S EQUIPPED WITH 7 NUMBERING DISCS.	2,094.00	1	11	87	F	"
SOCK MARKING MACHINE PNEUMATIC BS/22S.	1,624.00	1	11	87	F	"
SPRAY CABINET FOR FINISHING.	684.00	1	11	87	G	"
HOT AIR BLOWER WITH STEAM TB 234.	2,017.00					
LINING TRIMMING MACHINE GP2.	1,453.00	1	11	87	G	"
LINING ROUGHING MACHINE CA 69.	2,137.00	1	11	87	G	"
HYDRAULIC OPEN-END SHAVING MACHINE OF 800 MM WORKING WIDTH. MODEL DERAYA COMPLETE WITH ACCESSORIES.	39,179.00	1	04	88	G	LTC
LEATHER GLAZING MACHINE. MODEL PL 30.	7,473.00	1	04	88	G	"
SOLE ROUGHING AND BUFFING MACHINE. TYPE E 170 WITH ACCESSORIES. S/N 65988.	9,644.00				G	Bao Ji Leather Shoe Factory
CUTTER TRIMMING MACHINE. TYPE AA-1 WITH GRINDING STONE. WITH TABLE. S/N 65989.	4,774.00				G	"
MACHINE CODE 46.08.05 - STRAP FOLDING MACHINE FOR FLAT OR SHAPED STRAPS.	1,850.00				G	Shanghai Leather Luggage Factory

* G = good, F = faulty

Description	US dollar equivalent	Received			Present condition*	Present location
		Qty.	M	Y		
MACHINE CODE 23.08.11 - AUTOMATIC PNEUMATIC MACHINE FOR ATTACHING SELF-PUNCHING RIVETS.	4,062.00				G	Shanghai Leather Luggage Factory
MACHINE CODE 23.08.15 - PNEUMATIC SELF-PUNCHING EYELETING MACHINE.	1,862.00				G	"
MACHINE CODE 23.08.37 - SEMI-AUTOMATIC PNEUMATIC PRESS BUTTONS ATTACHING MACHINE.	3,931.00				G	"
MACHINE CODE 26.06.12 - TREADLE-OPERATED. AUTOMATIC STRAIGHT EDGE BENDING MACHINE.	2,346.00				G	"
MACHINE CODE 26.03.29 - LEATHER-GOODS EMBOSING ROLLER PRESS.	1,931.00				G	"
MACHINE CODE 42.08.01 - CEMENTING MACHINE FOR COMPONENTS OF EVEN THICKNESS.	1,092.00				G	"
MACHINE CODE 26.05.24 - LATEX CEMENTING MACHINE WITH STEEL ROLL.	1,050.00				F	"
MACHINE CODE 22.02.09 - PNEUMATIC UPPER AND LINING STAMPING MACHINE.	3,362.00				G	"
MACHINE CODE 23.06.08 - UPPER EDGE INKING MACHINE WITH INKING ROLL.	846.00				G	"
SPEED VARIATOR.	400.00				G	"
MACHINE CODE 26.06.03 - AUTOMATIC MACHINE FOR PRODUCTION OF LEATHER OR PLASTIC PROFILES.	2,788.00				G	"
MACHINE CODE 23.03.01 - SEAMS AND TOP LINE POUNDING MACHINE FOR LOOSE UPERS.	1,369.00				G	"
SKIVING MACHINE FOR SYNTHETIC COUNTERS/TOE PUFFS, WITH BUILT-IN CLUTCH, MOTOR AND TABLE 380/50 E 881879 (MOD 105/12K).	2,500.00	1			G	Bao Ji Leather Shoe Factory
ADLER INDUSTRIAL SEWING MACHINES: MODEL 69-373, COMPLETE.	8,232.00	2			G	Shanghai Leather Luggage Factory

* G = good, F = faulty

Description	US dollar equivalent	Received			Present condition*	Present location
		Qty.	M	Y		
ADLER INDUSTRIAL SEWING MACHINE: MODEL 69-72-E 42A. COMPLETE.	3,123.00	1			G	Shanghai Leather Luggage Factory
ADLER INDUSTRIAL SEWING MACHINE: MODEL 267-73. COMPLETE.	3,491.00	1			G	"
ADLER INDUSTRIAL SEWING MACHINE: MODEL 467-273-G2. COMPLETE.	4,955.00	1			G	"
TELEX MACHINE.	2,500.00	1	04	87	G	LTC

* G = good, F = faulty