



REGIONAL PROGRAMME FOR POLLUTION CONTROL IN THE
TANNING INDUSTRY IN SOUTH EAST ASIA - US/RAS/92/120

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STATUS OF WOMEN'S PARTICIPATION IN THE TANNING INDUSTRY IN INDONESIA

COUNTRY SURVEY

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ABBREVIATIONS/ACCRONYMS USED

CETP	COMMON EFFLUENT TREATMENT PLANT
ETP	EFFLUENT TREATMENT PLANT
ILO	INTERNATIONAL LABOUR ORGANISATION
IRDLAI	INSTITUTE FOR RESEARCH AND DEVELOPMENT OF LEATHER AND ALLIED INDUSTRIES
ISO	INTERNATIONAL STANDARD ORGANISATION
MIE	MINI INDUSTRIAL ESTATE
PEL	ENVIRONMENTAL EVALUATION
R&D	RESEARCH AND DEVELOPMENT
REPO	REGIONAL PROGRAMME OFFICE
RKL	ENVIRONMENTAL MANAGEMENT PLAN
RP	INDONESIAN RUPIAH, US\$ 1 = Rp 3,400
UNIDO	UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANISATION
UNDP	UNITED NATIONS DEVELOPMENT PROGRAMME
WID	WOMEN'S PARTICIPATION IN THE TANNING INDUSTRY

SUMMARY

EMPLOYMENT PATTERN

- Women's employment in tanning industry in Indonesia is negligible, accounting for less than 5% of the total workforce in the tanning and leather industry. Only in one large-scale tannery women constituted employed 40% women of the workforce.
- There is no specific type or category of work women were actually engaged in. Women were engaged in work ranging from unskilled to skilled activities. In some tanneries, women were employed as guards. Most unskilled women workers carried out basic manual and auxiliary work in the tanneries
- Women with higher educational background and/or special skills were generally employed in testing laboratories or effluent treatment plants.
- Comparatively more women were engaged in finishing operations than in the raw-to-semi-finished operations. Women were engaged in activities which did not require physical strength. Table 1 and 2 show the distribution of women workers in medium- and large-scale tanneries by number and type of work.

Table 1 - Number and distribution of women in raw to semi-finished production

PROCESS STAGE	NUMBER OF WOMEN EMPLOYED	TYPE OF WORK DONE
- Hide / skins receipt and storage	NIL	
- Soaking	NIL	
- Unhairing	NIL	
- Fleshing	NIL	
- Deliming and bating	NIL	
- Pickling and tanning	NIL	assist in measuring pickle/wet blue stock

- Some tanneries having with their own effluent treatment plant (ETP) were found to employ women in the operation and maintenance of ETPs and attached laboratories.
- At present, no tannery in Indonesia is owned by women or employs women in managerial positions.
- Most tanneries employ between one to three women in the tannery's administration. Their responsibilities include reception, information, typing, accounting and general correspondence.
- A comparatively larger number of women were employed in research and development institutions, such as IRDLAI. At

present, positions such as chief of division, section, process laboratory (beam house), finishing and tannery effluent treatment laboratory positions are held by women graduates from universities (Veterinary Faculty, Agricultural Faculty, Biological Faculty and Chemistry Faculty). Most of IRDLAI's external consulting services (e.g. in areas such as tanning, finishing, effluent treatment, environmental auditing and quality certification) are provided by women staff members. Most of these women have tertiary educational background, with considerable work experience and training in and outside Indonesia.

- Women constitute about 15% of the total number of students enrolled in the Academy of Leather Technology, Yogyakarta. This is the only formal educational institution for the tanning and leather industry in Indonesia.
- No tannery chemical suppliers employed women.
- Equal remuneration of men and women was the rule in the tanning sector.

Table 2 - Number and distribution of women in semi-finished to finished production

PROCESS STAGE	NUMBER OF WOMEN EMPLOYED	TYPE OF WORK DONE
- Sammying	NIL	
- Setting	NIL	
- Splitting, Shaving	NIL	
- Re- Chroming	NIL	
- Staking, Buffing	2	assist in stretching leather
- Toggling	5 - 8	assist in stretching the shrink leather
- Auto Toggling	1 - 2	fixing leather
- Padding	2 - 8	manual application
- Plating	1 - 7	operating machine in embossing leather according to imitation grain
- Spraying & drying	3 - 20	operating machine as well as preparing coating and drying
- Trimming, Sorting, Measuring	3 - 8	trimming, sorting leather according to quality and dimension

Table 3 - Women's involvement in chemical preparation

PROCESS STAGE	NUMBER OF WOMEN EMPLOYED	TYPE OF WORK DONE
- Calculation	1	calculate chemicals for process
- Weighing	1	prepare by weighing chemicals for process
- dilution/mixing	NIL	

FACTORS AFFECTING EMPLOYMENT OF WOMEN

- Tanners have never considered employment of women for positions other than in the tannery's administration. Generally, employment in the tanning operation was perceived unfit for women in view of the prevailing unclean working conditions and the physical strength required in the mostly manual work.
- Most tanners were of the opinion that employment of women would result in a financial loss, since women by law were granted more annual leave days than men (e.g. maternity leave, monthly menstruation leave).
- Tanners claimed that women would be less productive than men as women became tired quicker than men.

Table 4 - Number and distribution of women in effluent treatment

PROCESS STAGE	NUMBER OF WOMEN EMPLOYED	TYPE OF WORK DONE
- Pre-treatment (screening, homogenizing)	1	operating and inspecting
- Primary treatment (flocculation coagulation)		operating and inspecting
- Secondary treatment (biological process)	1	operating and inspecting
- Tertiary treatment (optional)		operating and inspecting

- Women tended to be more frequently absent from work than men, since they were supposed to attend to their traditional roles as housewives (e.g. children sick, husband sick, relative sick, family affair, etc.). In many regions, women were actually discouraged to take up employment. They were expected to comply with the traditional role of housewife, while men were expected to earn the family income.
- The existing labour legislation in Indonesia restricts work of women at late evening and night hours (between 10 pm - 5 am). This prevented tanners from employing women workers, since tanning was a continuous process and night shifts were a regular feature of employment in the tanning industry.
- Women opted for different employment as they perceived work conditions in tanneries as unattractive for women. Dirty and unsafe working environment, strong odour and labour intensity were some of the most commonly cited factors.
- Women felt that the leather goods industry (shoe, garment, accessories) provided better working conditions. Generally, the work was perceived by both employers and women to be more suitable for women. This attitude was also reflected by the fact that more female students were attending the

training courses on leather goods manufacturing than those on tanning (see table 5).

Table 5 - Attendance ratio of female students

Type of course	Percentage of female students
Tanning	10%
Leather goods manufacturing	30%
Material/chemistry	50%

Source: Enrolment records of Academy of Leather Technology, Yogyakarta

- Rapid industrial growth in Indonesia has opened good alternative employment opportunities in other sectors such as service industry, generally at the cost of labour intensive industries such as tanning and leather production.

EFFORTS AT EMPLOYING WOMEN

Of the eight selected tanneries closely analysed during the survey, only one tannery was found to employ a considerably larger number of women. This was mainly due to the fact that the foreign manager of this tannery had made positive experience with women employees in previous assignments abroad.

Certain governmental and non-governmental organisations in Indonesia pursue endeavours to raise general gender awareness and to tackle traditional perceptions pertaining to women economic mobility and independence in rural areas.

The Government of Indonesia, through its Ministry of Women Affairs, tried to encourage increased employment of women in the manufacturing industry. However, the tanning and leather industry appeared to have received less importance in this context.

RECOMMENDATIONS

1. The tanners need to improve their "image" as employers as well as the actual working conditions in the tanneries (such focusing on the better cleanliness, good occupational safety and health standards at work environment).
2. The tanners need to be made aware that women are as capable as men in performing various tasks in the leather production, particularly in the finishing operations. In this connection reference should be made to positive examples in and outside Indonesia.
3. The positive examples of women working in experimental laboratory, testing laboratory and ETPs should be propagated further.

4. The number of women in quality control section shall be increased, building on the general perception of women being more accurate and careful.
5. The actual enrolment of women in the tanning courses at the Academy of Leather Technology should be increased in combination with a placement service in interested tanneries.
6. A guide book on women's work in the leather tanning industry should be prepared, dealing with women specific safety and working aspects.

SCOPE OF STUDY

The study, initiated and financed by UNIDO under the umbrella project US/RAS/92/120, intended to collect data and background information on the current status of women's participation in the leather tanning industry in Indonesia. Similar studies were simultaneously carried-out in other countries of South East Asia, participating in the Regional Programme.

This study tried to identify the factors effecting the low-level of women's employment in the country's tanning industry and, based on the analysis of the same, to give recommendations which possibly lead to an increased participation of women in this industry.

METHODOLOGY

In order to conduct the survey in Indonesia, UNIDO engaged a national expert under its umbrella project US/RAS/92/120. The data collection was carried-out in following way:

- Review of relevant legislation and existing publications on women's participation in the manufacturing industry
- Collection of secondary data through a questionnaire sent to 30 medium- and large- scales tanneries.
- Collection of primary data through field surveys to 8 tanneries in Yogyakarta, Jakarta, Surabaya, Semarang and West Java, using semi-structured interviews with the employers, personnel manager and production manager, women working in the tanneries.
- On the spot interviews with women workers in the tannery.
- Data analysis and review of findings with employers, supervisors of women employers, personnel managers and the women workers.

Additional information was obtained through discussions with representatives from governmental, non-governmental and multi-lateral organisations.

TANNING INDUSTRY IN INDONESIA

As per statistics in 1993, most of the 586 tanneries in Indonesia were small-scale (about 83.4%). Only 97 units could be described as medium and large scale units.

Tanneries can be found in 12 provinces in Indonesia (North Sumatra, West Sumatra, Jakarta Special Region, West Java, Central Java, Yogyakarta Special Region, East Java, South Sulawesi, West Kalimantan, West Nusa Tenggara and East Nusa Tenggara).

More than 95 % of the leather production is concentrated in the island of Java. While most of the medium- and large-scale tanneries are scattered around the Jakarta Special Region, the Yogyakarta Special Region, Semarang and Surabaya, most of the small-scale units are located in three clusters (Garut-West Java, MIE Magetan in East Java and Masin-Central Java).

In 1995 the industry employed about 11,882 persons of whom women only constituted 5%. Their responsibilities were confined to mainly administrative and clerical work in the tanneries.

Production patterns

The majority of the tanneries produces from raw to finished stage, doing chrome and vegetable tanning or a combination of both. Most of the small-scale units specialise on vegetable and combination tanning. Their vegetable tanned leather is further processed in the production of bags, lining and shoe soles. The medium- and large-scale units produce full- or semi-chrome tanned leather for further use in the production of shoe uppers, upholstery, garment, etc.

Production methods in the small-scale tanneries are dominated by traditional technologies such as soaking, liming, deliming and tanning in pits. The principle vegetable tanning agent is chipped acacia.

The working conditions are general unclean and unsafe. The work is mainly manual and requires considerable physical strength (e.g. carrying of heavy loads - leather, fleshing and unhairing process, mixing and stirring up of stock with chemicals, etc.). During the tanning process strong odours are released.

The medium-and large-scale tanneries apply comparatively modern leather production technologies, using to a certain extent modern imported machinery.

WOMEN'S PARTICIPATION IN THE TANNING INDUSTRY

WOMEN'S EMPLOYMENT PATTERNS

TANNING INDUSTRY

Reliable records and statistics on women's employment in the tanning industry are very limited. No record could be made available from the Centre for Statistical Bureau, Ministry of Manpower or Ministry of Industry and Trade on women's employment in the leather industry.

Out of the 30 tanneries contacted with questionnaires, only 11 units were found to employ women.

Women did not work in the beam house sections of tannery. In most cases, if at all, women workers were found to be working in the semi-finished to finished production areas.

Employers, general managers, personnel managers and production managers in the tanneries contacted claimed to observe the equal work-equal pay principle for men and women. The actual remuneration depended on the respective educational qualification and actual length of working time. None of the tanneries in Indonesia employed women as contract labourers.

The following table provides an overview over the compulsory minimum pay as applicable in the various regions of Indonesia.

Table 6 - Minimum salary per region

Region	Minimum pay in Rupiahs	In US\$
Minimum Regional Pay for Yogyakarta Special Region	Rp. 106.500,-	42.5
Minimum Regional Pay for Central Java	Rp. 113.000,-	45
Minimum Regional Pay for Jakarta Special Region	Rp. 172.500,-	68.8
Minimum Regional Pay for West Java :		
• Territory I	Rp. 172.500,-	69
• Territory II	Rp. 157.500,-	63
• Territory III	Rp. 145.500,-	58.2
• Territory IV	Rp. 139.000,-	55.5
Minimum Regional Pay for East Java :		
• Territory I	Rp. 132.500,-	53
• Territory II	Rp. 127.500,-	51
• Territory III	Rp. 121.000,-	48.5
• Territory IV	Rp. 116.500,-	46.5

Almost all tanners/owners of tanneries felt that women were physically weaker than men. Accordingly, women could not be employed in positions which required physical strength (e.g. beamhouse, tan yard). However, it was generally acknowledged that women were more capable in carrying-out some specific finishing operations in tanneries.

Operations are trimming, toggling, padding, measuring and packaging were found to be suitable for women, whereas operations such as any wet-post-tanning operations (e.g. sammying, re-chroming) were found not suitable.

In one tannery women were engaged in the operation of through feed staking, buffing machines as well as in sorting and measuring.

Women and men are rarely working together in tanneries. Women assisting men in toggling operations is more the exception than the rule. Managers felt that women and men working together would result in lower labour productivity as the workers would waste more time on chatting.

At the time of the survey, no women were occupying any supervisory or managerial positions in the tanneries.

PT. Rachbini Leather, in Surabaya, was the only positive exception in respect to women's employment. Women could be found working in almost every section of the tannery constituting nearly 40% of the tannery's workforce. Women were employed both in unskilled positions and skilled positions such as machine operators. Women's educational background was elementary school and, in few cases, senior high school. As per the manager, women were paid equal wages for same work as their male colleagues.

Table 7 - Number and distribution of women in semi-finished to finished production

STAGE	NUMBER OF WOMEN EMPLOYED	TYPE OF WORK DONE
Sammying	-	-
Setting	-	-
Splitting & shaving	-	-
Re-chroming	-	-
Staking, buffing	2	supporting men in fixing hides
Toggling	5-8	fixing hides
Auto toggling	1-2	hooking
Padding	2-8	manual application
Plating	1-7	operate finishes
Spraying & drying	1-4	operate machines
Sorting & measuring	3-8	sorting and measure leather
Vacuum	1-4	operate machines

RESEARCH AND DEVELOPMENT INSTITUTES

The situation women's employment in the research and development sector was quite different from the tanning industry. Comparatively, more women could be found in this sector, holding mid and high level management positions. Most government owned research laboratories employed a considerable number of women scientists and technologists. Women were generally perceived of completing their work carefully, accurately and diligently.

For example, in IRDLAI, many women held managerial positions such as Chief of Tanning Development Laboratory, Chief of Tannery Effluent Treatment Laboratory and Chief of Leather Testing Laboratory, etc. Certain laboratories in IRDLAI were entirely staffed with women. There was no gender discrimination in terms of career opportunities, access to training, etc. Most women employees were university graduates, with practical experience and additional knowledge gained through training in and outside Indonesia.

LABORATORIES (IN TANNERIES AND ETPS)

Most tanneries in Indonesia did not have their own laboratory facilities for trials or product testing. Only a few tanneries actually tested new chemicals or formulas. As per the local practice, the necessary testing facilities were usually provided free-of-cost by the larger chemical suppliers or on fee basis by institutes such as IRDLAI.

EFFLUENT TREATMENT PLANTS

The concept of effluent treatment whether on individual or common was a very new one in Indonesia. The number of operational tannery effluent treatment plants in Indonesian tanneries was very small. To date, there was no common effluent treatment plant for tannery effluent installed in Indonesia.

Of the existing individual effluent treatment plants (ETP), only the one in Pt Sapta Tunggal, Yogyakarta, employed two women in the day-to-day operation of the plant. Both women were senior high school graduates. Thanks to the positive attitude of the tannery's manager the two operators were able to continuously upgrade their knowledge through attending outside training.

ENVIRONMENTAL MONITORING AND ENFORCEMENT AGENCIES

As in the case of research and development institutes, no gender discrimination was prevalent in official environmental monitoring and enforcement agencies. Both women and men were equally in charge of on-site sampling and analysis or of on-site environmental monitoring and auditing. Only in few exceptional cases, the task was assigned to men.

ENVIRONMENTAL CONSULTING COMPANIES

The existing environmental consulting companies usually assist the tanning industry in designing ETPs, preparing environmental management (= Rencana Pengelolaan Lingkungan - RPL) and evaluation plans (= Penyajian Evaluasi Lingkungan - PEL) as well as in conducting environmental impact assessments.

The consulting companies were found to indiscriminately employ women and men. For the selection and recruitment of candidates, the educational and professional backgrounds played a more important role than gender. Most women consultants were university graduates who, in most cases, had undergone additional training in and outside Indonesia.

Conclusions

- Women are more likely to find employment in medium- and large-scale tanneries than in small-scale tanneries.
- Whether women are employed, depends largely on the gender attitude of the concerned male manager. As the managers were generally of the opinion that women would not be as efficient in operating machines as men, women had less access to career opportunities and were mainly assigned to auxiliary functions, assisting the male machine operators.
- Under the current circumstances, women find better career opportunities in government organisation and environmental consulting companies than in the tanning industry.
- Emerging employment opportunities in view of the rapid industrialisation drain the number of women possibly available for employment in sectors such as tanning.

FACTORS INFLUENCING WOMEN'S EMPLOYMENT

PERCEPTIONS OF EMPLOYERS, CO-WORKERS AND WOMEN

"By nature, women are weak physically"

The key decisions makers in tanneries felt that women by nature were physically weaker than men. Thus, women could not be employed in work areas which required physical strength. In such sectors, women tended to work as helpers to men, who were primarily responsible to carry out the manual work.

Changes in the work arrangement, which could make such operations less labour intensive e.g. by introducing simple transport devices such as trolleys, might result in additional employment opportunities for women.

"Women are not primary pillars in the effort of earning money for family".

Traditional perceptions of roles of men and women were prevalent in many parts of the Indonesian rural society. According to these, men as family heads were responsible for earning the family's income, while married we expected to stay and work at home. Only in few cases, husbands permitted their wives to take up employment outside the family home.

Discussions with women workers and the management of the tanning units revealed that most women (particularly married

women) work to make the ends meet - in view of the small salaries of their husbands.

The demand in the labour market, in view of the rapid industrialisation in Indonesia, and the prospects of a higher standard of living thanks to increased family income were gradually leading to a change of the traditional perceptions in urban and semi-urban areas.

However, complying with the above traditional perceptions, was usually the women who were absent from work when family matters had to be handled.

"Women workers are less productive compared with to men"

Almost all employers, interviewed during the survey, believed that employment of women would not positively contribute to the tannery's productivity. This perception was based on the fact that women were permitted by law to take more leave from work than male workers. Apart from the general twelve days annual leave, women were also granted two days "menstruation leave" every month. Thus, women were allowed 24 days of leave every year as compared to 12 of their male colleagues. In addition to this, women were allowed by law to take paid maternity leave. In view of this, many tanners preferred to employ men.

"Tanning jobs are not for women"

Most of the tanners felt that the nature of leather production as such - being dirty, smelly, noisy and generally unsafe - made this sector unsuitable for employment of women.

"Loyal, and easy to manage"

On the other hand, one tannery manager, drawing from his positive experience with women's employment in his tannery, found women workers to be obedient, sincere, less demanding and more diligent, while men tended to switch jobs more readily when offered higher salaries. He found that men were often absent for 1 - 2 days after every pay day.

LEGISLATION ON WOMEN'S EMPLOYMENT.

The relevant government act "ORDONANSI", dated 17 September 1925, regarding "The Limitation of Work for Children and Late Evening Work for Women", specifies in article 3 that women are not allowed to work between 10 pm and 5 am. Many tanners faced difficulties, when employing women in the tanning operation, since tanning was a continuous process.

At the same time, as already mentioned earlier, the law granted women extra annual leave days in addition to the regular annual leave.

The respective government regulations by the Ministry of Manpower promulgated that "employers have to grant paid maternity leave to women for three months and leave of

menstruation for two days, in addition to the annual leave for twelve working days, without losing their rights as workers".

Some of the relevant regulations pertaining to women's employment are listed below.

Government decree number 12, 1941 concerning New Specification Related with Late Evening Work for Women, article 1:

....the Head of Labour Division, Ministry of Social Affairs, based on the factory's special requirements may give such factory, work place or estates, for certain length of time or based on requirements specified by them, permission to employ women workers, up to the certain time, between 10 p.m. and 5 a.m....

To date no such permission has been granted to any tannery.

Legislation issued by the Ministry of Manpower number Per-03/Men/1989:

....restriction on the terminating working relationship for women based on the reasons of marriage, pregnancy and giving birth to a baby....

Legislation of the Ministry of Manpower nr. Per-04/Men/1989 :

Rules to protect women workers working at late evening.

Furthermore, tanners were required by law to provide women workers with special welfare facilities such as rest room (for clothing), separate toilets special for women, etc.

EXISTING EFFORTS AT EMPLOYMENT OF WOMEN

AT POLICY LEVEL

The Government of Indonesia is currently undertaking several efforts in increasing women's participation in the Indonesian industry. Several of these projects received technical assistance from abroad, such as the project for the development of a comprehensive women's employment strategy with the help of ILO and UNDP.

The main recommendations under this project are

- establishment of an improved gender sensitive labour market information system, together with introduction of placement services for women
- improvement of working conditions (implementation of equal pay in all sectors, working time arrangements, working conditions and Occupational Safety and health standards)
- review and modification of education and vocational training for women workers (general and enterprise based training)
- promotion of self-employment and micro-enterprise development

- review of labour legislation, protection and enforcement
- creation of an enabling environment (awareness raising at the policy and programme level, for employers, trade unions, labour inspectors, legal literacy for women workers)

With regard to the country's tanning industry, no specific efforts in this respect have been undertaken so far, apart from the one currently implemented under the Regional Programme of UNIDO.

AT TANNERY LEVEL

With regard to tannery-level efforts to increase women's participation in the tanning industry, two different cases can be briefly mentioned.

Case 1 - Pt Rachbini Leather Factory, Sidoarjo, East Java

The tannery, located in Sidoarjo, East Java, is managed by an Indian factory manager. The tannery has been employing women workers since 1907. Currently, 32% of the total 165 workers are women. Of the 54 women around 12 are engaged in administrative activities, the rest is employed in the production. Except for beam house, women are working in all production areas, doing both manual work as well as machine operations.

Women who are interested to work in the tannery, have to undergo an initial training on machine operation and work practices, before being assigned to specific areas in the tannery.

The driving force behind this employment policy is the factory manager, who is drawing from his positive experience with women's employment in Thailand and India.

Though the tannery is facing problems in terms of longer annual absence of their female staff, the management is still convinced that this disadvantage of women's employment is offset by the advantages they have experienced in the past.

Such advantages - as listed by the management - included

- *Women are more loyal to the factory. Women do not move as frequently as men. Thus, it is possible to invest more in their training.*
- *Women are more patient in working.*
- *Women demand less.*
- *Women will always come to work after pay days (unlike men, who will be absent for 1 - 2 days after pay day).*

Case 2- PT. Bintang Buana Sakti

The tannery, located in Jalan Raya Demak - Semarang, Central Java, started production in 1986. Currently, the tannery employs 116 workers, including 23 women. Of these, 6 women work in the tannery's administration, while 17 other are employed in the leather production.

Despite this current situation, the production manager mentioned that the tannery does not intend to recruit more women for employment in the production. Most of the women currently working in the tannery joined the tannery based on invitation of relatives or neighbours and live in the vicinity of the tannery. As per the manager, women are employed because of the tannery's social obligation to the local community.

The manager felt that tanning is a heavy work and not suitable for women. To his opinion, women are less productive than men for following reasons:

- *Women need more rest time than men, since women are weaker and get tired quicker than men.*
- *Women are more often absent from work than men, since they take care of their household duties at the same time. Besides, they are on menstruation leave for 2 days every month.*

TRAINING INSTITUTIONS

Though, as it has been pointed out in an earlier chapter, the courses offered by Academy for Leather Technology (ATEKE) are already attended by a large number of women, only little efforts have been undertaken by the training institute itself to encourage more women to join the courses on tanning.

The training institute as such does not make any efforts to overcome existing perceptions vis-à-vis women's employment in the tanning industry.

CONCLUSIONS**WOMEN'S CAPABILITIES**

From the study of the two tanneries, which employ a larger number of women, as well as from different experiences in other countries, it is clear, that, in practice, women can carry out anyone of the tasks in the process of leather production.

It has been shown that they are capable of working as hard as men and of equally efficiently operating machinery. In some production steps such as trimming, padding, sorting, women were found to be even more productive than men.

Women need to be given the opportunity to prove this in Indonesia as well.

One pre-requisite would be adequate training to improve their capabilities and skills to meet the requirements for the positions. Such training - either on-the-spot or through an outside institution - is to date not yet available.

DESIRABLE POSITIONS

Women prefer to work in a clean, dry and odourless environment as can be found to a certain extent in the finishing operations.

Women are interested to engaged as machine operators, such as on buffing machines, spraying machines, embossing machines and measuring machines

GOVERNMENT POLICY

The Government of Indonesia stressed the importance of improving women's capabilities to provide women with the opportunity of working in any industrial area and to foster work-related co-operation between men and women. Interestingly, at the same time, the government also propagates the traditional role of woman as mother and good wife.

DIFFERENT ENTRY MODELS

Based on the analysis of the factors effecting the employment of women in the tanneries, two basic employment patterns could be identified, which might be able to tackle the disadvantages associated with women's employment.

WOMEN MAJORITY MODEL

Under this approach, the basic assumption is that tanners can be convinced to change their attitude towards cutting out women from certain type of work.

Women will be assigned to work at all production stages according to their capability. The manager will try to enhance the women's capability by sending them for in-house or outside training, so that they are subsequently able to work at all stages of tanning process.

No clustering of women for a specific work should take place. The emphasis should be on equal opportunity for men and women. However, women refusing to work in a certain area, shall not be forced by the employer to do so.

Such "work unity" method - as it is already applied in some tanneries - will not have a negative effect on the productivity of the tannery. The described methods are particularly suitable for

tanneries where women's career opportunities are limited and where women with a low educational background are employed.

COMPARTMENTALISED WORK MODEL

Almost all tanneries in Indonesia, which employ women, follow this model. As per this model employers are of the opinion that certain work in the tanning sector is not suitable for women. Therefore, the tanneries, refraining from recruiting women for such parts of the leather production, should assign women to sections such as trimming, padding, toggling, measuring and packaging, which are generally found suitable for women's employment.

Though this model ensures immediate employment of a larger number of women, it may not necessarily result in quality employment or in better career opportunities etc.

However, the advantage of this would be that work would not be disturbed too much in case women workers decided to take leave to attend to family matters or for other reasons.

RECOMMENDATIONS

CREATION OF ENABLING FRAMEWORK

- Link-up with the existing framework endeavours of the Government of Indonesia by providing tannery specific inputs and information.
- Provide tannery specific employment data for the whole sector in Indonesia. The existing data may be complemented by a more comprehensive study to be conducted by the Centre for Women Study. This study could also cover the leather footwear and product industry.

TRAINING AND AWARENESS RAISING AMONGST WOMEN

- IRDLAI, in co-operation with ATEKE, to provide special women focused skill up-gradation programmes for women already working in the tanneries, to be sponsored by individual tanneries or APKI
- ATEKE to conduct awareness and information campaign at the time of enrolment of new students as well as during the courses
- Establish a tannery focused placement service for (women) graduates from ATEKE.

AWARENESS RAISING AMONGST TANNERS

- Conduct awareness campaign on advantages of women's employment (highlighting advantages and women's actual capabilities) in the tannery, by using selected managers as "advocates" of the cause and drawing from good examples from other countries in the region

IMPROVEMENT OF WORKING CONDITIONS IN TANNERIES

- Improve occupational safety and health standards at work and working conditions as part of UNIDO's ongoing and planned activities under US/RAS/92/120.
- Provide women specific welfare facilities in the tanneries.

ANNEX I**BIBLIOGRAPHY**

1. Ordonantie : 17 Desember 1925 (Stbl. No. 647 tahun 1925) ; Legislation on Restriction of Child Workers and Late Evening or Night Hour Work for Women.
2. Decree Nr. 12, 1941 Concerning New Specification Related with Late Evening or Night Hour Work for Women.
3. Ministry of Man Power, Legislation Nr. Per-03/Men/1989 : Restriction on Breaking Off Work Relationship for Women for the Reasons of Marriage, Pregnancy and Giving Birth to A Baby.
4. Ministry of Man Power, Legislation Nr. Per-04/Men/1989 : Rules to Protect Women Workers Working at Late Evening or Night Hour Work

ANNEX II**LIST OF PERSONS MET**

Name	Position	Company/Organisation
Mr Drs Hasyim Diyono	Director	CV Priangan, Bandung
Mr Drs Benny Koeswanto	Director	CV Sapta Tunggal, Yogyakarta
Mr Siswoyo	Production Managers	CV Sapta Tunggal, Yogyakarta
Mr Dijono Hening Sasmito	Director	Pt Budi Makmur, Yogyakarta
Mr J Setyo Al Slamet	General/Environment Manager	Pt Budi Makmur, Yogyakarta
Mrs Widari	Chief of Tannery Laboratory	Gambiran Tannery, Yogyakarta
Mr Hasan Basalamah	Techician	Gambiran Tannery, Yogyakarta
Mr H Ate Toni	Proprietor	Sukaregang Tannery Cluster, Garut
Mr Djoko Leono Sastro	Director	Pt Karya Hidup, Jakarta
Mr Soekarjono	Production Manager	Pt Bintang Buana Sakti, Semarang
Mr Catur Dharmayanto	Manager	Pt Rajawali Nusindo, Taman Sidoarjo
Mr Djoko Sukasto	Senior Assistant Manager	Pt Rajawali Nusindo, Taman Sidoarjo

ANNEX III**STATISTICAL INFORMATION ON WOMEN'S EMPLOYMENT
IN MANUFACTURING INDUSTRY****LABOUR FORCE PARTICIPATION
BY AGE GROUP, URBAN-RURAL AREA AND SEX (1994/95)**

AGE GROUP	URBAN AREA	RURAL AREA	URBAN + RURAL
1	2	3	4
Female	42.34	54.85	50.24
15 - 19	30.58	41.55	37.04
20 - 29	49.36	41.55	37.04
30 - 39	46.06	61.62	55.97
40 - 49	48.07	66.89	60.47
65 <	19.81	32.80	28.49
Total	-	15.27	14.17
Male	78.57	88.78	85.04
15 - 19	32.10	61.18	49.99
20 - 29	84.54	94.27	90.24
30 - 39	97.84	98.48	98.62
40 - 49	82.10	93.46	90.09
65 <	47.45	68.52	62.09
Total		10.35	8.09

Source: Central Bureau of Statistics, Susenas 1995

**WORKING POPULATION OF AGE 15 AND ABOVE
BY MAIN INDUSTRIAL SECTORS, URBAN - RURAL AREA AND SEX**

Industrial sector	Urban		Rural		Urban + Rural	
	Female	Male	Female	Male	Female	Male
Primary (agriculture, hunting, forestry and fishery)	8.45	10.9 7	66.54	62.98	49.51	45.9 5
Secondary (mining&quarrying, manufacturing industry, electricity, gas and water, construction)	20.65	27.9 1	10.53	14.05	13.50	18.5 8
Tertiary (Trade, restaurants & hotels, transportation, storage, communication finance, insurance, social services, other)	70.90	61.1 3	22.91	22.96	36.98	35.4 6

Source: Central Bureau of Statistics, Susenas 1995

**AVERAGE MONTHLY NET WAGE/SALARY (IN US\$)
BY LEVEL OF EDUCATION, URBAN-RURAL AREA AND SEX (1994)**

Educational	Urban		Rural		Urban + Rural	
	Female	Male	Female	Male	Female	Male
never attended school	22	54	19	35	20	39
not completed primary school	27	53	23	41	24	44
completed primary school	31	61	25	48	28	53
General junior high school	43	71	32	58	39	65
Vocational junior high school	57	78	41	65	50	72
General senior high school	70	93	46	71	66	87
Vocational senior high school	72	94	71	86	72	91
Diploma I/II	116	129	79	101	102	119
Academy/Diploma III	130	172	67	114	120	160
University/Diploma IV	123	189	70	108	115	175

Source: Central Bureau of Statistics, Sakernas 1995

**POPULATION OF AGE 15 AND ABOVE
BY MAIN OCCUPATIONS, URBAN-RURAL AREAS AND SEX (1994)**

Main occupation	Urban		Rural		Urban + Rural	
	Female	Male	Female	Male	Female	Male
Professional	8.79	4.67	3.36	3.03	4.96	3.57
Administrative and managerial position	0.55	1.71	0.18	0.52	0.29	0.91
Clerical position	10.57	13.89	1.06	2.69	3.85	6.36
Sales personnel	35.68	21.19	14.66	8.26	20.82	12.49
Service personnel	13.91	7.03	2.15	1.77	5.60	3.49
Farmer & agricultural worker	8.89	11.06	66.84	63.03	49.85	46.01
Production worker	16.11	10.9	7.89	4.52	10.30	6.35
Operator	1.55	5.49	0.82	1.87	1.04	3.06
Other	3.95	24.06	3.04	14.31	3.29	17.76
	100	100	100	100	100	100

Source: Central Bureau of Statistics, Susenas 1995

ANNEX IV

QUESTIONNAIRE USED FOR THE SURVEY

1. TYPICAL DISTRIBUTION OF WOMEN WORKING AT RAW MATERIAL HANDLING TO SEMI FINISHED AREA

Process stage	Number	Type of activity
Hide/skin receipt and storage		
Soaking		
Unhairing		
Fleshing		
Deliming dan bating		
Pickling dan tanning		

2. TYPICAL DISTRIBUTION OF WOMEN WORKING AT SEMI FINISHED TO FINISHED AREA

Process stage	Number	Type of activity
Sammying		
Setting		
Splitting, shaving		
Re-chroming		
Staking, buffing		
Toggling		
Auto toggling		
Padding		
Plating		
Spraying & drying		
Sorting, measuring		

3. TYPICAL DISTRIBUTION OF WOMEN WORKING AT PREPARATION OF CHEMICAL AREA

Stage of activity	Number	Type of activity
Calculation		
Weighing		
Dillution /mixing (optional)		

4. TYPICAL DISTRIBUTION OF WOMEN WORKING AT PRODUCT TESTING AREA

Stage of activity	Number	Type of activity
Physical test		
Chemical test		

5. TYPICAL DISTRIBUTION OF WOMEN WORKING AT WASTE WATER TREATMENT LABORATORY

Stage of activity	Number	Type of activity
Sampling		
Sample keeping		
Chemical preparation for testing		
Sample testing		
Evaluation		

6. TYPICAL DISTRIBUTION OF WOMEN WORKING AT EFFLUENT TREATMENT PLANT

Stage of activity	Number	Type of activity
Chemical preparation		
Pre-treatment (screening, homogenizing)		
Primary treatment (flocculation & coagulation)		
Secondary treatment (biological process)		
Tertiary treatment (optional)		