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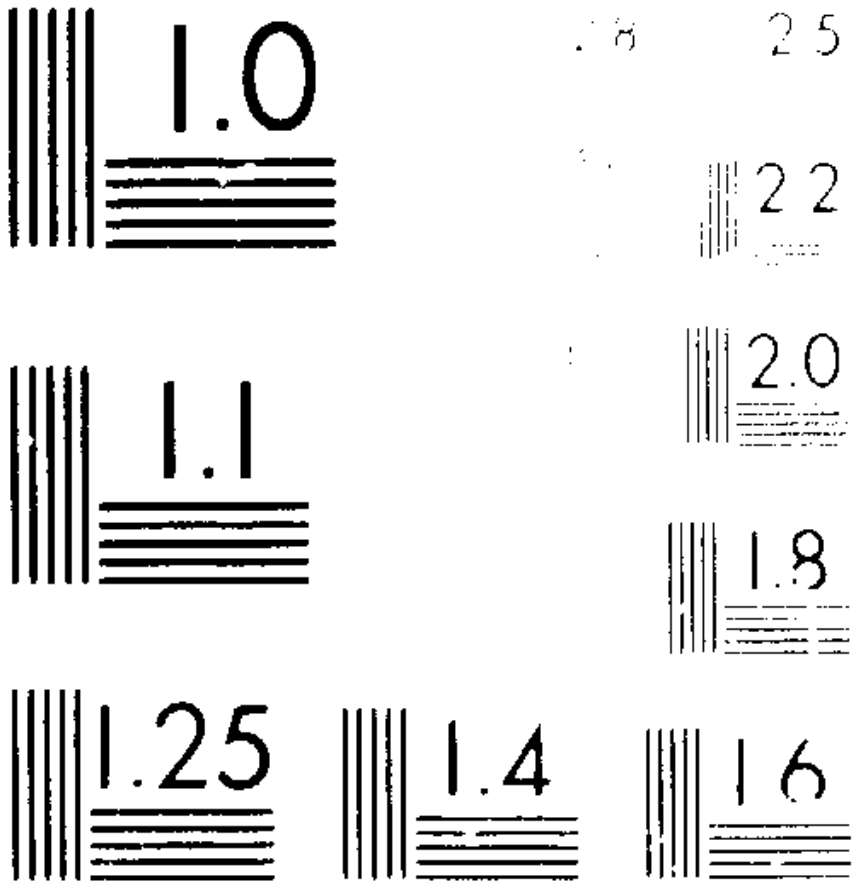
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TEXTILE INDUSTRY DEVELOPMENT PROGRAMME, JAKARTA

DP/INS/74/018

INDONESIA

Terminal report *

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

Based on the work of B. Rajaram,
Project Manager

United Nations Industrial Development Organization
Vienna

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SUMMARY OF RECOMMENDATIONS

Recommendation I

The plan target of Repelita III for the capacity of the spinning sector is 2.2 million spindles. As against this the targetted capacity for the weaving sector is 82,000 powerlooms & 60,000 handlooms. It is estimated that there will be an imbalance between spinning capacity and yarn requirements for the powerloom & handloom sectors, on the basis of the above figures, & that there will be a shortfall in spinning capacity on a shift to shift basis.

It is recommended that the planned installed spindleage be raised to 2.64 million spindles to achieve a more even balance between spinning capacity & yarn requirements.

Recommendation II

The bulk of the spinning units are at present concentrated in the island of Java.

It is recommended that to obtain a better dispersal of sources of yarn supply to the weaving sector, Sumatra be considered for priority in the location of spinning units in the future.

Recommendation III

There is need for further strengthening of the support institutions like the :

- Marketing Services Organisation
- Technical Service Centres
- Textile Design & Product Development Centre

and also providing other assistance like consultancy services, for the development of the small scale sector of the textile industry.

It is recommended that a levy (or cess) of Rp 2 per meter on the production of the large sector be made in the first instance to finance these institutions and further expand their activities.

It is estimated that this will yield a revenue of Rp 980 million per annum. The levy can be raised to Rp 3 per meter in stages to yield a revenue of Rp 2450 million to meet the financial demands of further expansion of

support services to the small scale sector.

Recommendation IV.

The MSO was conceived in the project design as an autonomous institution which is expected to generate its own funds in the fullness of time.

It is recommended (a) that the MSO covers itself for a commission of 5% on all sub-contracts executed and (b) pays a brokerage of 1/2 to 1% to its personnel responsible for obtaining sub-contracting business, to give them an incentive for developing this.

Recommendation V

One of the measures for supporting the small scale sector, can be the restriction of the production of certain specified varieties of fabrics only by the small scale sector. Sarongs for instance offers a suitable example.

It is recommended that the production of Sarongs initially be reserved for production by the small scale sector only and the large scale units be prohibited from manufacturing this, & the extension of this policy to some other suitable varieties be considered in the light of experience.

Recommendation VI

There is a serious weakness in the calibre of midmanagement personnel in the small & medium scale textile industry. This is essentially because of lack of training for performing supervisory functions.

It is recommended that a Supervisory Training Programme for " training trainers " be instituted, with the assistance of international experts.

Recommendation VII

The small scale textile factories can benefit considerably by recourse to management consultants in several situations and in respect to various aspects of their business. It is however not possible for them to afford expensive consultants.

It is recommended that government considers setting up a " Management Consultancy Cell " to assist the small scale sector & establish a training programme for personnel to provide across - the - board consultancy services to the small scale sector, through the assistance of international consultants in the textile industry.

Recommendation VIII

The small scale weaving factories are handicapped through a shortage of simple spare parts.

It is recommended that the PIPIK programme develops small scale foundries and engineering workshops to meet the requirements of the weaving factories in this regard.

TEXTILE INDUSTRY DEVELOPMENT PROGRAMME
(PHASE II)
INDONESIA.

1.0. INTRODUCTION

1.0.1. Previous Project.

1.0.2. Textile Project (INS/74/018) constituting the Textile Industry Development Programme (Phase II) is the successor to Project INS/71/531, which phased out in September 1975.

1.0.3. The main thrust of the previous project was technical assistance to be given to state owned and private textile mills in the spinning, weaving, knitting and finishing sections of large mills (and in some cases medium sized factories), chiefly.

1.0.4. The predominant emphasis in that project was placed on the increased utilization of installed capacity and correction of the imbalance between yarn production and the yarn requirements of the weaving and knitting sector.

1.0.5. Specifically attention had been given to the spinning sector. While no specific quantitative targets were set, the above objective has been considered as satisfactorily achieved. It has been agreed that some measure of the increase in production and efficiency in this sector is directly related to the activity of the project.

1.0.6. Also in the sectors of weaving, dyeing finishing and printing tangible results have been obtained as a consequence of the assistance provided by the project.

1.1.0. Assistance to Small Scale Sector.

1.1.1. The objectives of the previous project (Phase I) however, yielded place to a new emphasis in government policy, namely assistance to the small scale sector of the textile industry.

1.2.0. Definitions of size of sectors.

1.2.1. In terms of the definition adopted by the Directorate General of Textile Industry (DITJENTEKS) as at that time, the small, medium and large scale sectors of the textile industry were categorised on the following basis : -

	Factories with an installed capacity of				
a.	1	-	100	looms	Small Scale
b.	101	-	400	looms	Medium Scale
c.	401	and above		looms	Large Scale

1.3.0. Size of small scale sector

1.3.1. On the basis of statistics made available by the DITJENTEKS in 1976, the small scale sector with 630 establishments represents 81.5% of all the units in the industry and with a total installed capacity of 24,860 looms constituting 40.5% of the 60,372 looms installed in the entire industry.

1.3.2. If the medium scale was also considered, the total number of weaving units between the small and medium scale sectors comprised of 752 units, constituting 97% of the total number of powerloom weaving establishments, and a total installed capacity of 45, 985 powerlooms constituting 76% of the powerlooms in the entire industry.

1.3.3. More recent indications show that the total number of powerlooms in the industry now could be of the order of 66,000, but the pattern of distribution between the small and medium scale sectors on the one hand and the large scale sector on the other remains substantially the same. Thus the critical nature of the former to the fortunes of the textile industry and its impact on the general economy of the country as a whole is very clear.

1.4.0. BIPIK programme for assistance to the small scale sector.

1.4.1. In a policy statement issued in May 1974, the government defined the measures proposed to be taken by it to assist in the development of the small scale sector of industry, during Repelita II, and the establishment of the BIPIK (Bimbingan dan Pembangunan Industri Kecil = Guidance and Development of the Small Scale Industry) programme.

1.4.2. In persuance of this, further assistance from UNDP, directed particularly towards the small and medium scale powerloom sectors of the textile industry, was requested at the time of the Mid-Term Review of the previous project (INS/71/531), in May 1974.

1.5.0. Designing of textile project (INS/74/018).

1.5.1. Following this a Task Force comprising of Mr. Blijdenstein (Textile Adviser INS/71/531) Mr. B. Rajaram (Weaving Expert) Mr. Meyer (Marketing Expert) and Mr. Minke (Knitting Expert) on INS/71/531 , was constituted to design a suitable project to meet the objectives of the government. This Task Force was to work in close co-ordination with the BAPPENAS group involved with the development of the small scale industry in general.

1.5.2. Besides the main emphasis on assistance to the small scale sector, some measure of follow-up work on the previous project in terms of the large scale sector was also to be included.

This was with a view to consolidating the results achieved so far by the previous project and to assist the industry in matching quality standards of imported yarn and fabrics

1.5.3. The Task Force, (principally Mr. Blijdenstein and Mr. B. Rajaram) drew up a draft design for the present project in September 1974.

1.6.0. Approval in principle.

1.6.1. Approval in principle was accorded by BAPPENAS by their letter dated 29th January 1975 (No. 245/D.I./I/75), and the project proposal submitted to UNDP, New York, on 7th February 1975 (Vide INS/74/018 of that date from Resident Representative).

2.0.0. DEVELOPMENT OF THE PROJECT

2.0.1. Accordingly Preparatory Assistance (INS/74/018/A/01/37) for a period of one year was initially signed on 3.4.1975, providing for 57 Expert/months (US$.171,000), Individual Fellowships (US$. 16,200) Equipment (US$.50,000) and Miscellaneous (US$.5,000) making a total UNDP contribution of US$.242,000. The starting date specified was 1.7.1975.

2.0.2. A subsequent revision (INS/74/018/B/01/37) was signed on 2.5.1975, providing for some reallocations in the number of months against certain posts, while the total UNDP contribution remained the same at US$.242,000.

2.0.3. The project went into operation on 10.9.1975, with the arrival of the Project Manager in the field.

2.1.0. Job Description of Project Manager.

2.1.1. The Job Description of the Project Manager specifies the following : -

Purpose of the Project : To provide technical, marketing and managerial expertise, and thereby assist in the developing of the Indonesian textile industry, and particularly the small-scale and medium-size sector, to adequately meet the national demand for textiles and to make a purposeful contribution to the overall economy of the country.

Duties : Attached to the Directorate General for Textile Industry, the expert will be responsible for the finalisation of the project document of a large scale UNDP/UNIDO technical assistance project. Specifically the expert will be expected to : -

(a). further discuss and finalise a detailed work programme for a team of experts to be recruited, and guide, co-ordinate and supervise the duties and activities of the experts ;

(b). assist in selecting other members of the team of experts and consultants to be provided under the project and their counterparts. Consideration should be given to the use of international and local consulting firms ;

(c). set, to the extent possible, quantitive targets for the project against which its future evaluation will be possible ;

(d). advise and assist the management of the Institute for Textile Technology in all matters related to the project, in particular with regard to the Knitting Centre and the Product Development and Design Section of the Marketing Services Organisation (MSO) in consultation with the Director General for Textile Industry ;

(e). evaluate the existing facilities in the Institute for Textile Technology and its subcentres in provinces and prepare a list of equipment needed for the realisation of their work programme;

(f). advise and assist the Board of Directors of the MSO in the formulation and implementation of Marketing policies and strategy.

2.2.0. Work Plan

2.2.1. A Work Plan (Annexure I), for the period October 1975 to September 1976, to meet the objectives of the Preparatory Assistance was submitted to UNIDO and approval received.

2.3.0. Drafting of Project Document

2.3.1. Discussions were undertaken with the Directorate General of the Textile Industry for the finalisation of the Project Document, after familiarisation visits to a few textile manufacturing and

marketing centres, and a draft Project Document was forwarded to UNIDO on 3.2.1976. However, this had to be recast again following discussions called for by the Resident Representative, against the background of UNDP's liquidity problems at that time, and so as also to conform to his directives that greater use of Consultants and Associate Experts be provided for in the project design.

2.3.2. The draft so revised, submitted in March 1976, received approval from UNDP in April 1976, but this did not represent finality. The Project Document had to be recast again subsequently to take care of the latest financial constraints established by UNDP for 1976 and 1977.

2.4.0. Signing of Project Document

2.4.1. The Project Document (INS/74/018/C/01/37) was finally signed on 28.3.1977, with Mr. Achmad Slamet, Secretary General of the Department of Industry signing on behalf of the government and Mr. Himalaya Rana, Resident Representative UNDP, signing on behalf of UNDP and UNIDO.

The Co-operating Agency designated was the Directorate General of Textile Industry.

2.5.0. Objectives of the project

2.5.1. Long term objectives.

(a). To provide technical, marketing and managerial expertise and thereby assist in the development of the Indonesian textile industry and particularly the small scale sector, to adequately meet the national demand for textiles and to contribute to the export potential of the textile industry in general, thus making a purposeful contribution to the overal economy of the country.

(b). The UNDP/UNIDO programme intends to provide assistance as

close as possible to the enterprise level and to assist in upgrading and training national personnel in the industry and its service organisations, so that they are fully competent and capable of assuming full responsibility for their allocated tasks when UNDP/UNIDO assistance terminates.

2.5.2. Immediate objectives.

(a). To assist the small scale sector by :

- the establishment of a Marketing Service Organisation.
- the establishment of Technical Service Centres for the small scale mechanical weaving industry.
- development of the present Knitting Section of the Institute of Textile Technology Bandung into a Knitting Centre for more advanced knitting technology and product development to service the knitting and ready-made knits industries.
- the establishment of a programme of training in Factory Management.
- providing technical expertise in yarn dyeing and finishing to the small scale sector.

(b). To provide further assistance to the large and medium scale mills, both in the private and public sector, in the areas of :

- Spinning
- Weaving
- Maintenance
- In-plant Training

to primarily enable these mills to achieve higher quality levels.

2.5.3. This project does not have a direct investment potential.

2.6.0. Early drawbacks in the development of the project

2.6.1. It has to be regretfully recorded that the constraints imposed by the unfortunate liquidity problems of UNDP in 1976, impaired the design of the project by affecting the synchronisation of some of the inputs.

2.6.2. Notably, the arrivals of the Market Research and Market Development Experts had been so timed in the original project design as to permit an overlap of twelve months, with a view to ensuring effective co-ordination between the two functions. However as the situation finally emerged the Market Research Expert (Mr. Vaahtokari) departed the field in September 1977, while the Market Development Expert (Mr. Aavatsmark) did not arrive until April 1978, thus creating a void in the concerned area for six months.

2.6.3. Besides the above, which represented a major draw back, deferments in the fielding of the Weaving Expert I, caused some slight dislocations initially in the time schedules for the training of the technicians for the TSC's at Majalaya and Pekalongan.

2.6.4. This was covered up partly by the Project Manager undertaking some of the work in this area, besides his normal functions, pending the arrival of the Weaving Expert I (Mr. Hoshiyama) in the field in October 1976.

2.7.0. Fahlstrom Mission

2.7.1. Mr. Fahlstrom, Deputy Director, Industrial Operations Division UNIDO, Vienna, undertook a mission to Indonesia in January 1977. The purpose of the mission was " to review with the Ministry of Industry and BAPPENAS the ongoing and proposed projects and to make recommendations concerning future activities in Indonesia within the context of UNDP and UNIDO regular programme funds available. (vide UNIDO/TA/GEN/1 PRO 306 dated 14 January 1977 from Mr. Anders Persson Resident Representative a.i. to Mr. Achmad Slamet, Secretary General Ministry of Industry).

2.7.2. Following Mr. Fahlstrom's visit to the project, recommendations were made to the government that the assistance of a follow-up nature from the previous project (INS/71/531) be deleted from the scope of the present project thus confining its activities only to the small scale sector. Further it was recommended that out of the items of machinery constituting the UNDP equipment component, only the Weft Insertion Warp knitting machine be retained, leaving the Knitting Centre to obtain the remaining items from other sources.

The resultant savings through reduction of 48 man/months in the Experts' Component was to be diverted to other projects.

2.7.3. However the government, while accepting the above recommendations, requested that the savings of effected be ploughed back into the project and further assistance be rendered to the small scale sector by extending the tenure of the project by one more year, taking it to March 1980.

2.8.0. Extension of Project

2.8.1. This was endorsed by the Tri Partite Review held on 19th December 1977, and the decision to extend the project by one more year taken, with suitable modifications in the Immediate Objectives so as to reflect the decision to focus the efforts of the project purely on the small scale sector.

Modification in the Immediate Objectives of the project.

2.8.2. The Immediate Objectives of the project were accordingly recast as follow : -

To assist the small scale sector by :

- the establishment of a Marketing Services Organisation.
- the establishment of Technical Service Centre for the small scale mechanical weaving industry and also providing technical guidance directly to some designated weaving factories.
- development of the present knitting section of the Institute of

Textile Technology Bandung into a Knitting Centre for more advanced knitting technology and product development to service the knitting & ready-made knits industries.

- the establishment of a programme of training in Factory Management.
- providing technical expertise in yarn dyeing & finishing to the small scale sector.

2.8.3. The decision to extend the project was cleared by BAPPENAS vide their letter No. 559/DI/III/1978 of 11th March 1978 and Project Revision " F " giving effect to this decision was signed on 8th May'78.

2.9.0. Mid-Term Review Cancelled.

2.9.1. A Mid-Term Review of the project was scheduled for April'79, and the terms of Reference drafted, and forwarded to UNDP New York, (vide Pro 300 CPMP INS 74 018 dated 27th February 1979 from Mr. Rana to Mr. Quirolgico).

2.9.2. However, UNDP communicated their decision to dispense with the Mid-Term Review, in view of the fact that the project was proceeding satisfactorily and there appeared to be no major problems.

2.10.0 Reorganisation of the Ministry of Industry.

2.10.1. In the latter half of 1979, there was a major reorganisation of the Ministry of Industry, basically resulting in a more horizontal restructuring with the administrative direction & control of the textile industry being vested with two separate Directorates General, and the Directorate General of Textile Industry disbanded. The small scale sector came within the jurisdiction of the Directorate General of Small Scale Industries (Direktorat Jendral Industri Kecil), while the large and medium scale sectors fell within the purview of the Directorate General of Multifarious Industries (Direktorat Jendral Aneka Industri).

2.10.2. Additionally the Agency for Industrial Research and Development (Badan Penelitian dan Pengembangan Industri (BPPI) was established.

2.11.0. Change in Co-operating Agency.

2.11.1. Following this restucturing of the ministry on a large scale, and the concommitant reassignment of personnel, there was a phase of uncertainty regarding the Co-operating Agency for the project to BPPI, while functionally it would work in close coordination with the Directorate General of the Small Scale Industry, since guidance and development of the small scale industries (represented by BIPIK) and therefore the MSO and TSC's fell squarely within the four corners of its jurisdiction.

2.12.0. Immediate effect of change in Co-operating Agency.

2.12.1. The inevitable consequence of the rather fundamental restructuring of the Ministry had its impact on the project in some aspects. Notably the individuals functioning as counterparts at the MSO, were reassigned to other duties, causing a serious disturbance in the counterpart situation in this rather key area.

2.12.2. Further the finalisation of budget sanctions for counterpart funds for the operation of the project, and therefore unavailability of funds for internal travel of experts resulted in the " grounding " of the experts in Bandung almost through the entire month of April 1979.

2.12.3. Yet another consequence of the phase of readjustment was the reported delays in the actual receipt of their salaries by the TSC personnel and the funds for their travel to factories for a period of some two or three months, with its unfortunate effect on the morale and motivation of the staff concerned.

2.13.0. Project Revisions.

2.13.1. Project Revision " K " is currently effective, after revisions over the period of both a routine as well as substantive character.
Details of these are contained in Annexure II.

2.14.0. Tri Partite Reviews.

2.14.1. Tri Partite Reviews of the project were held on 9.12.1976, 19.12.1977, 22.11.1978 and the Terminal Tri Partite Review scheduled for February 1980.

3.0.0. PROJECT ACTIVITIES.

3.0.1. Marketing Services Organisation (MSO).

The Market Research Expert Mr. M.A. VAAHTOKARI (Finland) arrived in the field in May 1976 and undertook the task of drawing up a detailed Organisation Structure for the MSO, after an initial period of familiarisation, and on the basis of the broad functions conceived for the MSO in the project design.

3.0.2. The related immediate objectives of the project activity in this area was : -

" The establishment of a Marketing Services Organisation to assist the small-scale sector of the textile industry to enable the factory owner to play a more positive role in the marketing of his products, by providing him services in Market Research, Market Development & Promotion, and Textile Designing & Product Development ".

3.0.3. Organisation structure of MSO.

The organisation structure with a covering note on the functions envisaged, were discussed with the Director General of Textile Industry on 13.8.1976. The Director General signified his acceptance of the structure (please see Annexure IV) and indicated that while this would serve as a blue print for the ultimate set-up of the MSO, initially only certain activities would be started. Priority was to be given to the Market Information and Product Development aspects of the service to the small scale industry.

3.0.4. Product Libraries.

Accordingly a beginning was to be made with establishing

Product Libraries both at the Central office of the MSO in Jakarta, as well as its wings at each of the Technical Service Centres (TSC's) in the first place.

3.0.5. Initially over a hundred samples of fabrics of various description collected for the purpose from different weaving areas, were analysed for determining cloth constructions and other manufacturing particulars. After this they have been categorised coded and catalogued for reference and displayed suitably for inspection by potential manufacturers from small scale weaving factories. Some samples of readymade garments and ready-to-use items like towels, table covers etc. have also been subsequently added together with further samples of fabrics.

3.0.6. Smaller editions of such a Product Library have also been set up in each of the Technical Service Centres, where a more limited range of fabrics have been displayed, on similar lines to the central office of MSO at Jakarta.

3.0.7. Market Studies.

The Market Research Expert undertook a study of the " Role of the Small Scale Weaving Industry in the Indonesian Textile Market " and another on " Market Study on Industrial Textiles ". The reports on the finding were submitted to DITJENTEKS.

The former study was undertaken at the specific request of the Directorate General and the findings were circulated to the Annual Conference of DITJENTEKS held in March 1977 as a part of the working papers, for the benifit of the participants who were drawn from various sectors of the textile industry.

3.0.8. Sub-Contracting activities.

With the appointment of the Manager (Mr. Rasidin) the sub-contracting activities of the MSO were initiated, with some small orders for terry towels being farmed out to two factories in Pekalongan.

3.0.9. Yarn and Cloth price bulletins.

The MSO commenced the issue of fortnightly bulletins to the regional MSO wings of the TSC's on prevailing rates for the different counts of yarn from principal manufacturers, as well as some typical varieties of cloth.

3.0.10. The Market Research Expert departed from the field on 22.9.1977, and pending the arrival of the Market Development and Promotion Expert, there was an inevitable slowing down in the pace of the activities of the project in this rather vital area.

3.0.11. Market Promotion.

The Market Development and Promotion Expert (MDPE) Mr. L.Aavatsmark (Norway) arrived in the field on 24th April 1978.

With his arrival the promotional activities of the MSO received the necessary impetus and the sub-contracting activities of the MSO in particular showed encouraging growth, both in terms of actual business obtained as well as fresh enquiries.

3.0.12. Contact with institutional buyers like hotels etc.were established with a view to channelising some of their requirements of textiles to the small scale sector.

3.0.13. It was the finding of the MDPE that there was an inadequacy of communication as between the central MSO and its regional wings, at the TSC's, as also between the regional offices of the Department of Industry (Kanwil Perindustrian) and the central and regional MSO's resulting in an inadequate appreciation of their individual roles in servicing the small scale textile industry.

3.0.14. With a view to rectifying this situation the MDPE conducted a workshop at DITJENTEKS on " Communications and Marketing " with participants drawn from these various offices as well as from the BIPIK section of DITJENTEKS. The workshop dealt with communication techniques and media to meet the objectives in question.

3.0.15 Development of exports.

The sub-contracting activities of the KSO were broadened to cover the export field. The MDPF successfully established contact with importers abroad interested in developing business with the small scale textile industry in Indonesia. These have materialised in specific business enquiries and in one significant instance a trial order has been received for the supply of terry towels by a consortium of small scale weavers in the Pekalongan and Klaten areas.

3.0.16. " Bapak Angkat " policy.

It is worthy of note in this context that the new philosophy of " BAPAK ANGKAT " (ADOPTED FATHER) conceived by government, wherein a section of the large textile sector under state ownership functions as " ADOPTED FATHER " to a group of small scale units, has found practical implementation in this case. PT. SANDANG II (one of the two state corporations in the textile industry under the jurisdiction of which fall the state owned textile mills of the central government in C. Java, E.Java & Bali regions, are serving as " Principals " in the export transaction, while the small scale weaving establishments constituting the " consortium " act as " sub-contractors to PT SANDANG.

This is in line with the recommendations of the MDPF that some " forced " sub-contracting by the state owned textile units to assist the small scale sector is called for (vide his Preliminary Report to DITJENTEKS in July 1978).

3.0.17. Another example of the above has been the order for 800,000 meters of " Blacu " (long cloth) placed by the army with a group of weaving factories in Majalaya, with PT SANDANG I functioning as the " Principals " for the supply.

3.1.0. Problems encountered in the development of exports by the small scale sector.

3.1.1. A lack of knowledge in the small scale textile circles of the benifits of the " Export Certificate System " with its percentage

draw back based on check prices of exports, was very evident.

3.1.2. Secondly where there was knowledge of the system, there was scepticism regarding the actual " pay back " of the stated percentage for a given item of textiles exported.

3.1.3. Thirdly there were the problems created by incorrect markings of " country of origin " through unscrupulous elements in other countries suffering under quota restrictions, attempting to take advantage of such available to Indonesia.

3.1.4. These points have been embodied in a note dated 12.10.79 on the subject, addressed to the Director General of the Agency for Industrial Research and Development (ANNEXURE V).

3.1.5. There is a regrettable lack of awareness on the part of the small scale factory owners on the absolute need to adhere strictly to the specifications, laid down by the importer, in terms of the basic fibre, Yarn Counts, Reed and Pick, Width etc.
This has been evidenced in the case of the order for towels, where after the original counter sample had been approved by the buyer, there have been changes in the further manufacture by the part use of Rayon instead of cotton, resulting in problems understandably with the importers.

3.1.6. Export business is founded on quick and prompt communication between the importer and exporter. Consequently adequate telex and telephone facilities are critical to the situation. The absence of the former and inadequacy of the latter, where the one line has to be shared with the Balai Tekstil, has rather handicapped the effectiveness of the role of the MSO in functioning as a medium for development of exports by the small scale textile industry.

3.2.0. <u>Textile Design and Product Development</u>.

3.2.1. Mr. H. Poppe, Textile Design Design Expert (TDE) arrived

in the field on 9th June 1977, and launched on planning the set-up of the Design Section at the ITT. Details of these were submitted to Mr. Wibowo, Director Research and Development, ITT.

3.2.2. The counterparts assigned to the expert were technically oriented, having textile technology backgrounds and were functionally suitable to that extent. However, the Design Section called for counterparts who were basically " art oriented " , and who had to be developed in the application of design and colour ideas to textiles, within its technological constraints.

3.2.3. It was thus arranged that 3 students undergoing the academic course in Textile Designing at the Institute of Technology Bandung (ITB), and 2 similarly from the ITT itself, be assigned to the Design Section. Of these unfortunately 2 out of the 3 from ITB came to be withdrawn subsequently, only leaving Mrs. De Pizal with the Design Section. She has constituted the backbone of the counterpart staff at the Design Section.

3.2.4. Initially a " pattern loom " was designed by the expert and three such requested, for the production of woven design samples. These were to be made at the Carpentery Section of the ITT, and one was supplied to the Design Section.

3.2.5. A small warper was also made for use at the section, to avoid delays in having small warps made outside.

3.2.6. Demonstration materials were prepared, and a colour chart of international trends for 1978 sent out to the TSC's in Majalaya, Pekalongan, Klaten, Surabaya and Medan.

3.2.7. Extension Services in Product Development for small scale weaving factories at two centres, viz. Klaten and Surabaya were provided by means of 3-week workshops, with about 15 participants in each. It was felt that in view of the complete absence of know-

ledge of fabric structure and basic weaves and their applications, group demonstrations and practical work by participants would be more productive than assistance at individual factory level. These have been amply demonstrated by the results of the two workshops held.

3.2.3. Weave order sheets containing 120 sample patterns with technical descriptions, weaving particulars etc produced at these workshops, as also at the Design Section, were sent to the Product Library at the MSO, the TSC's at Klaten and Surabaya (as being the participating Centres) and to the Director General. (This last was at the specific request of the DG).

3.2.9. The expert also drew up an overall plan for the Textile Section of the National Design Institute under consideration by the government.

3.3.0. Problems in the Textile Design and Product Development activities.

3.3.1. The major drawback in this area has been the unfortunate departure of the original Textile Design Expert (Mr. Poppe), prematurely in November 1978, due to personal reasons. His replacement Mr. Krondahl arrived in the field only in July 1979, so that there was an interruption of almost eight months in the work in this field.

3.3.2. It has also to be recorded that production of sample designs got off to a rather slow start, with delays in the receipt of the requisite yarns, in the desired assortment of counts and colours. The delays were caused by reasons essentially of the nature of lack of effective co-ordination between the operational wings of the ITT, which form the sources of supply of these raw materials, and the Design Section.

3.4.0. Technical Service Centres (TSC's).

Related immediate objective.

3.4.1. The related immediate objectives of this aspect of the project was the following : -

The establishment of Technical Service Centre and training of national staff to man these Centres. The Technical Service Centres will provide technical expertise in the weaving preparatory processes, loomshed, dyeing and finishing sections, expertise in on-the-job training of operatives and guidance in setting up day-to-day managerial controls to the small scale weaving factories in the various regions.

Amended immediate objectives.

3.4.2. Following the Tripartite Review held on 19.12.1977 and the decision to extend the project by one more year, but to concentrate entirely on the small and medium scale sectors, the objectives were amended in respect of this area of project activity as follows :

- " the establishment of Technical Service Centres for the small scale mechanical weaving industry and also providing technical guidance directly to some designated weaving factories ".

Thus towards the latter stages the experts concerned were engaged in more direct assistance to factories, with a slight shift in the bias away from the TSC's, while at the same time being available for overall guidance to the TSC technicians.

Project approach to developing the TSC's.

3.4.3. The approach of the project to the work in this area has been on the following lines : -

(a). providing the basic training to the technicians attached to the TSC's, who will eventually provide technical service to individual factories.

(b). developing the senior counterparts to a degree where

they will be able to provide the necessary guidance to the TSC technicians after the international experts have departed.

(c). the experts to do the "trouble shooting" in situations where the TSC technicians found themselves out of their depth in tackling any problems in the factories, after their independent assignment to these.

Location of TSC's.

3.4.4. The following locations were selected by the government for situating the TSC's :

1. Majalaya (West Java).
2. Pekalongan (Central Java).
3. Klaten (Central Java).
4. Lamongan (East Java).
5. Denpasar (Bali).
6. Sengkang (Sulawesi).
7. Silungkang (West Sumatra).
8. Pematang Siantar (North Sumatra).

BIPIK inputs into TSC's.

3.4.5. The physical facilities for the TSC's, in terms of the buildings, furniture and equipment (like looms etc) were provided by BIPIK, as also the salaries of both the administrative and technical personnel of the TSC's.

In some cases (e.g. Majalaya, Pekalongan), existing premises were adapted for the purpose, while in others brand new constructions were undertaken.

Equipment for TSC's.

3.4.6. All the TSC's are equipped with the necessary basic equipment like, warp & weft winding machines, sectional warpers, one each of plain and box looms, dyeing vats, small screen printing tables etc.

In the case of the two earliest TSC's namely at Majalaya and Pekalongan, the overall length of the weft pirns and the copspace of the shuttle had not been matched. However, the necessary changes were subsequently made on the advice of the writer and revised specifications adopted for the pirn winding equipment for the TSC's which followed.

Mechanics of training of TSC technicians as originally envisaged.

3.4.7. Two weaving technicians each out of a group of six trainees at a time, were to be alloted to a weaving factory for a period of two months, to be trained on the shop-floor by the international expert through the senior counterpart, thus simultaneously resulting in the upgrading of three factories also. This process was to be repeated three times for each batch of two trainees, so that a total of six trainees would have been trained in a period of six months and nine factories upgraded in the same period.

A similar method was to be adopted in the case of the Dyeing & Finishing technicians.

Training period in actual practice.

3.4.8. However, in actual practice it was found that the overall period of six months for training each group of trainees as well as the period of two months for upgrading a factory were inadequate in many cases, because of the slow pace of absorption by both the technicians and the factories. In this light therefore the period of training had to be extended cosiderably, as notably in the case of the Lamongan Centre.

Comments on Location and Facilities of TSC's.

3.4.9. Location.

(a). Majalaya & Pekalongan.

The location of the above two are ideal in view of their

proximity to the textile areas they are intended to serve.

(b). Pematang Siantar & Klaten.

These would rank below the above two in so far that they offer the best possible solutions, having regard to the wider dispersal geographically of the textile factories in both the regions concerned.

(c). Lamongan.

The location of this Centre is highly unsuitable from the point of view of its utility to the powerloom sector in the region that it is intended to serve.

These are concentrated in Surabaya and its surroundings, with pockets as far away as Pancrogo, Madiun, etc. While therefore it would be impossible to site the TSC at a centre which would be equidistant to all the locations of the powerloom factories, it appears logical to set it up in Surabaya itself, rather than in an outlying area like Lamongan.

The logical focus will be towards Surabaya, which is not only the administrative capital of the province, but also represents the commercial centre of gravity of the region.

(d). Sengkang.

This centre is in the midst of the silk handloom industry, with no powerloom activity in the region. The centre will therefore be oriented to meeting the requirements of this silk handloom industry.

(e). Denpasar.

This centre is in the process of being established. The Dyeing & Finishing and Weaving Experts were deputed to make a detailed survey of the proposed venue of this centre with a view to making recommendations in regard to alterations to the existing structure to render it more suitable for the purposes of the TSC &

also for ensuring a logical lay-out of the equipment. These recommendations are contained in Technical Report No. 79 which is before the government.

(f). Silungkang.

The comments made in regard to the TSC at Sengkang will apply in a large measure to this centre also.

3.4.10. Facilities (Buildings and Equipment).

Buildings.

(a). The buildings housing the TSC's at Majalaya, Pekalongan and Pematang Siantar are quite suitable even though existing buildings (with suitable alterations) have been utilised for the purpose.

(b). The TSC's at Platen and Lamongan are housed in new buildings, which are most attractive as well as functional, except for reservations in regard to the Dyeing and Finishing section. Detailed comments in regard to these at Lamongan are contained in Technical Report No. 42.

Equipment.

3.4.11. All the TSC's have been provided equipment in terms of machinery on a uniform basis, consisting of weaving preparatory machinery, two powerlooms (one plain and one box loom), dye vats, one screen printing table and some handlooms. Also there is provision for class room work and " Group Training " programmes.

Testing equipment still to be installed.

3.4.12. However, the centres still require the basic testing facilities for both physical testing of yarn, as well as testing of dyestuffs and chemicals. Government has our detailed recommendations in regard to these and it is our understanding that these are under implementation.

Absolute necessity for installing humidifiers.

3.4.13. One important aspect in regard to equipment, which has found repeated emphasis in our discussions and recommendations is the installation of proper humidifying equipment in the loom section of the TSC's.
The weaving factories in the small scale industry do not seem to appreciate in the least the necessity for ensuring a controlled and uniform Relative Humidity of 80% to 85% in the loomshed. It is therefore most important that the TSC's, which should serve as " models " should be equipped with humidifiers so as to impress this vital necessity on the weaving factory owners. The TSC at Pekalongan is the only centre at present equipped with a humidifier unit.

Personnel at the TSC's.

3.4.14. It will be readily appreciated that the personnel at the TSC's - the administrative as much as the technical - will be the key factors in the degree of effectiveness of the services rendered to the industry. It is impossible to emphasise adequately the need for a proper attitude and the necessary motivation on the part of the staff of the TSC's to " sell " their services to the factory owners. The whole concept of such a service is new and the factory owners have, in a sense, to be educated to make full use of the service. This would obviously call for a lot of sustained promotional effort, on the part of those responsible for the functioning of the TSC's.

3.4.15. The writer had some reservations in this regard at one point and these were conveyed to the government in a note dated 7th June 1978 to the then Director General of Textile Industries and also the relevant extract reproduced in a memo dated 8th June 1979, on the general subject of TSC's, to the present Director General of Small Scale Industries.

3.4.16. However, more recent visits to the TSC's have dispelled

these fears to an extent, but the essential point made in 3.4.14 will bear repetition.

3.5.0. Project outputs in this area.

3.5.1. Weaving Expert I (Mr. Yoshiyama - Japan) arrived in the field on 3rd October 1976 and was assigned originally to the Majalaya (West Java) and Pekalongan (Central Java) regions for the training of TSC technicians. With the arrival of Weaving II Mr. J.D. Theodore (India) on 25th January 1978, the former was assigned to the Pekalongan and Klaten centres in Central Java together with Pematang Siantar in North Sumatra, while the latter was assigned to the Majalaya and Lamongan (East Java) regions.

The Dyeing and Finishing Expert (J.E.H. Bennett - UK) joined the project on 3rd January 1978 and covered the Majalaya and Pekalongan regions initially. Subsequently, his activities were directed towards, Klaten, Lamongan and Pematang Siantar.

3.5.2. Number of TSC technicians trained.

A total of 28 for powerlooms and 14 on the dyeing and finishing side, assigned to the various TSC's, received training from the two Weaving Experts and the Dyeing & Finishing Expert respectively. These technicians were drawn from the high school (SMA) (Sekolah Menengah Atas) level and had been subjected to a short theoretical course of six months at the ITT, Bandung, before their assignment to the TSC concerned.

Suggestion re : syllabus for pre-training.

3.5.3. In the very initial stages of the project the writer had taken the liberty of making some suggestions to the Director Research and Development, of the ITT, in regard to the syllabus followed for the theoretical pre-training mentioned in 3.5.2. (Annexure V).

Assistance to weaving factories during training of TSC technicians.

3.5.4. Fourteen factories received in-depth assistance by

Weaving Expert I in the course of the training of the TSC technicians (vide 3.5.2.) while 13 factories received such assistance from Weaving Expert II.

Direct assistance to factories.

3.5.5. Besides the above, 4 factories received direct assistance, while Weaving Expert I continued to assist some of those involved initially in the technicians' training, after completion of this.
In the case of Weaving Expert II, eleven weaving factories received such assistance.

Impact of assistance in weaving.

3.5.6. Out of the 13 factories assisted by Weaving Expert I 5 factories registered outstanding improvements in productivity or production, varying from 182% in one case (PT Tiga Dara in Pekalongan) to 25% (PMT Medan).

Similarly among the factories in which Weaving Expert II was involved there were increases in production or productivity, ranging from 30% in increase in loom efficiency on sarongs (Kamajaya I Pandaan) to a minimum of 7% (Ijah Asen & Pert. Mustika in Majalaya).

Technical assistance in product diversification.

3.5.7. Some factories have also benifitted through technical assistance provided by the experts in product diversification.
A case in point is " Pada Asih " in Majalaya which was solely on Sarongs and were facing problems in marketing their goods against the stiff competition in this product line. This factory was assisted in converting its product line to " cele " (gingham shirtings), resulting in higher profit margins as well as easier marketing of its production.

Technical assistance for cost reduction.

3.5.8 Weaving Expert II observed that Maduratex (Madura)

was using a size mixing with an inordinately high starch content designed to give a 20% size to the warp. It was pointed out to the factory that this was totally unnecessary for satisfactory weaving of the warp yarn and only resulting in avoidable waste of sizing ingredients and unduly heavy droppings in the weaving shed. Accordingly experiments were undertaken with a reduction in the starch content and an application of only 10% size on warp, thereby reducing the cost of sizing starch by half. The weaving efficiency remained unaffected while sizing cost was reduced, even as the factory confirmed to the writer on a subsequent follow-up visit.

3.5.9. Simultaneously the Dyeing & Finishing Expert also gave pointed attention to the aspect of reduction in the costs of dyestuffs used by the small scale factories. It was clear that in many cases the recipes were uneconomical and left considerable room for rationalising. The factory owners usually acted on the basis of technical " advice " (?) received from the salesman of dyestuff manufacturers and the objectivity of such was not always beyond question.

TSC technicians employed for cost surveys.

3.5.10. The TSC technicians for dyeing & finishing were accordingly directed in conducting cost surveys of some factories. It is noteworthy that in the case of one factory (PISMATEX, in Pekalongan) it has been confirmed by the owner that a saving of Rp 250,000 per month in the cost of dyestuffs has resulted through rationalisation of the recipes on the basis of the expert's advice.

3.5.11. It has been reported that the TSC's in areas like, Majalaya, Pekalongan, Klaten and Pematang Siantar, as also Lamongan, have provided extension services to factories in their respective regions. These have been in the nature of assignment of the TSC technicians to individual factories for specific periods, and for group training/ demonstrations at the TSC's themselves. Details of these are contained in Annexure XI.

Feasibility studies.

3.5.12. Two major items of project activity in the area of technical services, were the Feasibility Studies conducted by Weaving Expert I on the establishment of a " Common Sizing Facility in Klaten " and a " Common Finishing Facility in Majalaya ", by the Dyeing & Finishing Expert. These studies were requested by the then Director General of Textile Industries, following a move by groups of factory owners at these two centres for setting up such facilities as a result of discussions at the Factory Management Development Workshops at the two locations.

Findings of the Feasibility Studies.

3.5.13. The details of the studies and their findings are contained in . Technical Reports Nos. 54 & 48, which are with the government.

Basically the former study came to the conclusion that there was a case for the establishment of a brand new common sizing facility in the Klaten area.

As regards the common finishing facility for Majalaya, it was considered advisable to refurbish the existing INDUKS unit in that centre and re-orient its operations on more commercial lines, rather than launching on setting-up a completely new finishing house at an estimated capital cost than (September 1978) of Rp.702 million approximately (US$.1,615,600 approx).

Feasibility Study on Common Finishing Facility at Majalaya commended to UNDP/UNIDO project INS/78/0.04.

3.5.14. The result of the above study is commended to the attention of the project on " Operational Consultancy to Small/Medium Scale Public Sector Manufacturing Enterprises " (INS/78/004).

3.5.15. Prototype of curing/baking machine.

A prototype of a curing.baking machine was developed by

one of the Dyeing & Finishing counterparts, Mr. Kasoenarno, under the guidance of the Expert, Mr. J.F.H. Bennett.

This was developed as a step in intermediate technology, for use by the small scale textile factories, who do their own printing. The use of such a curing/baking unit will help to improve the application of their pigment printing colours and reactive colours, so that the fastness is improved by proper fixation.

The unit was developed and built at ITT, Bandung and will find use for demonstration purposes, as the initial trial runs have proved successful.

The project agreed to bear the cost of manufacture of this prototype at an approximate cost of Rp.250,000 (US$.415 approx)

3.6.0 Knitting Centre

3.6.1 The related immediate objective of this aspect of the project activity was : -

" The development of the existing knitting section of the Institute of Textile Technology (ITT), Bandung into a high calibre Knitting Centre of national status, to provide technical and managerial services, build up a Design & Product Development Centre and advise on technological developments to prospective investors, to serve the knitting industry of Indonesia ".

3.6.2. Commencement of activity

The Knitting Expert Mr. H.L. Sterenberg (Netherlands) arrived in the field on 5th May 1977 and undertook a broad survey of the knitting industry through visits to 65 factories spread over a wide geographical area, out of the total number of 235 knitting factories in the country at the time.

Following this survey, a total of 25 factories were designated for in-depth assistance by the expert through the Knitting Centre.

3.6.3 Product Library

Initially the expert launched on building up a Product Library for the Knitting Centre, as it was clear that the industry's knowledge of the range of knitted goods that could be manufactured with its existing equipment was rather limited.
To this end contact was established with manufacturers abroad and a very wide range of samples obtained. The Knitting Centre today has samples of over 1000 knitted fabrics, with technical details, for reference by potential manufacturers.

3.6.4 Knitting yarn requirements

One of the main requirements of the knitting industry is the supply of cotton yarn of the correct specifications. Yarn for knitting basically has to have a lower twist, as opposed to yarn for weaving, and

all the spinning mills in Indonesia are catering only to the weaving industry.

It is estimated that the requirements of cotton yarn for knitting (mainly of 30^s counts) by this segment of the industry is 450,000 kgms per month. This is a sizeable quantity of production to interest any spinning mill and accordingly an approach was made to the DITJENTEKS to take steps to meet this requirement.

3.6.5 Knitters Association.

The Director General indicated that if the Knitting industry could organise itself to take collective action in such matters, it would strengthen the hands of the DITJENTEKS for mobilising the supply of the suitable yarn.

At his instance therefore a Knitters' Convention was called at the ITT in May 1978, led by the Knitting Expert, at which he dealt with this aspect, with a view to gaining support to the idea of forming an association of knitters, which could take collective action in such & similar matters of concern to the knitting industry.

This was the harbinger of the Knitters' Association, now formed under the apex body of the Assosiasi Pertekstilan Indonesia (API) (Federation of Indonesian Textile Associations).

3.6.6 Supply of cotton knitting yarn.

It is reported that three spinning mills. (1). Inbritex of Pasuruan. (2). Textra in Jakarta, & (3). Southgrand Spinning Mills of Bandung, have diverted a part of their production to cotton yarn for the knitting industry. In the case of Inbritex, the mill is now even spinning cotton : polyester blends of 60 : 40 to cater to knitting factories engaged in exports, while through largely the efforts of the Knitting Expert, Primissima has been interested in the manufacture of 60^s cotton yarn to meet the requirements for export of knitted fabrics by a knitting factory in Solo (P.T. Sumber Jaya) which is currently in the process of expansion.

3.6.7 Knitting calculations & standards.

The Knitting Expert has provided specifications for : (1). Basic calculations (2). Knitting standards and (3). Standard garment measurements to the Knitting Centre for use by the industry.

3.6.8. Training Courses.

While a textile education institution for higher levels like the Institute of Textile Technology Bandung, provides technical personnel for the higher echelons of the Knitting industry, it is the experience of the project that there is still a lack of adequately trained people at midmanagement and supervisory levels. This level of staff is critical to the efficiency and quality of production as they have direct responsibility for both.

In view of this, the Knitting Expert undertook training courses for such personnel drawn from the industry.

A 2-week course on Warp and Raschel knitting from the 27th February to 11th March 1978, was conducted at the Knitting Centre with the Knitting Expert heading the " faculty " comprising of himself and the counterparts. There were 13 middle level technical personnel attending.

Similarly a 2-week training course on Knitting Design, with the Knitting Design (Associate Expert) also participating together with the counterparts, was held from 9th April'79 to 21st April'79, with 15 trainees attending.

3.6.9. Training Manuals

Besides the above the Knitting Expert and Knitting Design (Associate Expert) have also brought out two manuals on " Terminology in Weft Knitting " and " The Manufacture of Full Fashioned Knit outwear ".
These two manuals tigether with the course notes of the training programs (contained in Technical Reports Nos. 27, 72, 82 and 86)

will be useful training material for the Knitting Centre.

3.6.10 Technical Advice to Balai Penelitian Tekstil, Medan.

At the request of the " Balai Penelitian Tekstil, Medan, the Knitting Expert provided guidance and information regarding the set-up of a kind of " Vocational Training Centre " for knitting / garment making operations. The institution had already sanction from the government for the purchase of workshop equipment for warp and raschel, flat, circular and hosiery knitting, while the necessary ancillary equipment had also been received.

3.6.11 Technical Assistance to factories.

Details of technical assistance given to the various knitting factories designated for in-depth assistance (Vide 3.6.2. above) are contained in the relevant Technical Reports.

3.6.12 Investment counselling.

It is material to record that in two instances the advice and guidance of the Knitting Centre was sought where the factories were launching out on major expansion of their facilities and product lines.

In the case of one of these units (P.T. Sumber Jaya) the company was seeking a loan of 800 million Rupiahs from BAPINDO (Bank Pembangunan Indonesia) (Development Bank of Indonesia) out of its total requirements of capital of 1.3. billion Rupiahs for setting up a second unit to cater to export markets. The Marketing Expert was approached jointly by both the bank and the management of Sumber Jaya for his appraisal of the market potential for exports and assistance of the Knitting Expert sought by the factory in regard to the planning, lay out & choice of machinery for the proposed expansion. It is reported that the loan application is receiving the favourable consideration of the bank, and that the appraisal of the experts concerned from the UNIDO project has had a significant influence on the outcome.

3.6.13 Collaborations with knitters abroad.

A firm of knitters engaged in the manufacture of foundation garments in Holland (SIERITA) have shown interest in the possibility of a link-up with an Indonesian knitting factory, for the manufacture of their products in this country, because of its lower wage costs primarily. The Knitting Expert has been instrumental in bringing this party together with a local manufacturer (Mr. Hambardjan) and assisting with the technical aspects of the proposition.

Further, another firm of knitters in Holland (L. Ten Cate of Geesteren) have shown interest in a similar collaboration with P.T. Surber Jaya of Solo for the manufacture in Indonesia of knitted cotton underwear.

The Knitting Centre, through the Knitting Expert, has been approached by the foreign manufacturer for technical liason in the implementation of the proposal.

3.6.14 Knitting Design Expert

The Knitting Design (Associate) Expert Miss Angelika Weiss (FRG) arrived in the field on 9th January'79. Under the direct guidance of the Knitting Expert, she has been engaged in the designing aspects of the assistance to knitting factories.

A Colour Index of colours in trend for knitwear fashion goods, was done by the Associate Expert, and given to the Research & Development Section of the ITT, for reproduction & circulation as a guide to the knitting industry.

There have also been calls directly for the services of the Knitting Design Expert from some factories in Jakarta (P.T. Alexandra, Billion, Persodjo) in assisting them with the design of their knitwear products for export to the European markets.

3.6.15 Cancellation of Knitting Engineer's Post.

In view of the rejection of offer by the candidate (Mr. Pczycki) for the post of Knitting Engineer in April'79 and the

obvious difficulty in fielding an alternative candidate before Oct/Nov'79 , as against the cut-off date of the project set for March'80, it was the view of the government and ourselves that it would be preferable to cancel this post, but extend the Knitting Expert's post with suitable modifications in the Job Description. This was conveyed to UNIDO (Vide Telex No. 1370 dated 3.4.1979) and agreed to by UNIDO Vienna (Vide Telex No. 17672 dated 19.4.1979).

Accordingly the Job Description of the Knitting Expert was revised to cover this aspect of the work of the Knitting Centre as well and the Knitting Experts' tenure extended until March 1980.

3.6.16 Some problems faced by the knitting industry.

Sub-standard quality of cotton yarn.

The quality of cotton yarn supplied to the Knitting industry calls for much improvement, with the following defects being observed :

(a). Unevenness
(b). Excessive slubs & thick places
(c). Twist too high for knitting (Ref. Para 3.6.4)
(d). Variations in Counts beyond tolerance limits $\pm$ 2 1/2%.
(e). Moisture content too high
(f). Too low wax content
(g). Cones wound badly.

The above defects in the yarn resulted in bad appearance of the Knitted fabric, abnormal needle breakages, loss of production, and higher waste losses during the process of knitting.

3.6.17 Very limited choice of " novelty " yarns available

Very limited choice, if not total absence of " novelty " or " fancy " yarns for product diversification or fashioning / designing.

3.6.18 Consumer bias for'imported' fabrics.

The Indonesian consumer in common with those of even some

developed countries is very import biased. This results in the preference for even spurious imported fabrics marked " Made in Hongkong " etc over better quality fabrics made within the country. It is realised that this is a matter of attitudes,which can change only over a period, but nevertheless this constitutes a handicap for the developing indigenous industry.

3.6.19 Limited product range being manufactured.

There is a high concentration on a limited product range by all factories with similar equipment, leading to a race for a share of the same market.

In 18 factories with 400 warpknit / raschel machines, 100 machines - or 25% of the installed capacity - with an average life of less than three years, were found to be idle, for the reason cited above.

A better attempt at product diversification would have avoided this problem which is resulting in a waste of national assets as it were.

3.7.0. FACTORY MANAGEMENT DEVELOPMENT PROGRAMME (FMD Programme)

Related Immediate Objective.

3.7.1. The related immediate objective of the above was : - " To train factory owners in the small scale sector of the textile industry in the application of modern methods of management in the areas of Production, Materials, Financial, Marketing and Personnel Management ".

Commencement of the programme.

3.7.2. The Factory Management Development Expert Mr. M.N. HOLMES (U.K.) arrived in the field on 7th April 1977, and it was decided in consultation with the Director General (DITJENTEKS) to initiate the programme in Majalaya. The DG was particular that the programme begin in Majalaya, as this represented a rather " difficult " region in many respects in terms of the small scale sector of the textile industry.

Accordingly the first of the series of Factory Management Workshops was held in Majalaya from 6.6.1977 to 14.7.1977.

Mechanics of the programme.

3.7.3. The initial design.

The initial design of this activity was based on " Workshops " or " Seminars " for groups of 12 to 14 factory owners/managers spread over a period of six weeks each, to be held in various regions of the country. These were to be conducted in three sessions of two weeks each, with an interval of a week between each session. The total spreadover for each Workshop was to have been eight weeks, with six weeks of actual " classroom " work.

Further, the idea was to hold the study periods in the mornings for three to four hours, to be followed by in-plant work by the expert for follow-up.

3.7.4. Eventual method.

The pattern of working eventually was evolved after discussions with the first group of participants, and this varied slightly from workshop to workshop.

It is important to emphasise, that it was appreciated from the very start of this facet of the project activity that it was very sensitive and " complete acceptance " by the participants was paramount to its success.

The final pattern, as it emerged, was to have study periods of three to four hours per day on three or four mornings each week for durations of anything between four to seven weeks, depending on the number of hours and days worked each week. The overall aim was to try and achieve approximately 72 study hours for each workshop.

Visits to the factories was usually arranged to immediately follow the classroom work, but this was not always possible.

Implementation work was carried out on the non-study days.

3.7.5. Coverage of the programme.

A total of 9 regional workshops were held in different regional centres representing areas with a fairly heavy, to heavy, concentration of the small-scale weaving industry.

In the major centres of the small scale textile industry, like Majalaya and Pekalongan, two workshops each were conducted in order to cater to a proportionately larger number of factories in those two centres.

One workshop each was conducted in Medan, (North Sumatra) Klaten (Central Java), Surabaya (East Java) and Jogyakarta (Central Java), to cover the power-loom factories in those areas.

3.7.6. Bali Workshop.

Besides the above, one regional workshop was also organised in Bali, of a shorter duration of four weeks, oriented to the handloom

sector, which forms the hard core of the small scale textile industry in that region. For obvious reasons the bias in the course contents and problems dealt with varied to that extent from the general pattern of the other workshops.

3.7.7. Total number of factories covered by the programme.

A total of 97 factories were represented on the regional workshops, with 125 participants drawn from these. Thus 13% of the small and medium scale units was covered by the programme.

The average size of factories represented at the workshops was of 112 looms, while 54 factories out of these had an installed capacity of less than the average and 28 factories above this average. Out of the former again a total of 30 factories had an installed capacity of 50 looms and less, so that a significant section of the smaller factories received the benifit of the programme.

Mid-Management Workshop at Jogyakarta.

3.7.8. It has been the common experience of the team that there is a crying need for strengthening the mid-management levels in the small scale textile industry. This was never more evident than in the work in the management development field and thus when a request was received from Primisima in Jogyakarta for a workshop of short duration for their middle level staff, this was readily acceded to. The Factory Management Expert conducted a special appreciation course for the supervisory staff of this factory in September 1979 which was attended by 13 participants.

3.7.9. National Seminar.

3.7.10. Background of National Seminar.

It came to be quite clear during the discussions at the regional workshops that while there may be some regional biases to the management problems in the various regions, there was a common

denominator to these and that an exposure of the participants to others drawn from different regions would help to broaden their perspective in finding solutions to their own management problems.

3.7.11. Concept of National Seminar.

Accordingly it was suggested to the government by the writer that a National Seminar, bringing together the more active participants from among those who had already attended the regional workshops, be organised at the ITT in Bandung.

The Seminar was conceived on a Residential Course basis, with the participants all being housed together for the duration of the seminar for ten days, thus exposing them to each other even during the non-working hours and achieving a closer interaction.

3.7.12. Design of the National Seminar.

The design of the seminar was patterned on the Case Study method with actual situations in the different areas of management such as Production, Marketing Personnel etc, observed by the Management Team during the course of their implementation work forming the " case " for discussion.

3.7.13. Implementation of the National Seminar.

The suggestion found acceptance with the government and a National Seminar on the above lines was held in Bandung from the 19th to 30th November 1979, as a climax to the activities of the project in the area of Factory Management Development.

The participants were also addressed on some selected topics of interest by guest speakers drawn from the government, agencies like National Agency for Export Development (NAFED), SIDFA (UNIDO), and the Project Manager.

There was a total of 16 participants attending the seminar and the lively discussions resulting in their many recommendations (Annexure VI bears ample testimony to what has been indeed the highlight of the Management Development Programme.

The writer wishes also to take this oppotunity to express his appreciation of the excellent manner in which the seminar was organised and conducted by the Streering Committee formed for the purpose, under the leadership of the Co-Project Manager.

3.7.14. Impact of the programme.

The impact of the programme rested on two points, namely : -

1. The measure of acceptance of the programme which was so critical to the success of an activity of this nature.
2. The degree of implementation in practice of the principles of management absorbed at the workshops, by the individual factories participating.

3.7.15. Majalaya case and formation of the SIMA group.

The FMD programme made a most encouraging start with its very first workshop at Majalaya. As has already been mentioned the Majalaya region was considered very " sensitive " by the authorities, mainly because of tradition and history, in so far that it represented the birthplace of the small scale textile industry, but had been overtaken by more recent regions, like notably Pekalongan. It was of paramount importance therefore to pierce the attitudinal barrier in this centre. It is to the credit of the Management Team that this was achieved and that the participants of the first workshop in Majalaya, constituted themselves into a group called the " SIMA " Group, to make a collective approach to their problems in the procurement of raw materials, finishing of their grey goods and marketing of these.
The birth of the SIMA group was inspired by the discussions of their management problems at the workshop and sparked off by the Management Team.

3.7.16. Mid-term appraisal of FMD Programme.

It was considered desirable to take stock of the progress of the programme at about the half way stage, with a view particularly to determining if the design of the programme called for any modi-

fications in order to ensure continued acceptance of the programme by the small scale industry.

3.7.17. Questionnaire design.

Accordingly a questionnaire (Annexure VII) was designed with " Yes " or " No " answers required, covering the following aspects of the programme : -

i). Methodology
- (a). Study Periods
- (b). Implementation

ii). Knowledge gained

iii). Degree of implementation achieved

iv). General benifits gained

3.7.18. Response to questionnaire.

The questionnaire was sent out to all the participants of the EMD Programme upto that point. Thirthysix replies, representing a 54% response, were received. The general consensus was that the programme as it was organised and being conducted was quite suitable from the point of view of the participants. Further, 100% of the replies received expressed the desire of the participants to attend a similar workshop again.

3.7.19. Evaluation of degree of implementation by factories.

Towards the closing stages of the programme, the Management Team undertook a more intensive evaluation of the degree of implementation, by factories in different regions, of the principles of management inculated at the workshops. This involved actual visits to factories by individual members of the Management Team and gathering information on the basis of a very detailed questionnaire designed for the purpose, by the Expert (Annexure VIII).

3.7.20. Results of evaluation.

This evaluation exercise covered 35 factories spread over different regions, with an installed capacity of 4243 looms and employing 4623 workers.

The degree of implementation and gains achieved varied, as was only to be expected, as per the following summary : -

i). Increase in efficiency

	- Highest	34%
	- Average	14.3%

ii). Increase in take-home

-pay of workers	- Highest	50%
	- Average	27%

iii). Increase in labour employment

	- Highest	-
	- Average	3.91%

Factories'overall performance : -

Satisfactory

- Excellent	20%
- Good	12%
- Fair	30%
	62%

Not satisfactory

- Poor	37%
	99%

3.7.21. Details of evaluation exercise

The details of the above, analysed on a regional basis, are contained in Annexure IX.

3.7.22. Guidebook on Management of textile factories in the small and medium scale.

The Management Team have compiled a guide book on the management of textile factories in the small and medium scale, which should form an extremely useful reference document for the factories as well as for use at the TSC's, to which these are being issued.

3.8.0. Problems of the small scale textile industry in the management area.

3.8.1. Strengths and weaknesses of the small scale sector

It is submitted that if the above is viewed from the standpoints of the strengths and weaknesses of this sector of the textile industry, one has a better perspective in the approach to these.

3.8.2. Strengths

The strengths of the industry can be listed as follow :-

(a). Varied machinery and equipment, like plain looms, drop-boxes, jacquards etc. This comprehensive range of looms is a highly valuable management resource.

(b). The industry has a highly adaptable labour force. In this context, the extraordinary skill and dexerity shown by some workers weaving intricate check patterns for sarongs on single shuttle looms, is remarkable.

(c). The wide product range and high value fabrics that this sector can produce is a valuable management resource Ikats speciality towels, and check sarongs are cases in point.

(d). The dispersed location of the industry, which should provide ready markets at the doorstep, if the right product lines are manufactured for the right place.

(e). The small size of the units together with their location in small communities, provides an ideal climate for the development of close employer / employee relations and a high degree of motivation of labour.

3.8.3. Weaknesses.

Under this head will fall : -

(a). Basic lack of knowledge of even the fundamentals of management. This is evidenced by the absence of even the most elementary reporting systems in many factories.

(b). Lack of adequately trained mid-management personnel, like shop-floor supervisors, jobbers (charge hands) etc.

(c). Limited technical " know-how " on the part of top management,

restricting their product range. There is a remarkable shortage of technical " know-how " in the manufacture of " fancy cloth ", for which the industry has the equipment. This implies inability to convert fabric designs through the cloth structure stage of settings (cloth geometry) interlacings, and eventual production on the loom. Expertise is wanting in knowledge of fabric structure, application on the loom, box loom operation and economical setting, two barrel dobby setting and use etc.

The same applies to the field of dyeing and particularly to the economic use of dyestuffs.

(d). No regard at all to the need for proper maintenance of machinery. A large part of this is also due to the inadequate training of the supervisors, and Jobbers (charge hands).

(e). An interrelated problem with the above is the lack of training facilities to provide the industry with a corps of mid level technical personnel with a PRACTICAL bent.

(f). There is a complete lack of appreciation of the need for " good " housekeeping" in the factories. An organised and tidy workplace in itself induces quality mindedness in the workers, while an untidy and disorganised workplace, with materials in process like yarn cones, weavers beams etc, strewn all over the shop floor, results in sloppyness among the operatives and shoddy work.

(g). Finally, the production oriented " philosophy " of top management rather the " market oriented " approach that is so vitally necessary.

3.9.0. Overall comments

3.9.1. Contribution of small scale sector to total domestic cloth production.

At the time the project was conceived in 1974 it was estimated that the contribution of the small scale sector of the textile industry to the total domestic production of cloth was 15%, with 45% of the loom capacity in this sector (Ref : Justification of the project; Pages 1 & 2 of the Project Document).

3.9.2. Data obtained from the then Directorate General of Textile Industries, shows that in the year 1977/78 the breakdown of total domestic cloth production, sectorwise was as follows :-

Sector :	No. of looms installed :	Cloth produced 1977/78 in meters	Production per loom per annum in meters
Large Scale	16,300	341 million	20,900
Small & Medium	48,700	585 million	12,000
Handlooms	N A	24 million	N A

(Note : Large scale - Factories with over 400 looms.
Small & Medium scale - Factories with less than 400 looms
N A - Not Available).

3.9.3. From the above it will be seen that by 1977/1978, the contribution of the small and medium scale sectors representing 75% of the installed capacity had risen to 63% of the total domestic cloth production.

3.9.4. Increase in percentage of contribution of small & medium scale sector to total domestic cloth production.

Analysing this further, the contribution of 45% of the installed loomage has risen from 15% to 63% by 1977/78 by 75% of the looms which are in the small & medium scale sectors put together, & which are the sectors the project has been concerned with.

3.9.5. Increase in productivity of small & medium scale sectors.

Purely on a pro rata basis, if the level of productivity

had remained the same, in these sectors as in 1974 the contribution in 1977/78 would have been 25% in the latter year, as against the actual contribution of 53%.

3.9.6. Thus there has been a significant increase in the productivity of these sectors.

3.9.7. Productivity of small & medium scale sectors compared with large sector.

The production per loom per annum in the large sector was 20,000 meters in 1977/78, whereas it was 12,000 meters only in the small & medium sectors, so that the productivity of the latter sectors is still only 60% of the former.

3.9.8. Trend of productivity of small & medium scale sectors.

However the rising trend of productivity in the small & medium sectors is clear and the project derives considerable satisfaction from this.

GARMENT ADVISER.

3.10.0 Subsequent to the commencement of the project, the government requested the assistance of a consultant for the Garment Industry for a period of three months. The main function of the Consultant is to survey the existing production facilities and methods in the small scale garment industry, its marketing methods and supporting institutions, with a view to assisting the government in formulating proposals for its development on sound lines because of its large employment potential. This consultant, Mr. Eliot Michaelson (USA) joined the project on 6th January 1980 on a three month assignment and is currently engaged is field work.

4.0.0. Counterpart situation & training

4.0.1. The names of counterparts assigned to the project and their qualifications and background are as listed in Annexure XII.

4.1.0. Co-Project Manager.

4.1.1. Mr. Santosa, who was at the time of the commencement of the project in September 1975, the Director in charge of the technical & research institutions serving the textile industry & which were under the jurisdiction of the then Directorate General of Textile Industries, was assigned as Co-Project Manager.

4.1.2. Mr. Santosa had already been associated with the previous project (INS/71/531) in a similar capacity and therefore came to us with the experience of a technical assistance programme of the nature of this project. Together with his standing and knowledge of the textile industry, this provided an ideal background for his work as Co-Project Manager.

4.1.3. After the reorganisation of the Ministry of Industry in 1978, Mr. Santosa was moved to the Agency for Industrial Research & Development (BPPI) ,but the project was fortunate in having his continued association as Co-Project Manager. The project owes a lot to Mr. Santosa for his understanding and unstinted co-operation in its execution.

4.2.0. Market Research & Market Development & Promotion.

4.2.1. Mr. Idi Subroto & Mr. Soeroeri were originally assigned as counterparts in this area and joined the project in May and June 1976 respectively immediately after the arrival of the Market Research Expert.

4.2.2. With Mr. Subroto's technical background and that of Mr. Soeroeri in economics, it was accepted that they would complement each other in the work in this area.

4.2.3. Unfortunately, however, in actual fact Mr. Soeroeri found himself unable to give the time that it called for to his function as counterpart, because of his other preoccupations in the Ministry of Industry. Mr.Idi Soebroto thus continued as the lone counterpart until the departure of the Market Research Expert (Mr. Vaahtokari) in September 1977.

4.2.4. However at this point even Mr.Idi Soebroto was re-assigned to other duties in the Ministry and Mr. Abbas was nominated as counterpart to the Market Development & Promotion Expert.

4.2.5. Mr. Abbas showed good promise in his development as counterpart, but again following the reorganisation of the Ministry in the latter half of 1978, Mr. Abbas came to be withdrawn, consequent on his being posted to some other function in the new set-up.

4.2.6. A period of uncertainty then ensued, and the Market Development Expert (Mr. Aavatsmark) was virtually without a counterpart for a time, even though being assisted by Mr. Rasjidin Dimar (Manager MSO), from time to time.

4.2.7. This position was formalised with the assignment of Mr. Rasjidin Dimar, who had also had the benefit of a study tour, as counterpart to the Market Development Expert in August 1978.

4.2.8. Even to-day, however, Mr. Rasjidin is not always able to devote undivided attention to his function as the Marketing Counterpart, and it has to be recorded with regret that counterpart development in the area of Marketing has not been possible to be achieved to the desired degree, in view of the situation described above.

4.3.0. <u>Counterparts in Technical Services, Knitting and Factory Management Development.</u>

4.3.1. In refreshing contrast to the position in regard to the marketing area, all the counterparts in the above fields have

benifitted beyond question by their exposure to the international experts.

4.3.2. Being Senior members of the faculty of ITT, Bandung and having had the benifit of development by the previous project also in most cases, it can be affirmed that these counterparts have now attained a level of practical knowledge of their disciplines to serve the industry adequately.

4.3.3. It is clear that all these counterparts have received acceptance in the industry and the project has reason to be justifiably satisfied that the objective in counterpart development in these areas has been fully achieved.

4.4.0. Textile Design & Product Development Counterparts.

4.4.1. The bulk of the counterparts assigned to this field are technically oriented, rather than " art oriented ". While this has perhaps been a limiting factor in their development as creative textile designers, their technical background has not been without advantage.

4.4.2. They have been complimented very effectively by Mrs. Ae Rizal, who came to this section with her background of academic training in Textile Design at the Institute of Technology Bandung (ITB). It was possible to obtain her assignment to the Textile Design Section on a full time basis and she has proved an asset to this activity.

4.4.3. If ultimately the Textile Design Section, now being set up, can continued to have Mrs. Rizal to spearhead its activities and extension services to the small scale industry, it would indeed be well served.

5.0.0. Fellowships.

5.0.1. Study Tours.

Mr. Hanafi Wirabrata, Chief of the Textile Bureau of the Regional Office of the Department of Industry of West Java and Mr. Rasjidin Dimar, Manager of the Marketing Services Organisation (MSO) were deputed from 4.6.1978 to 2.7.1978 for a Study Tour of India, Thailand and the Phillipines, under the aegis of the project.

5.0.2. The purpose of the Study Tour was " to study the handloom and powerloom industry, with special reference to the measures taken by the government and by the industry itself, to increase its effectiveness and competitive power in the home and export markets ".

5.0.3. M/s Hanafi and Rasjidin submitted a very comprehensive report on their findings which was forwarded to the Directorate General of Textile Industries, and UNIDO , Vienna.

5.1.0. Two fellowships in Market Research.

5.1.1. M/s Yayan Mulyana from the TSC in Majalaya & Kambali Abhal from the TSC in Lamongan were nominated by government for the above in November 1977, the country for study being India.

5.1.2. However Mr. Abhal showed no progress in acquiring even a working knowledge of English to benifit from the fellowship and it was therefore recommended to government in June 1979 that he be replaced (Vide Memo to Co-Project Manager) (Annexure).

5.1.3. Mr. Kambali Abhal was accordingly replaced by Mr. Widjitoro, Chief of the area office of the Department of Industry in Pekalongan, in July 1979.

5.1.4. However Mr. Widjitoro withdrew his candidature subsequently for personal reasons, and Mr. Suwondo Geni from the TSC Pelongan was nominated as the alternate, in October 1979.

5.1.5. As arrangements for the training of the fellows in India and their placements with the several organisations and institutions concerned had been finalised in the meanwhile, Mr. Mulyana was deputed forthwith to begin his fellowship at the end of October 1979, while the nomination of Mr. Suwondo Geni was still under processing.

5.1.6. Further it was recommended by the authorities concerned in India, that a period of three months would be adequate for the field of study proposed, which was basically the following : -

(a). Training in Market Research (data collecting, their statistical preparation and findings and intrepreting and presenting the results.

(b). Some practical knowledge about sources of data & the field work itself, by visiting trade associations, government institutions and market research institutions, with special reference to the small scale textile industry.

(c). An overall picture of the marketing system and methods in the host country and factors affecting it.

5.1.7. The proposal to reduce the period of the fellowships from the six months originally proposed to three months was accordingly discussed with government and agreed too.

5.2.0. Fellowships in Market Development & Promotion.

5.2.1. M/s Bangun Katabudjur and Nawawi Mochammad from the ITT, Bandung were nominated for the two fellowships in the above area, with the United Kingdom to be the country of study.

5.2.2. Basically the field of study was to be : -

- Study of information & communication systems for obtaining market information .
- Product Planning (value of " brand name " and " brand image ").

- Distribution systems (use of agents, wholesalers and/or middlemen, transport methods etc).
- Retailing methods.
- Advertising & Promotion (use of advertising agents, budgeting etc).
- Pricing and price setting (on the basis of evaluation of costs vs profits etc).
- Standardisation & quality control, systems of labelling - including identification, dimensions, customer guidance e.g. washing instructions etc).

It was intended that the fellows be placed with the relevant sections of Houses like Marks & Spencers or Selfridges so that the entire gamut of operations could be studied under one roof.

5.2.3. However M/s Rangun and Nawawi could not unfortunately conform to the level of proficiency, required by the British Council in the English language for training in UK and hence the possibility of their placement with similar organisations in Holland are being presently explored by the Training Section of UNIDO.

5.2.4. In the case of these fellowships also, the period of training has been curtailed from six to three months, at the instance of government.

5.3.0. Fellowship in Knitting Technology.

5.3.1. The Knitting Expert was of the view that it would be preferable for the fellowship in the above area to be in Circular/ Flat Knitting technology rather than in Warp / Raschel Knitting, having regard to the fact that two members of the staff at the Knitting Centre had already had the benefit of training in these fields.

5.3.2. Accordingly in consultation with government, the area of training was determined to be Circular ' Flat Knitting and to cover the following : -

1. Flat Knitting
2. Circular Knitting
3. Interlock Knitting
4. Jacquard Knitting
5. Hosiery / Socks Knitting
6. Full-fashioned Outerwear Knitting
7. Double-Cylinder Links - Outerwear Knitting

5.3.3. Further it was recommended that the fellow take a 6-months'course at the Training School of the Bentley Engineering Group Ltd, Leicester (U.K.).

5.3.4. Mr. Achyar of the Knitting Centre and the counterpart of the Knitting Expert was nominated by the government for the above fellowship and commenced his training in April 1979, inclusive of one month's language training.
Mr. Achyar is thus scheduled to return in January 1980.

5.4.0. Fellowship in Knitting Design.

5.4.1. The field of training under this fellowship was to cover theoretical & practicaltraining in (a) Warp and raschel knitting designing and
(b). Flat/circular knitting designing.

5.4.2. The programme of training covered 3 months with Karl Mayer Textilmaschinenefabrik Gmbh Oberthausen, in warp and raschel designing, six weeks with H. Stoll & Co Reutlingen for flat-knitting designing and six weeks with Mayer & Cie Albstadt/Taitfingen, all in West Germany, for Circular/Jacquard designing.

5.4.3. Mr. Sakri Iranto, the Knitting Design counterpart, was nominated by the government for this fellowship and commenced his training with Stoll Strickmaschinenfabrik Gmbh, Reutlingen on 23rd April 1979.

5.4.4. He was with this firm until 27.8.1979 and underwent both theoretical & practical training on flat knitting designing.

5.4.5. The course included the analysis of different types of knitted fabric samples and their production by the counterpart himself on a hand flat knitting machine.

5.4.6. After the completion of this part of the training Mr. Iranto moved to Karl Mayer Textilemaschinenfabric GmbH, Obertshausen from 31.8.1979 to 20.10.1979, during which he studied both the theory and practice of warp and raschel knitting design, with particular reference to curtainings, Brocades & Trimmings.

5.4.7. On the completion of his fellowship training Mr. Iranto has returned to the ITT & also submitted a report on his training.

6.0.0. Equipment.

6.0.1. Optiscope.

UNIDO has provided the Textile Design Section with an optiscope, which should be extremely useful in the production of print designs particularly. This was received in February 1978.

6.0.2. Warp Knitting machine with weft insertion.

The original Project Document provided for the contribution by UNDP, of the following items of equipment to the Knitting Centre :

I T E M :	Estimated Cost ($) :
(a). One Warp Knitting machine with weft insertion.	57,630
(b). One lace raschel knitting with fall plate.	59,720
(c). One pattern beam warping machine.	7,000
(d). One sectional beam warping machine.	29,220
(e). One spunwarp knitting machine.	47,150
T o t a l	200,300

Subsequent to the visit of the Fahlstrom Mission, it was decided to eliminate all the items other than the Warp Knitting machine with insertion to consultation with government (as already mentioned (vide 2.7.2.).

Thus a warp knitting machine with weft insertion constituted the UNDP equipment component to the Knitting Centre, at a total cost of US$ 59,370 . This was received in May 1978 & commissioned in July 1978.

7.0.0. Seminars presented by the UNIDO team.

7.0.1. The UNIDO team of experts presented a total of four 2-day Seminars, as per the following details : -

Date :	Theme :	Venue :
December 13 & 14, 1976.	Development of traditional textile designs for the market promotion of the Indonesian small scale textile industry.	Yogyakarta.
November 7 & 8, 1977.	Some approaches to the development of the small & medium scale textile industry.	Bandung.
December 20 & 21, 1978.	UNIDO seminar on strengthening the potentials of the small & medium scale sectors of the textile industry.	Bandung.
January 21 & 22, 1980.	Problems, possible solutions & prospects of the small scale textile industry in Indonesia.	Bandung.

7.0.2. There was an average of 50 to 60 participants at each of the Seminars drawn from the small scale textile industry and the government departments concerned.

7.1.0. Technical Reports.

The project has done 100 technical reports to date, on the various aspects of its work. These have been circulated to the Agency, Government and to individual factories in those cases where these pertained to technical advise rendered to factories. A list of the reports is contained in Annexure XIV.

8.0.0. RECOMMENDATIONS

8.1.0. Imbalance between installed spinning capacity and installed looms.

8.1.1. The bias in the situation in regard to available supplies of spun yarn to the weaving sector of the industry, still seems to be in favour of the spinning sector, in Indonesia.

8.1.2. Growth of spinning sector.

The recent growth of the spinning sector particularly since 1967/68, has been phenomenal no doubt, and the installed spindleage is now reported to be of the order of 1.721,110 spindles (ref : table below) : -

Year :	Installed spindleage :	Year :	Installed spindleage :
1967/1971	481,730	1971/1972	552,468
1972/1973	631,234	1973/1974	729,680
1974/1975	869,660	1975/1976	1,238,500
1976/1977	1,394,268	1977/1978	1,573,224
1978/1979	1,721,110	-	-

Source : Assosiasi Pemintalan Indonesia (ASPI) (Association of Spinners , Indonesia).

8.1.3. Rising trend in average counts of yarn required.

The increase in spindleage has also to be viewed against the rising trend of the Average Count of yarn required by the Weaving Sector. In our estimate this has risen progressively from 24^S (approx.) in 1973 to 36^S (approx.) presently.

8.1.4. Yarn requirement per loom shift.

The quantity of 36^S yarn required for an 8-hour loom/shift on powerlooms (MTM) on a fabric of 36^S warp x 36^S weft, 96 Reed x 64 Pick (which is a fairly typical cloth construction), will be 2.83 Kgs at 70% loom efficiency. This represents the average operating efficiency of the entire weaving sector (both

large & small & medium, with the large producing 20,000 meters/loom/year and the other two producing 12,000 meters/loom/year.

8.1.5. Spindle / loom ratio.

The expected production of 36^{s} yarn per spindle / shift is 96 grammes. On this basis the number of spindles/ shift required to feed one loom/shift will be 2850 : 96 = 29.6 (say 30 spindles).

The present (1978/1979) installed capacity of power-looms in the industry is 65,000. (Source : DITJENTEKS), so that with 1.72 million spindles in place, this gives a ratio of 26.46 (say 26 approx.) spindles per loom, without even taking the hand-looms into consideration, which sector accounts for a further 66,000 looms.(Source : DITJENTEKS) and their requirements of yarn have also to be met.

8.1.6. Shortfall in spindleage.

Thus there is already a shortfall, in terms of installed spinning capacity, of 195,000 spindles for the powerloom sector alone.

8.1.7. III Repelita targets.

The targetted installed capacity of spindles in the final year of Repelita III (1983/1984) is 2.2 million spindles & powerlooms 82,000, thus yielding a ratio of 26.8 (say 27) spindles per loom. The targetted figure for handlooms at the end of the same period still remains at 60,000 looms, which have to be catered for also.

8.1.8. Consumer preference & spindle / loom ratio.

Since consumer preference is showing a rising trend for finer fabrics, the average counts of yarn required by the weaving sector by 1983/84 can be assumed to be even higher than the present 36^{s}, thus throwing the ratio between spindles and looms installed even more out of balance.

8.1.9. Estimated spinning capacity required.

It is our estimate therefore that in order to achieve a better degree of self-sufficiency in yarn requirements by 1983/1984 (Repelita III) on the basis of 36^{s} average count required for the powerlooms and 20^{s} average for the handlooms, the spinning capacity required will be as shown in the following table.

	Total No. (Repelita III) (1983/84)	Average Cts of yarn required.	Cloth production per loom per 8 hour/shift.	Yarn requirement per loom for 8 hour/ shift.	Yarn production per 8 hour spindle /shift.	No. of spindles required / loom/shift.	Total No. of spindles required.
Powerlooms	82,000	36^S	24 meters	2.85 kgs	96 grams	29.68 (30)	2,460,000
Handlooms	60,000	20^S	7.3 meters	0.52 kgs	170 grams	3.05 (3)	180,000

Grand Total of Spindles required = 2,640,000

Total planned for 1983/84

(Source DITJENTYS) = 2,200,000

Shortfall = 440,000.

8.1.10. Possible argument against further increase in spinning capacity planned.

It may be argued that the spinning sector operates on a 3-shift basis while the weaving sector operates only on a 2-shift basis - (or even less in some cases) and that therefore the planned capacity of the spinning sector should be adequate to meet the yarn requirements of the weaving sector.

8.1.11. Necessity for long term planning on shift to shift basis.

It is submitted that any long term planning to achieve self sufficiency in yarn supplies must be based on a shift to shift basis.

Further the two following factors have to be kept in mind : -

(a). The rising trend in the average counts required.

(b). Possible increase in the operating efficiency of the small & medium scale sectors, which presently still stands only at 60% of the large scale, but has registered a significant increase already.

8.1.12 Recommendation.

It is recommended therefore that government consider a further enlargement of the spinning sector than the 2.2 million spindles envisaged by 1983/1984, to 2,640,000 spindles as indicated in the table above.

8.2.0. Better geographical dispersal of spinning units required.

There is too heavy a concentration of the entire textile industry, and particularly the spinning sector in the island of Java.

8.2.1. Government policy against further expansion of the textile industry in Java recognised.

The policy of the government not to permit the installa-

tion of any further textile mills in the island of Java is most laudable indeed.

3.2.2. More spinning units in Sumatra required.

There are sizeable pockets of the Weaving industry in the different regions of Sumatra. Most of these have now to look to Java for their supplies of yarn, with only two (or three) spinning units in that island.

3.2.3. Recommendation.

It is recommended therefore that in any plans for the growth of the spinning sector, priority for locating these in Sumatra may be given consideration.

3.3.0. Need for further strengthening of institutional support for the development of the small & medium scale sectors of the textile industry.

3.3.1. MSC & TSC's providing only limited services at present.

The Marketing Services Organisation and its wings in the regional TSC's, established under the project, while being a step in the right direction in this regard, are still only capable of providing limited services to the small & medium scale sectors of the industry.

3.3.2. Requirements for more expanded services.

It is recognised that the development of these institutions to the organisational and activity levels that the situation demands is dependent on two main factors, namely : -

(a). Personnel of the right calibre to man the support institutions.

(b). Adequate funds to meet all the operational budgets for more enlarged services.

3.3.3. Budget Estimates of Directorate General of Small Scale Industries for MSC & TSC's.

The budget estimates of the Directorate General of Small Scale Industries, for the support activities for the small scale sec-

tor of the textile industry, inclusive of the operations of the MSO (Jakarta), its wings at the regions and the TPC's, as also the administrative offices at Jakarta, ranges from Rp 485 million (approx.) in the year 1979/1980 to Rp 997 million (approx.) in the year 1983/1984 (Vide Annexure XV).

Sectorwise break-up of targetted domestic production of textiles.

8.3.4. The targetted domestic production of textiles at the end of Repelita II was 1,400 million meters. Of this, the contribution of the large sector of the industry can be estimated to be 490 million meters on the basis of the break-up of 35% by this sector and 65% by the small & medium scale sectors, assuming the position in 1977/1978 as representative and allowing for some increase in the contribution of the latter sector.

Proposal for levy (or cess) on large sector.

8.3.5. If a levy (or cess) of only Rp 2 per meter to start with is made on the cloth produced by the large scale sector, it will yield a revenue of Rp 980 million per annum which could be utilised for financing the supporting institutions to provide more expanded services to the small & medium scale sectors, pay attractive salaries to the technical staff, and even provide a strong financial base to provide short terms credits to this sector of the industry.

The figure of Rp 2 could be gradually raised to even up to Rp 5 per meter, in the light of actual needs, to bring the revenue from this source to 2,450 million Rp. annually.

The levy to constitute seperate fund.

8.3.6. The financial resources thus raised, would have to be set-up as a seperate fund to meet the requirements for the development of the small & medium scale sectors of the industry.

Proposal in consonance with " Bapak Angkat " policy.

8.3.7. It is submitted that a levy of the scale suggested will cause no hardship to the large sector, while the rationale of such a levy will be in consonance with the " Bapak Angkat " philosophy of the government, wherein the stronger large sector will nurse the weaker small scale sector.

Strict monitoring of large sector required.

8.3.8. The measure proposed would call for strict monitoring of the production of the large scale weaving sector, but here again it is submitted that this should not constitute a serious administrative problem having regard to the small number of establishments involved.

Recommendation.

8.3.9. It is recommended that government examine the feasibility of the above proposal for a levy on the large sector of the textile industry.

... / ...

Annexure V : Budget Estimates of Directorate General of Small Scale Industries for MSO & TSC's.

No.	Budget Head	First Year (1980/1981) Actual Budget	Estimates for each year				Remarks
			Second Year (1980/1981)	Third Year (1981/1982)	Fourth Year (1982/1983)	Fifth Year (1983/1984)	
1.	Central Office	Rp. 127,541,000,-	First Year +	Second Year +	Third Year +	Fourth Year +	- Central = Garment Section Project - MSO Jakarta etc.
2.	Regional Office	Rp. 173,250,000,-	± 20%	± 20%	± 20%	± 20%	- Not all the Regional Provinces.
3.	TSCS / MSO	Rp. 184,595,000,-	Rp.221,514,000,-	Rp.265,816,300,-	Rp.318,980,160	Rp.382,776,190,-	- 8 TSCS/MSO = 8 TSCS in Majalaya, Pekalongan, Klaten, Lamongan, Denpasar, Silungkang, Pematang Siantar & Sengkang.
	Total	Rp. 485,386,000,-	Rp.577,083,000,-	Rp.692,500,000,-	Rp.831,000,000,-	Rp.997,200,000,-	
		US$ 776,617	US$ 923,332	US$ 1,108,000	US$ 1,329,600	US$ 1,595,520	

= US$ 5,733,069 for 5 yrs.

8.4.0. Utilisation of Marketing Services Organisation as Selling Agency for Small Scale Textile Industry.

Concept of Marketing Services Organisation (MSO).

3.4.1. The MSO was conceived in the project design as an autonomous institution " which is expected to generate its own funds in the fullness of time, but will receive financial assistance from the government in its formative stages ".

Development of the concept.

3.4.2. The development of the above concept implies an inflow of funds into the MSO as a result of its own activities, in the fullness of time.

3.4.3. Sub-contracting section of MSO.

One of the activities of the MSO which has already established itself in a measure is the sub-contracting undertaken by it on behalf of institutional buyers. The small scale units, situated as they are in areas remote from a metropolis like Jakarta, do not have the scope or means of establishing business contacts with such institutional buyers, and the MSO therefore serves as a profitable link.

3.4.4. Development of sub-contracting on commercial lines.

It is imperative to develop this activity on commercial lines in the interests of growth. This can be achieved if there was a financial incentive to the personnel attached to the sub-contracting activities, and to develop this source of revenue to the MSO.

3.4.5. Recommendation.

It is recommended therefore that :

(a). the MSO covers itself for a commission of 5% on all sub-contracts executed.

(b). the MSO pays a brokerage of 1/2 to 1% to its personnel responsible for obtaining sub-contracting business, to give them an incentive for developing this.

3.5.0. Reservation of Production for the Small Scale Sector of the Textile Industry.

Reservation of production for the small scale sector can either be (a). Qualitative (b). Quantitative.

3.5.1. Basic considerations.

The basic considerations that will apply in determining the mode for reserving any category of cloth to be exclusively manufactured by the small scale sector will obviously be the following : -

i. Market requirements of the particular variety based on estimated demand.

ii. Potential of the small scale industry to meet this demand.

It is essential for this purpose to have a " Resource List " of the small scale sector even to be able to estimate the potential of the industry for the manufacture of a given category of febric. A suggested Pro-Forma for this (Annexure A) is attached.

Based on information as above, atleast a starting point can be established to determine if a qualitative or quantitative approach has to made to the question.

3.5.2. Qualitative Reservation.

Initially a beginning should be made with one category of fabric , like Sarongs, which offers a very good example for being restricted for manufacture by the small scale sector.

3.5.3. Definition of variety of cloth required (Example : Sarong).

If therefore it is decided to make a beginning with say Sarongs, a definition of this, which is easy of understanding and also difficult to be violated by the competing sector, must be laid down.

The following is a suggested stipulation in this regard : -

" No producer with an installed capacity of looms in excess of " X " looms shall produce Sarongs with a check pattern or any cloth with a check pattern having width between 110 cms and 132 cms from which Sarongs can be made.

Provided that nothing in this direction will apply to the production of checked table cloths or bed covers, which (1) is made of counts not higher than 20^S warp or weft and (2) reeds and picks not higher than 48 and 44 - respectively ".

8.5.4. Other suggested varieties.

Other varieties which can follow, once the reservation in regard to Sarongs has been established, are some of the following among others, which are suitable for manufacture by the small scale sector.

(1). Blacus (90 cm to 106 cm grey width 20^S wp x 20^S wft, 56R x 52P).
(2). Bandage cloth (112 cms to 117 cms grey width 32^S x 20^S, 44P x 28P).
(3). Dusters (45 cm x 45 cm with coloured borders 2.5 cm" wide & headings of 2.5 cm" 20^S x 1.5^S 40P x 18P).
(4). Luriks.

8.5.5. Quantitative Reservation.

In the case of varieties of cloth wherein the potential of the small scale sector to meet market demands may not be adequate, a quantitative restriction on the production of such varieties of cloths by the large scale sector may be called for.

Specifically speaking, if, for example, the potential of the small scale sector for the manufacture of blacus (20^S x 20^S 56R x 52P) is not adequate to meet the consumer requirements, a prorata restriction on the manufacture of this cloth by the large scale sector can be imposed. If, say, the small scale sector can meet only 60% of the demand, with 75% of the looms available in the whole industry, it can be stipulated that : " NOT more than 40% of the looms in any weaving factory with more than " X " looms shall be engaged in the manufacture of blacus of 90 cm to 106 cms grey width with 20^S warp x 20^S weft 56R x 52 P ".

8.5.6. Main Prerequisites.

Irrespective of the nature of protection or assistance provided to the small scale sector, the most critical requirements will

be the establishment of (1) Monitoring systems and (2) Enforcement Measures, as will be readily appreciated.

8.5.7. Monitoring of production.

Monitoring systems will involve primarily calling upon individual factories / mills to submit production returns of yarn & cloth, countwise and sortwise respectively every month, by say the 15th of the following month.

These figures should form the base for any regulatory action that may be called for. It is only such statistics that can provide a base for any type of regulatory measures and/or assistance at all. A suggested proforma of such a return is appended (Annexure B).

8.5.8. Enforcement measures.

Enforcement measures have to ensure that qualitative and/or quantitative stipulations laid down are not violated by the large scale sector. It also implies that the regulatory measures will have enough " teeth " in them to compel the factories to adhere to the stipulations laid down and make it clear that non-compliance would be met with penal measures.

8.5.9. Recommendation.

It is recommended that government make a selective approach to this question & consider the reservation of production of atleast Sarongs in the first instance to the small scale sector.

Annexure " A "

RESOURCE LIST OF POWERLOOM FACTORIES.

1. Factory, address and telephone - by Region.
   (name of proprietor).

2. Installed capacity.

3. Details of looms/widths.
   (a). plain
   (b). automatic
   (c). drop-box
   (d). dobby
   (e). dobby - dropbox
   (f). jacquard
   (g). jacquard / dropbox

4. Production capacity Actual/theoretical.

5. MAIN product lines.

RESOURCE LIST OF HANDLOOM FACTORIES.

1. Factory name address - By regions.
2. Installed capacity.
3. Width of looms.
4. Poduction capacity.
5. MAIN product lines.

(ANNEXURE " B ")

NAME OF COMPANY

ADRESS

No. OF LOOMS INSTALLED MONTH 1979

No. OF LOOMS WORKING

DESCRIPTION OF CLOTH	DIMENSIONS		PARTICULARS				No. of DAYS WORKED IN THE MONTH	NO OF LOOM HOURS WORKED IN THE MONTH	TOTAL PRODUCTION IN METERS
	WIDTH	LENGTH	WARP	WEFT	REED	PICK			
							GRAND TOTAL:		

8.6.0. Supervisory Training Programme.

8.6.1. Type of middle level supervisors in the small scale textile industry.

The usual pattern of management in the small scale sector, is for the owner himself to fill many roles, understandably, and perform a variety of management functions. In this situation he is obliged to rely heavily on the shop-floor supervisor (usually a worker of some seniority of service with the establishment) to take care of the management of labour in the various sections, and who also performs some production planning , & machinery maintenance functions at the same time.

8.6.2. Lack of " skill " in the performance of supervisory functions.

An effective supervisor is one who possesses both " knowledge" of his job as well as " skill " in performing it. In the small scale sector - and this applies with equal force to some factories in the medium scale sector also - there is a lamentable lack of the " skill " even where there is a basic level of"knowledge". This is evidenced for example by the absence of the requisite degree of discipline in many factories.

The establishment of the several regional textile schools (like the Balai Tekstil at Jakarta , Pekalongan, Medan etc) can be expected to meet the requirements in regard to developing supervisors with some " knowledge " of the job.

8.6.3. Need for supervisory training for developing " skill ".

However there is an imperative need for establishing a Supervisory Training Programme for developing the necessary skill in middle management supervisors, as they are the " Kingpins " of factory management.

8.6.4. Programme for training trainers.

With the wide dispersal of the small & medium scale sectors

of the textile industry, the most practical approach to a supervisory training programme in our view will be to develop a corps of " trainers " who can be situated individually in the various regions - say at the TSC's.

3.6.5. " Trainers "to be trained .

A corps of 8 trainers initially, on the basis of one trainer for each TSC and selected with some regard to their aptitude & personality for such a function should be subjected to an organised and scientific " Supervisory Training Programme " by an international expert in this field, and held at either Jakarta or Bandung, with the Balai Tekstil or ITT respectively providing suitable venues.

3.6.6. " Trainers to develop supervisory skills in the field."

After the period of training on the basis of a programme designed by an expert supervisory training the " trainers " are to be re-assigned to the individual TSC's to conduct supervisory training programmes on a continuing basis to middle management personnel in the factories in the region concerned.

3.6.7. Recommendation.

It is recommended that consideration be given to the establishment of a programme for " training of trainers " for the small & medium scale textile industry.

3.7.0. Consultancy Services for Small & Medium Scale Sectors.

3.7.1. Limited facilities available at present.

The TSC's and the senior counterparts trained by the project and based at the ITT, Bandung , are capable of providing assistance to the Small Scale factories, in the limited technical areas, and in the solution of day-to-day shop floor problems.

3.7.2. Need for " Consultancy Services " of a broader character.

However, these factories require and can benefit considerably by consultancy services in depth both in situations where

(a). expansion of existing manufacturing facilities as well as
(b). operation & control of existing activities are concerned.

8.7.3. Area in which consultancy services are required in the expansion of existing manufacturing facilities.

The managements of the small & medium scale textile factories, who plan expansions, do not have adequate knowledge of : -

- choice of technology and equipment selection.
- equipment specifications tendering bid evaluation & contracting.
- scheduling, monitoring and control of project implementation.
- plant design & lay-out.
- design & implementation of management, production and marketing systems.

8.7.4 Areas in which consultancy services are required in the operation & control of existing activities.

Similarly, there is considerable need for consulting services in the operation & control of existing activities. -

- technical & management trouble shooting.
- upgrading of plant management.
- increase in operating efficiency.
- quality control & maintenance systems.
- production planning & control.
- COST CONTROL AND COST REDUCTION.
- production flow & materials handling.
- capacity utilisation improvement.
- product design & product development.
- sales systems, product line planning, pricing.
- inventory control.
- expansion programmes, diversification.
- set-up management information & control systems (for production efficiency and other performance indicators.

8.7.5. Inability of small scale operators to hire expensive consultants.

It is needless to emphasise that except in very few cases perhaps the small scale factory owner cannot afford the services of established consulting firms in the private sector.

8.7.6. Need for establishing a consultancy " cell ", financed by the state, to provide consultancy services to the small scale sector.

There is thus need for setting up a consultancy unit to which the small scale operator can have recourse, whenever in need.

8.7.7. The small scale operator to be educated in the utilisation of such services.

The small scale factory owner is not oriented to the use of consultancy services and has to be educated in the use of such. The Regional Perindustrian Offices and alert BIPIK officials will have a role to play in this direction.

8.7.8. Need for training " consultants ".

Personnel for providing such across the board consultancy need to be specially trained in the techniques of consultancy. The Management counterparts trained by this project may well serve as a nucleus of such a service with further specialised training in consultancy work.

Recommendation

8.7.9. Training programme for " consultants ".

It is suggested that government seek the assistance of either multilateral or bilateral aid programmes, for obtaining the services of experienced consultants in the textile industry to set up a training programme for developing personnel for a " consultancy unit " for the small scale textile industry. The running cost of such a service can be met from the fund suggested in 8.3.6.

3.8.0. Manufacture of spare parts for the small scale textile industry.

3.8.1. Scarcity of spare parts for winding machines, looms etc.

It is our experience that in many cases items of weaving preparatory machinery and looms in small scale weaving factories are rendered idle for want of simple spare parts like bushes, clamps, picking bowls etc. It is not uncommon, in the situation, to see cannibalisation of machinery thus reducing operable machine capacity materially.

3.8.2. Spare parts required mainly finished castings.

The spare parts required in these cases are mostly of finished castings and not sophisticated engineering items.

3.8.3. Possible complementary role of the small scale engineering units.

Since the spare parts required in many cases are of a simple nature of finished castings there is very valuable scope for developing the small foundries & machine shops in the small scale engineering industry to meet this requirement of the small scale weaving industry.

Recommendation

3.8.4. It is recommended that the SIPIC programme for the small scale engineering industry examine this angle, in view of the obvious common advantage.

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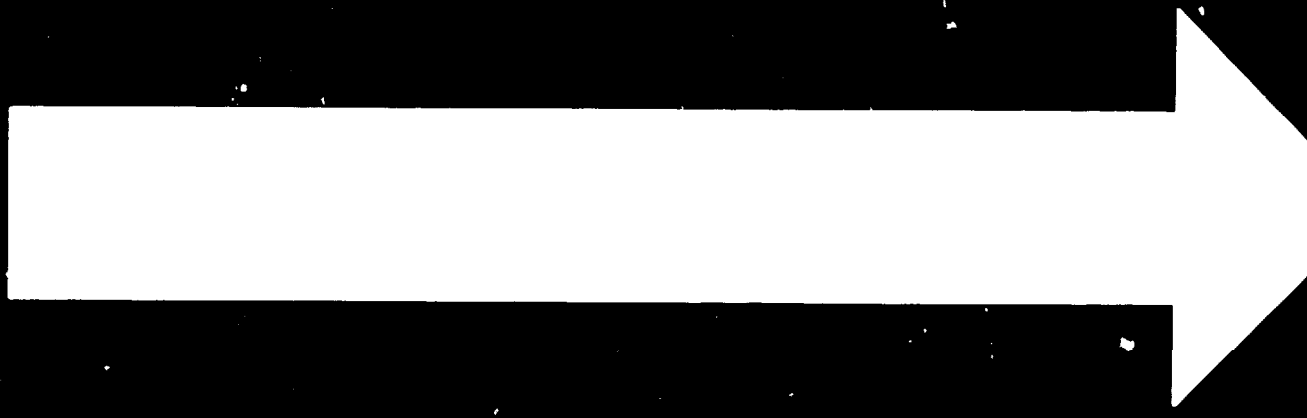

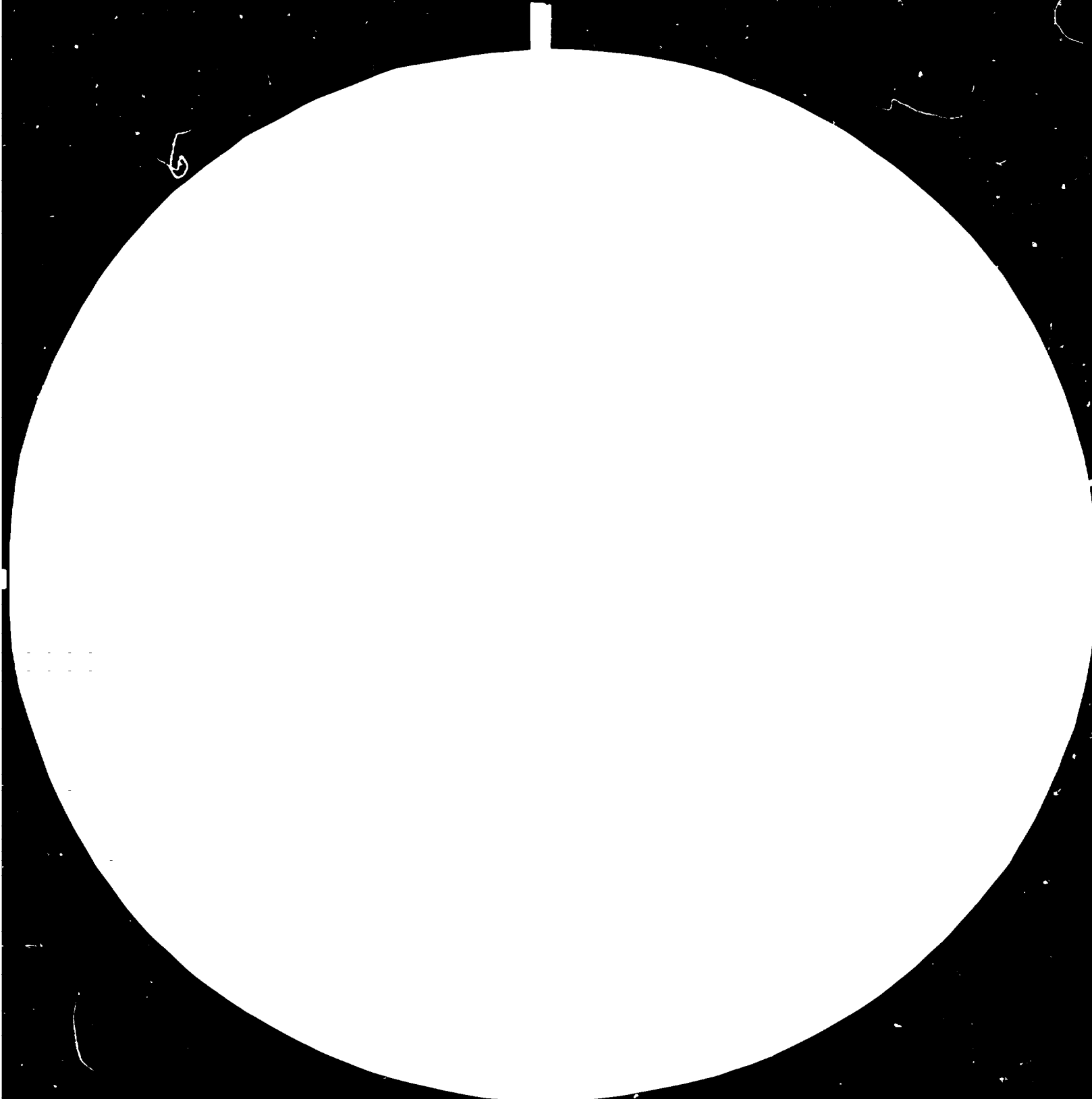

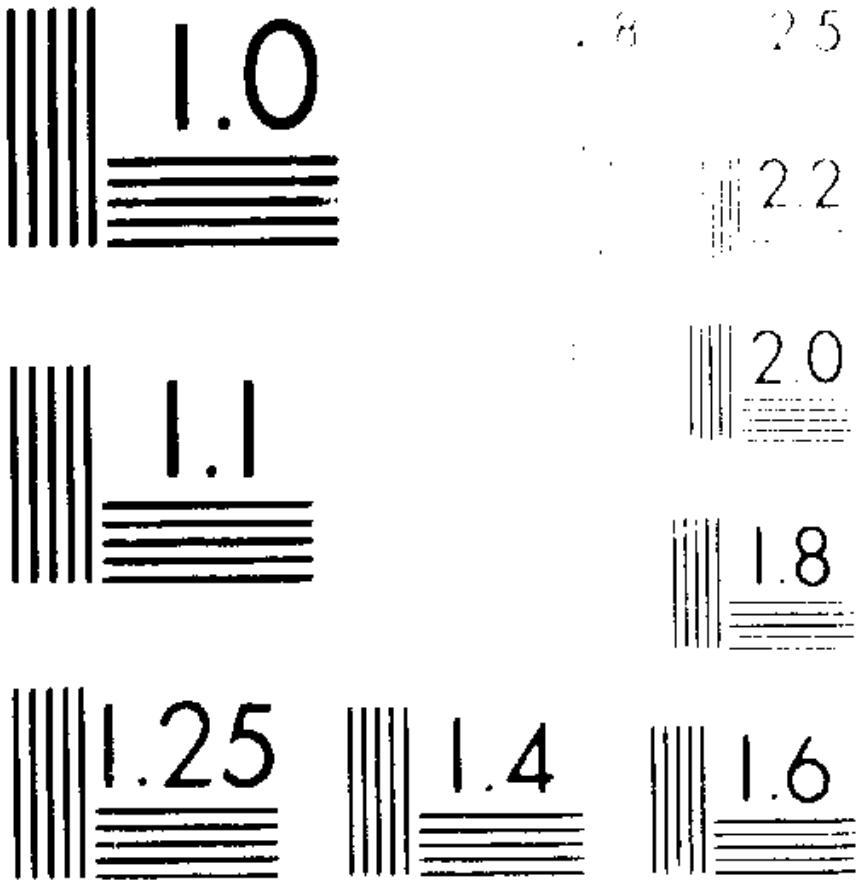
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ACKNOWLEDGEMENTS

We wish to place on record our deep sense of appreciation of the understanding shown by Mr. Safioen, throughout the period he was associated with the project as Director General of Textile Industries, his ready access for discussions of its various aspects, and his able guidance in its execution.

The Co-Project Manager Mr. Santosa has at all times shown the utmost co-operation in the work of the project and for this we are most obliged.

Our thanks are also due to Dr. Suhartono, Director General of the Agency for Industrial Research & Development, Mr. GitoSoewojo, Director General of Small Scale Industries and their senior staff members for the courtesies extended to us during our several meetings.

It is not possible for us to single out any of the officials of the various Regional Offices of Perindustrian, who showed us unfailing consideration on our visits and our thanks are due to them all.

Gen. Soerjosoejarso & Mr. Wibowo Moerdoko have placed us under a debt by providing all the back up facilities for the project & the team of experts and we are grateful to them. We will be failing in our duty if we did not acknowledge the able support we have received from UNDP Jakarta, and the warm co-operation of the experts, one & all of whom gave of their best in the implementation of the project.

Finally our thanks are due to the Secretarial Staff for their willing services.

WORK PROGRAMME FOR FIRST YEAR

(ANNEXURE I)

Textile Industry Development Programme
SF/INS-74/018
Work Plan of Project Manager
For the period October 1975 - September 1976

	ACTIVITY	1975			1976								
		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
1.	Familiarisation visits to textile manufacturing and marketing centres, meeting with P.N. Industry Sandang officials and others in the small scale weaving and knitting industry & trade.	(1)											
2.	Completion of Job Description of Market Research, Weaving and Factory Management Development Experts and submission to UNIDO Vienna.		(2)										
3.	Discussions with the Directorate General of Textile Industry (Ditjenteks) and redrafting of Project Document.			(3)									
4.	Assisting Ditjenteks & I.T.T. in the design of the syllabus for pretraining of nationals for Technical Service Centres.			(4)									
5.	Arrival of Market Research Expert and initiation of discussions regarding set-up of the Marketing Service Organization for the small scale weaving, and knitting industries.					(5)							
6.	Arrival of Knitting Expert and steps for setting up of Knitting Centre at the I.T.T. Bandung.					(6)							
7.	Finalisation of equipment for Knitting Centre in consultation with the Knitting Expert and requisitioning thereof.						(7)						
8.	Selection for fellowships in Market Research.							(8)					
9.	Arrival of Weaving Expert and training of six nationals for staffing of first Technical Service Centre and upgrading of selected factories to begin in Majalaya.						(9)						
10.	Requisitioning of testing equipment for Technical Service Centres.							(10)					
11.	Recruitment of Executive Director of Marketing Service Organization (MSO) by the Ditjenteks and establishment of nucleus of MSO.												(11)

ACTIVITY
12. Arrival of Factory Management Development Expert.
13. Completion of training of six nationals to staff the first TSC and establishment of the first TSC in Majalaya.
14. Training of second batch of six nationals for staffing TSC to begin.
15. Design programme for Factory Management Development in consultation with the FMD Expert.
16. Formation of first training group of 6/8 factory owners in the Majalaya area in consultation with Ditjenteks and other suitable bodies for initiation of the Factory Management Development Programme with the first group of factory owners in October 1976.

1975			1976								
Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept

(12)

(13)

(14)

(15)

(16)

PROJECT REVISIONS. (ANNEXURE II) 1.

PROJECT REVISION	DATE	PURPOSE	TOTAL UNDP CONTRIBUTION ($)	NET EFFECT ON CONTRIBUTION ($)
A	3/4/1975	Preparatory Assistance : -	242,000	-
B	2/5/1975	To delete post 11-04 Weaving Expert (Small-scale II) and to increase Post 11-01 (Proman) by 6 months, and Posts 11-02 (Market Research) 11-03 (Weaving Expert) Small-scale I, 11-05 (Knitting Expert by 3 months.	242,000	-
C	28/3/1975	Budget for full project ; PD signed.	1,287,340	-
D	1/4/1977	To reflect the 1975 & 1976 actual expenditures & the impact of the new guidelines on the 1977, 1978 and 1979 budgets.	1,499,809	+ 212,469
E	7/11/1977	To reflect the Revision I of the 1977 Action Plan, the 1978 Programme Financial Projection and their effect upon the 1977 buiget.	1,493,249	- 6,560
F	8/5/1978	(a). To include the recommendations of the UNIDO evaluation mission in January 1977 i.e. the deletion of the scheduled assistance to the large scale textile industries, and instead focussing upon assistance to medium & small scale textile industries. Moreover it was re-commended to delete part of the provision for equipment as this equipment could be obtained from other sources. (b). To include the decision of the Tri Partite Review meeting held in December 1977, i.e. the extension of the project until the end of the first quarter of 1980 and to substitute a full fledged expert for the Associate Expert in Knitting engineering. The post to have a duration of 18 months .	1,563,325	+ 70,076
G		To incorporate the actual expenditure for 1977	1,575,474	+ 12,149
H		(a).To incorporate UNIDO's new standard costs for experts manmonths.		

... / ...

2.

PROJECT REVISION	DATE	P U R P O S E	TOTAL UNDP CONTRIBUTION ($)	NET EFFECT ON CONTRIBUTION ($)
		(b). To reflect recent developments on the expected implementation of the project.		
		(c). To increase the miscellaneous component for 1980 in order to provide for reporting costs	1,531,220	- 44,254
I	6/11/1978	To reflect recent developments requested by Government as per their letter No. 123/Dj.Teks/x/ 78 dated 18.10.79 to increase by 6 manmonths for 1979 line 11-10 (Dyeing & Finishing Expert) and to decrease by 6 manmonths line 11-11 (Knitting Engineer).	1,531,220	-
J	21/5/1979	To reflect actual expenditure for the year 1978 & the consequential effect on the budgets for future years.	1,572,487	+ 41,267
K	20/12/1979	To reflect estimated 1979 expenditures and the effect on the budget for 1980.	1,572,487	+ 16,800

ANNEXURE III

DATE OF ARRIVAL AND DEPARTURE OF EXPERT

EXPERT :	DATE OF ARRIVAL :	DATE OF DEPARTURE :
1. Y. Vaahtokari	May 1976	September 1977
2. T. Hoshiyama	September 30, 1976	
3. M.N. Holmes	April 7, 1977	January 25, 1980
4. H.L. Sterenberg	May 5, 1977	
5. H. Poppe	June 9, 1977	November 6, 1978
6. J.E.H. Dennett	January 3, 1978	
7. J.D. Theodore	January 25, 1978	
8. L.M. Aavatsmark	April 24, 1978	
9. A. Weiss	January 9, 1979	
10. H.E. Krondahl	July 7, 1979	

(ANNEXURE IV).

Some notes on the MSO organisation.

According to the project document, the MDF has got to formulate the set-up of the MSO and finalise its organisational structure, after discussions with [illegible] and the manufacturing interests in the small-scale weaving industry. The following notes are produced for the discussion with [illegible].

Organisation Chart.

To start with, a preliminary organisation chart has been drawn, to illustrate the overall organisational structure considered necessary. It differs from the proposition presented in the project document (annexure IV) in three aspects presented below.

Supporting activities

(1). An Advisory Council has been added, to give the different parties interested in the development of the small scale industry a wider forum (wider than the MSO Board), for discussing matters of mutual interest and for creating a stronger cohesion between them. The Council should convence in corpore once or twice a year. A smaller Working Council should also established from the members of the big council, to advise the Executive Director on day-to-day problems of the organisation. This Working Council could also have members at ad-hoc basis, to get the needed expertise at the disposal of the Executive Director.

(2). To point out the need of regular office services,in more explicit terms, a special Administration Section has been formed to take care of them (correspondence, finance, book-keeping, and other general services belonging to this category).

(3). A special Training Section seems to be necessary, for planning and executing all the training activities of more character (which cannot be included into company-wise consultancy). As most of the owners of the small-scale units have received no

formal education in business and marketing, the need of training is enormous. The courses and seminars arranged could also act as a natural and continuous contact link to the clientele.

As training is one of the services the MSO is giving to its customers, it can added as a sub-section to the Marketing Services Section (see point 6).

Basic activities

As to the three basic sections, namely Market Research, Product Design & Development, and Marketing Services, the main emphasis has been placed on the Marketing Services Section. Therefore, and to ensure a co-ordinated action in marketing services, all the contacts to the clients have been channelled through it. When needed, representants from the Market Research Section and Product Design & Development Section will be present at the meetings with the clients. However, they should not take similar contacts to the customers, on their own initiative.

(4). The Market Research Section collects, tabulates and interpretes data on production, markets and customers of the small scale weaving (and knitting) industry. Besides that, it should be involved in the preparation of information, in putting its findings in an easily digested form that the small scale units can make use of without difficulty.

For data collecting, the MRS needs a field organisation. It is suggested that the size and functioning of this organisation will be finalised at a later stage when these details can be stated more easily and securely.

(5). The primary job of the Product Design & Development Section, is to create new designs and even completely new products, for the small scale weaving industry. Secondly, it should prepare information about fashion trends (incl. colours, design, materials and structures of the fabrics) and, naturally, about the results of its own work in product development.

(6). The operational area of the Marketing Service Section is three fold.

At first, it gives consultancy services in marketing, namely in market intelligence, product policy, sales and promotions, marketing organisation and management, etc.

Secondly, it will be engaged indirectly in some promotional activities, like arranging exhibitions and other PR activities to promote the products of the small scale weaving (and knitting) industry, maintaining a product library (with samples) and acting as a promotional link between the small and large scale units (for subcontracting) and towards (state ?) trading corporations (for contracting). And thirdly, it will be engaged in training activities ; arranging courses and seminars and editing and buying suitable training material for them.

The field organisation of the MSS like that of the MPS, should be finalised at a later stage.

As the Marketing Services Section plays a dominant role in the MSO activities (as far as contacts to the clients are concerned, anyway), the head of this section should occupy the number-two-man position of the whole organisation. He should, therefore, be selected accordingly.

Testing period

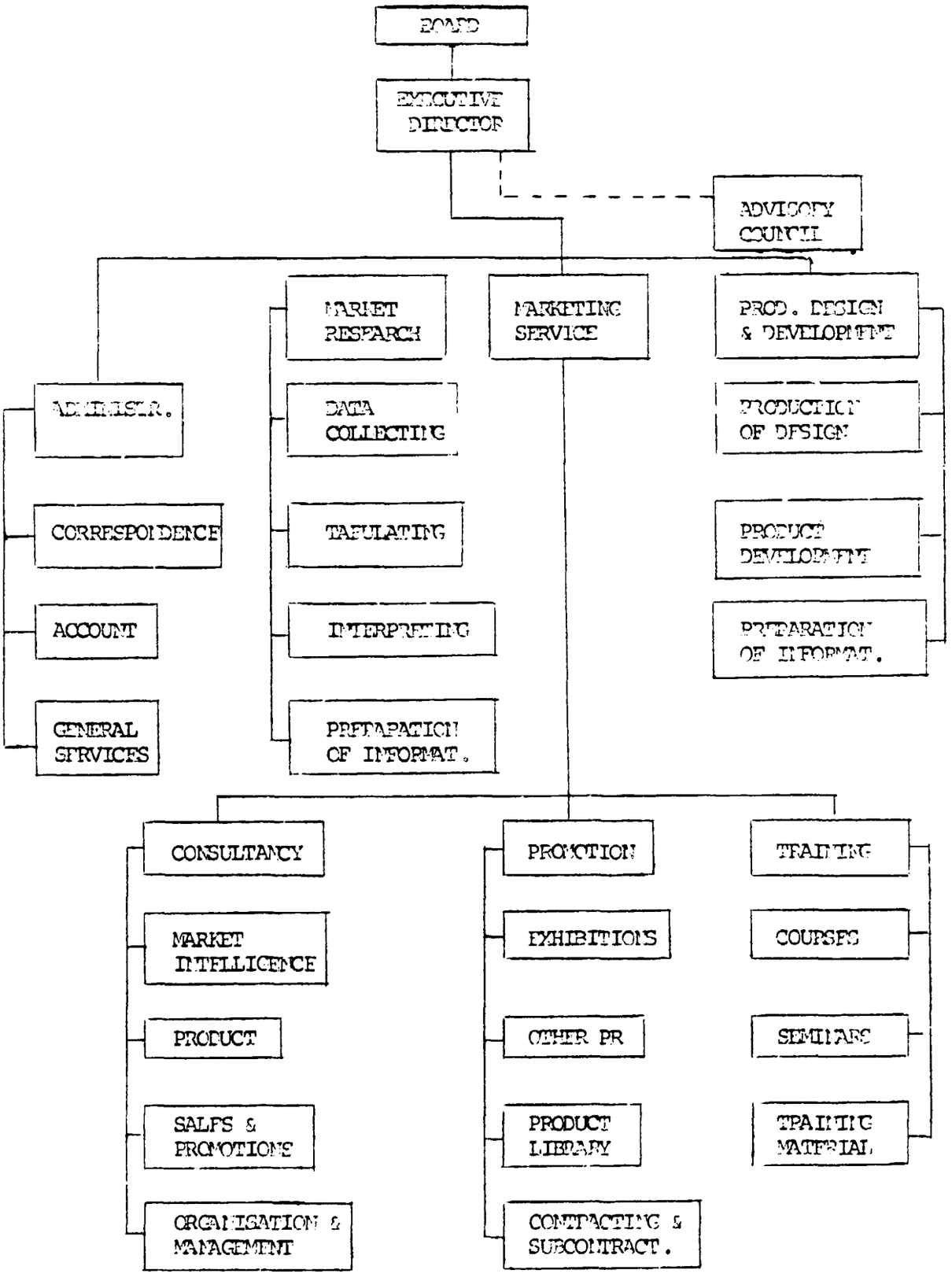
The organisational set-up of the MSO should be tested during the life-time of the project, and it should be finalised before its termination. In other words, the MSO as an organisation should be handed over to wholly Indonesian hands in good running condition, at the end of the project.

20/07/76

(31)

Kalervo Vaahtokari

THE MSO ORGANISATION



ANNEXURE V.

Jakarta, 12th October 1979.

Dear Dr. Suhartono,

Since the " Export Certificate System " with its percentage " draw-back " or " premium " set-up, based on check-prices for a given number of textile commodoties, was launched early this year(following the 15th November 1978 devaluation), our Marketing Expert has been seeking to emphasise the export opportunities, in his discussions with the local Perindustrian Offices as well as the factories visited.

However, it has been the experience of the expert that very few - if any - had knowledge about the " Export Certificate System " - including the local Perindustrian Offices in for instance Ujung Pandang, Surabaya, Semarang, Pekalongan.

The matter has been raised at three different Management Workshops during the sessions on " Marketing " taken by the expert, always with the same result.

A total ignorance about even the existance of the Export Certificate System has been evident, but when mentioned, drew quite some attention and interest.

We are therefore beginning to wonder about the effectiveness of the information system obtaining to spread the news about this obvious " export boosting " regulation. It would appear that whichever agency is credited with the responsibility of disseminating this information to the small scale operator in the regions is still experiencing problems in achieving this objective.

Secondly, our Marketing Expert has recently come across several exporting or export-interested firms, which to a certain degree are aware of the system but who are sceptical regarding the actual " pay-back " of the given percentage for a given textile item when exported.

In this context, problems with customs authorities and outstandings for unduly long periods, have been mentioned.

In actual cases where the MSO, through the Marketing Expert, has had inquiries from abroad and tried to calculate FOB and C&F prices on the basis of the factory cost + profit, after due allowances for the " pay-back " on the strength of the Export Certificate, so as to enable the factories to quote prices more attractive to the importer at the other end, the factories, however, have been very reluctant to deduct this percentage (or alternatively to include it as additional profit). This is because they seem to entertain doubts or out of fear of the paper work and other problems involved with government departments.

The many changes in " check-prices ", and materials/items eligible have further strengthened this fear. The very laudable intention in introducing the measure to boost exports has thus been seriously impaired.

It is imperative for Indonesia to increase her textile exports as soon as humanly possible (since the inevitable quota-system presently hampering exports from Singapore, Taiwan, Korea and Hongkong will no doubt be imposed on Indonesia within a few years will & then presumably be based on previous years ' performance '. In view of this, it is essential that the intention behind the regulation is followed up by the authorities and that payment back to exporters is effected without delays.

The export-incentive and the competitive prices possible through the regulation is too valuable for Indonesian Textile Exports in the next years to be " thrown away " because of procedural or administrative problems.

Over the last few months we have also come across instances of other Asean countries illegally shipping textiles to US and Europe (EEC) claiming Indonesian origin and thus enjoying the Indonesian General System of Preference.

In other words they are taking advantage of the possibility of textile exports from Indonesia, because they are themselves barred from these markets, through non-availability of quotas.

Other instances where false papers and invoices etc for textiles/ garments made in other South East Countries and " claimed " to be of

... / ...

Indonesian " origin " , have also occurred,as we feel you are only too well aware.

This has now led to a ban on imports from Indonesia, into the UK and Holland more recently. Being barred from such important markets is of course a severe matter indeed and further activities in this direction will be most detrimental to Indonesian textile exports.

Thus it is imperative to have a stricter control on issuance of " Country-of-origin " documents. We venture to suggest that this could be done by a verification - system by API (Assosiasi Pertekstilan Indonesia) and/or through verification by the commercial sections of the Indonesian Embassies, in the importing countries concerned. The first would bring into force a measure of " self disciplining " by the industry & trade itself.

By the same token the " system " or set-up of the Export Certificates, and the resultant pay-back must be simplified and organisationally improved so that prospective Indonesian textile exporters really get an incentive.

In this context, the following specific examples that have come to our notice, may be of interest : -

P.T. PERSODJO, Jakarta.

Does not believe that he will receive the percentage pay-back he is entitled to and is therefore reluctant to reduce his prices accordingly. Result : Too high prices in export markets. He claims that several of his knitwear colleagues have millionsof Rupiahs pending with Government, for months.

EXPORT OF TOWELS FROM PEKALONGAN (SANDANG II).

Calculation of export prices should be on the basis of the 10-13% " pay-back " entitlement but has not been taken into account - because of doubt of whether it will actually result.

CO-TEXI MAS EXPORT BLOUSES (15.000)

Reluctant to calculate prices with eligible 20% " pay-back ". Price - offer had to be sent off without this possibility of price re-

duction, which again naturally reduces price competitiveness.

I am venturing to bring the above points to your kind notice in the confident belief that you will be pleased to have these problems looked into by the relevant authorities.

With kind regards,

I remain,
Yours sincerely,

(Sd)

P. RAJARAM
Project Manager.

Dr. Suhartono
Director General
Industrial Research & Development
Gedung Pola, Jakarta.

c.c. : Mr. Gitosewcyo, Director General (Ind. Kecil)
Mr. Santosa, Co-Project Manager
Mr. F.M. Iqbal, SIDFA, UNIDO

ANNEXURE VI

C O N C L U S I O N S

NATIONAL SEMINAR

November 19 - 30, 1979

FOREWORD

by

STEERING COMMITTEE

The Factory Management Development Programme National Seminar was held from 19th November to 30th November 1979 and the Steering Committee have pleasure in submitting the results of the Seminar.

These results are divided into two sections.

One, the INTERNAL SECTION covering items related to the factories.

Two, the EXTERNAL SECTION covering those items which relate to ' outside ' factors.

On behalf of the Committee we would like to express our thanks and appreciation to all the persons involved in the Seminar for their efforts which has made the Seminar such a great success.

We hope that these results and conclusions can be used successfully to assist in the development of the Small Scale Section on the Textile Industry in Indonesia.

C O N C L U S I O N S

of

NATIONAL SEMINAR

of

TEXTILE FACTORY MANAGEMENT DEVELOPMENT PROGRAMME

November 19 - 30 ,1979.

The National Seminar of the Textile Factory Management Development Programme was held with the express purpose to improve the potential of the Small Scale Textile Industry in Indonesia in industrial development

TO IMPROVE THE INDUSTRIAL DEVELOPMENT POTENTIAL OF THE INDUSTRY.

Participants came from the various regions in Indonesia and after discussion and deep consideration of the speeches by the various guest speakers which included ;

A. 1. Chief of Industrisl Research and Development
   2. Project Manager U.N.I.D.O.
   3. Project Manager Government
   4. Chief of Central Institute of Textile Industrial Research and Development

B. Papers

   1. U.N.I.D.O. Management Team
   2. Team of Central Institute of Textile Industrial Research & Development
   3. P.I.P.I.K.
   4. B.P.E.N.
   5. DEPNAKER
   6. IAPINDO
   7. INKINDO

(I) I N T E R N A L C O N C L U S I O N S

A. RAW MATERIALS

1. In order to stabalise the working capital a good policy must be made

for Raw Materials stock within the factory. i.e. Stocks should not be too large.

2. To avoid loss and difficulties in the Small Scale Textile Industry we must know the raw material quality by the use of ;
   a). Simple testing apparatus which can be used by the factory.
   b). Sending samples to the various institutions for testing ; FPI/BMI/PT

3. When we already possess low quality material we can ;
   a). Improve the quality of the raw material by re-winding and sizing it.
   b). Use the yarn for weft, or for the weft stripe which is usual in sarongs.
   c). Use it for coarse fabrics.
   d). When making the coarse fabrics mentioned at (c) above such fabrics must be correctly labelled to avoid complaints from the consumer.
   e). The weavers work load must be adjusted according to the Raw Material quality to maintain efficiencies.
4. If the yarn quality is poor the factory should not be pressed to use this, it is better to change to better yarn.

B. PERSONNEL

To improve the potential of The Small Scale Textile Industry in Indonesia it is recommended that labour should be used as much as posibble (Labour intensive) and to achieve this, action must be taken according to the situation in each factory, these include ;

1. Make an organization scheme within the factory according to the factory requirements (organization charts etc).
2. Make job descriptions for all the personnel in the factory.
3. Make records of absenteeism and punctuality.
4. Management must always set a good example - discipline must come from the top.
5. To improve or maintain discipline, and explain to the labour the benifits of good discipline.

6. Make a good system of control within the factory.
7. Make and keep good co-operation with outside labour organizations and make rules for labour with the co-operation of these outside labour organizations, particularly when such rules carry penalties.
8. To improve the co-operation between the factory personnel at all levels.
9. To make good working conditions.
10. To improve the enthusiasm of all personnel.
11. To improve the skills of personnel by providing training.
12. To improve the motivation for all personnel.
13. To recommend to all owners of the factories ;
    a). To provide good wages at all levels.
    b). To provide incentives.
    c). To pay attention to the health of personnel and to show symphaty in cases of illness etc. Also in times of bereavement and anniversary to give gratification where possible.
    d). To check the weges increase at regular intervals.

C. MACHINES

1. Old machines can stil operate quite well and efficiently providing ;
    a). Spare parts are available.
    b). Weft forks and stop motions are added.
    c). Maintenance is good.
    d). They are used for products which are not suitable for ' mass production '
2. If new machines are to be bought, must first investigate profitability - better to buy one type of machine only.
3. The old machines can be profitable particularly because they have low depreciation which enables low pricing. However this advantage is only a limited advantage and not over-riding.

D. METHODS

1. Participants appreciate the need for long and short term factory

development. If the factory meets difficulties they can request outside assistance.

2. Participants suggest that ' experts ' should make some examples of this planning for different factories of different sizes.
3. Participants suggest that factory owners must think about priorities of ' needs ' in the factory. Raw material is first priority to make good fabrics and to give consumer satisfaction.
4. The marketing knowledge, textile design and machine operation must be improved. Assistance can be requested for these from B.A.T., I.T.T., P.P.T., M.S.O., P.D.C.
5. For special fabric types such as tie and dye IIOT, name towels etc these will be more profitable if produced on hand-looms rather than on powerlooms.
6. The looms which have special mechanisms such as dobby, box motions etc. will be more profitable if cloths are made which require the use of these mechanisms.
7. Machine and equipment improvisation which is already in the industry should be improved and also should be made available to other factories which may need it. This could be done by having special ' papers ' on each machine.

   Improvisation includes ;

   a). Boilers for drying yarn etc. during the rainy season.

   b). Sprayer for providing humidity.

   c). Systems to record the life of shuttles, picking sticks etc.

   d). Pirn winders made from old knitting machines.
8. Factory owners should meet together to discuss problems including such improved equipment and this would give benefits by bringing items to notice.
9. All participants appreciate the importance of preventive maintenance in keeping production high, also to the survival of the industry - preventive maintenance should be well planned.
10. Maintenance, including checking and adjustments, breakdown and lubrication, change of spare parts can be done by the maintenance staff within the factory if they have the knowledge for this. This

knowledge can be obtained from such sources as P.B.T. and P.P.T.

11. It is recommended to all factory owners to join the Indonesian Weaving Association, ASPINDO. This will help to solve the problems of the Small Scale Textile Industry.

E. FINANCE AND MARKETING

1. The Small Scale Textile Industry is still very weak in Marketing, this weakness is caused by ;
   a). The factories are not market oriented.
   b). There is very high competition from the medium and large scale factories.
2. If there is high inflation it is suggested ;
   a). Working Capital should not be used for new investment.
   b). When buying yarns they must do ' value analysis '
   c). When selling the product do not allow credit.
   d). It is recommended that some of the profit be used to increase the amount of working capital.
3. If it is wished to solve the investment problem in case of shortage of working capital there are some ways ;
   a). Sell some machines to raise cash.
   b). Increase productivity.
   c). Try and obtain a loom.
   d). Make co-operation with another factory.
4. To prevent excess investment capital we can act as follows ;
   a). For the development of the factory it is necessary to calculate very accurately in order to obtain a balance between making working capital and investment capital.
   b). If we wish to plan new investment, it is better to make a ' Feasibility Study ' very accurately.

(II) E X T E R N A L C O N C L U S I O N S

A. GOVERNMENT

1. It is proposed to Government that opportunity should be given to

the entrepreneurs of the Small Scale Textile Industry to make a comprative study of the Textile Industry in Indonesia or abroad and arranged through U.N.I.D.O.

2. It is proposed to the Government that the large factories should not be allowed to produce the fabrics already being produced by the small factories.
3. It is proposed to the Government that an Institution should be appointed to ' export ' the cloths produced by the small factories.
4. It is proposed to the Government that arrangements should be made to distribute yarn to the consurers.
5. It is proposed to the Government that they should make a ' board ' to collect the production of the small factories when the market is bad to avoid loss.
6. It is proposed to the Government that they should give the entrepreneurs information about :
   a). Government policy in textile matters.
   b). Inflation in the country and outside the country.
   c). Grading of raw material.
7. It is proposed to the Government that they should improve co-ordination, integration and synchronization in the establishment and development of the Small Scale Textile Industry.
8. It is proposed to the Government that they should prevent the Medium and Large scale factories from dividing into small factories in order to get facilities from Government.
9. It is proposed to the Government that they should appoint or established one ' free of charge ' management consultancy (for example BPP) which is qualified to develop one method or system which is useful for small factories.
10. It is proposed to the Government (BPP) to make one sample of short or long term planning such as presented by the UNIDO team and then supply it to the small factories which need it.
11. It is proposed to the Government to ensure that the system of labelling is carried out according to the rules.
12. It is proposed to the Government that the rules for industrial standards of yarn quality be followed.

13. It is proposed to P.T. Industri Sandang and Pinda Sandang (Spinning mills) that all counts of yarn be made available and at reasonable prices.
14. It is proposed to the metal industries department to develop a spare parts industry for looms.
15. It is proposed to the Government to increase the activity of ; BBT / BT / PPT for giving technical assistance to the Small Scale Textile Industry.
16. It is proposed to the PPT that they should help the Small Scale Textile Industry to overcome the spare parts problem.
17. It is proposed to the Government that the technical and management workshops be continued periodically and equally in many places.
18. It is proposed to the Government that the ' English ' system of yarn counting be replaced by the ' metric system ' on a step by step basis.

B. BBT / BT / PPT

1. It is recommended that BBT should train and supply hand-loom and power-loom operators who are qualified.
2. It is proposed that BBT provide local experts to help factories which need them.
3. In the case of the ' complex and particular ' dyeing and finishing industry, it is recommended that assistance be provided either from Government or others such as BBT/ BT / PPT to increase industries potential.
4. The handloom factories need assistance in design and other knowledge for development.
5. To change handloom factories to powerloom factories assistance is needed in management because the ' atmosphere ' and general situation in the two types of factories is quite different.
6. The Small Scale Textile Industry needs regular information so a textile magazine is required to improve communication between BBT and the owners of the factories in the Small Scale Textile Industry. The contents should be simple and easy to be understood by small factory entrepreneurs.

7. It is recommended to BBT that they should develop a vertical which could be used by the industry and would take up small space for the weaving of wide cloths.
8. In making work study programmes the industry need help or assistance from BBT.
9. a). The role and activity of BPT/ BT / PPT need to increase to help with quality control of goods produced in the factories.
   b). BBT / PPT are recommended to provide information and standards of good quality, mainly for the Small Scale factories.
10. In order to provide information on short and long term planning it is recommended that PPT provide a clear idea and explanation on the subject so that the benefits of planning can be spread among the factories. In case of difficulties the factories can also contact the makers of machines.
11. To face the change in consumption of cotton fibre to that of synthetic fibre information and assistance is needed from BBT and PPT.
12. BBT / ITT should develop simple innovation of equipment and spread this information to the small factories.
13. It is recommended that PPT train the operaters in skills to qualify them to solve the problems in the small factories.
14. The assistance of PPT is needed in the regions for the case of checking of quality of yarn and cloth etc. and this assistance should be increased.
15. To overhaul the machines of the Small Scale Textile Industry requires assistance from BBT / PPT to improve the skill of the staff.

C. <u>BPEN</u>

1. The information on exports from BPEN is very small, participants hope that in future BPEN will be more active to spread information to the Small Scale Textile Industry, this information should include ;
   a). Type of goods.
   b). Quality standard.
   c). Export procedure.
   d). Government policy and regulations for export.

2. It is proposed to BPEN to give opportunity to the Small Scale Textile Industry to attend exhibitions and also to join in the policy making of such exhibitions both locally and overseas.
3. Participants hope BPEN can make a marketing channel for the productions of the Small Scale Textile Industry either individually by factories or as a group.

D. BANK

1. Credit from the Government bank is necessary for the Small Scale Textile Industry.
2. To support the development of the Small Scale Textile Industry it is required that Government Bank can give credit facilities with ;
   a). Low cost credit.
   b). Without consultant but enough to show a ' certificate ' from the Government Department of Industry or Trading and Finance Department.
   c). The administration to be easy, quick and straight to the point for obtaining credit.
3. It is recommended that the Financial Institution can give active assistance to the factory owners in the Small Scale Textile Industry to improve the knowledge and skill in financial management.

E. U. N.I.D.O.

1. The UNIDO programme must be continued, especially for marketing.
2. The programme of management development for the Small Scale Textile Industry must be continued either by U.N.I.D.O. or other equally qualified institution.

F. OTHERS

1. It is recommended to ASPINDO to increase its activities to introduce the organization to the Small Scale Textile Industry. Especially

for the factory owners who are in the more distant regions, so they may benefit.

2. It is recommended that P.T. Industry Sandang and Pinda Sandang should give credit to the Small Scale Textile Industry without Bank Guarantee but by selection.

3. The Finishing Factories in the regions should give more service to the Small Scale Textile Industry in order to improve business.

4. It is recommended that there should be a consultant in management to give their service in the case of short or long term planning by industry, to give or provide an institution which can give recommendations from the Small Scale Textile Industry if they need credit from the bank.

ANNEXURE VII.

Dear Participants,

You being one of the successful participants who completed the Workshop on Textile Factory Management Development, we seek your valued help and assiatance in trying to improve future workshops.

Knowing that your time is extremely valuable but wishing to have the benifits of your experience and knowledge we have prepared a questionnaire which we would most respectively ask you to complete. From your views, along those of other successful participants, we hope to be able to assess the value of the present Factory Management Development Programme and if possible to improve and expand it.

In order not to waste your time we have kept the questionnaire to only 21 questions. These are arranged under five main sections :

i). Methodology - (i) Study periods
(ii) Implementation

ii). Knowledge gained

iii). Degree of implementation achieved

iv). General benifits gained

v). Remarks or comments if any

In order to save your time the questions are arranged for either 'Yes' or 'No' answers or " Multiple choice ".

We would be most grateful therefore if you would kindly complete the following questionnaire and return it to us in the enclosed envelop. If the questionnaire could be returned before ------- it would be most helpful.

All that is required to answer the questions is a tick in the appropriate ' Box ' viz - [ ] [V]

Yours sincerely,

QUESTION NO.	SUBJECT AND QUESTIONS	ANSWER TICK APPROPRIATE BOX.

Section 1 : Methodology

(a) Study Periods

1. The total number of study hours in the factory management workshops is usually 72. Do you consider this to be :

Sufficient ? ☐

Not sufficient ? ☐

Too much ? ☐

2. The workshops usually last for 6 weeks. Do you consider this to be a satisfactory period ?

Yes ---------- ☐

No ---------- ☐

If your answer is 'No' please indicate which would be the most suitable number of weeks for the workshop :

8 weeks ---------- ☐

7 weeks ---------- ☐

6 weeks ---------- ☐

5 weeks ---------- ☐

4 weeks ---------- ☐

3. Study periods are usually held for 3 or 4 hours per day. What is your opinion on the most satisfactory number of hours per day ?

QUESTION NO.	SUBJECT AND QUESTIONS	ANSWER TICK APPROPRIATE BOX.
	6 hours --------	☐
	5 hours --------	☐
	4 hours --------	☐
	3 hours --------	☐
	2 hours --------	☐

Section 1 . Methodology

(b) Implementation

4. An important part of the workshop was factory visits - particularly the participants factories. These visits served the doubled purpose of :

(i) Letting each participant obtain a wider experience of what other factories are like and

(ii) The workshop leaders were sometimes able to offer helpful suggestions.

What is your opinion of the overall value of these visits :

Extremely valuable ------ ☐

Very valuable -------- ☐

Of some value --------- ☐

Only small value ------- ☐

No value ---------- ☐

QUESTION NO.	SUBJECT AND QUESTIONS	PLEASE TICK APPROPRIATE BOX.

5. With regard to the factory visits mentioned in question 4, do you consider that the length of the visits is sufficient ?
Normally a visit lasts about 1 to 2 hours
should the time be

(a) Increased ---------- ☐

Continued as at present -- ☐

Be reduced ---------- ☐

(b) Or the visits abolished --- ☐

6. Do you consider that sufficient time was spent on " implementation " ?

Implementation time is sufficient ---------- ☐

Implementation time should be increased ----- ☐

Implementation time should be decreased ----- ☐

Section 2 : Knowledge Gained

7. Discussion and study periods covered the six topics of : Personnel, Production, Finance, Materials, Marketing and General, Managements. There was only limited time available for each topic.
Do you consider that there was a correct allocation of time to each subject ?

Yes ☐

No ☐

QUESTION NO.	SUBJECT AND QUESTIONS	ANSWERS TICK APPROPRIATE BOX.

If the answer " No " please complete the following. More time should be given to :

(i) Personnel ---------- ☐

(ii) Production ---------- ☐

(iii) Finance ---------- ☐

(iv) Materials ---------- ☐

(v) Marketing ---------- ☐

(Vi) General ---------- ☐

Less time should be given to

(i) Personnel ---------- ☐

(ii) Production ---------- ☐

(iii) Finance ---------- ☐

(iv) Materials ---------- ☐

(v) Marketing ---------- ☐

(vi) General ---------- ☐

8. Would you have gained from the workshop if more time had been given to participants' discussions and less to presentation by the experts ?

Yes -------- ☐

No -------- ☐

QUESTION NO.	SUBJECT AND QUESTIONS	ANSWERS TICK APPROPRIATE BOX.
9.	What was the overall amount of ' useful ' knowledge gained by you on the workshop ?	
	A very large amount ----------	☐
	A large amount ----------	☐
	Some - (Not enough) ----------	☐
	Only a little ----------	☐
	Nothing ----------	☐
10.	Was there too much theory and academic work and not enough practical mill examples by the Management Team ?	
	Yes ----------	☐
	No ----------	☐

Section 3 : Degree of Implementation Achieved.

11.	Were you able to implement all the various points discussed or only some of them :	
	All points discussed were implemented ----------	☐
	A lot of points were implemented ----------	☐
	Only about half the points were implemented ----	☐
	Less than half the points were implemented ----	☐
	No points were implemented ----------	☐
12.	Are you able to implement all items yourself or do you require further assistance in the form of consultancy for some items ?	
	Further assistance required ----------	☐
	No more assistance required ----------	☐

QUESTION NO.	SUBJECT AID QUESTIONS	ANSWERS TICK APPROPRIATE BOX.

13. Which of the subjects of topics in your mill have shown some improvement due to direct implementation ?

- Personnel ---------- ☐
- Production ---------- ☐
- Finance ---------- ☐
- Materials ---------- ☐
- Marketing ---------- ☐
- General ---------- ☐
- None ---------- ☐

14. Did you have direct assistance of the management team in implementation in your factory ?

- Yes ---------- ☐
- No ---------- ☐

Section 4 : General Benifits Gained.

15. Which section has shown the first important gain in your factory ?

- Personnel ---------- ☐
- Production ---------- ☐
- Finance ---------- ☐
- Materials ---------- ☐
- Marketing ---------- ☐
- General ---------- ☐
- No gain ---------- ☐

QUESTION NO.	SUBJECT AND QUESTIONS	ANSWER TICK APPROPRIATE BOX.
16.	Are your workers now receiving more wages or having better working conditions than before the workshop ?	
	Yes ----------	☐
	No ----------	☐
17.	Have there been any other benifits gained from the workshop such as improved quality, less waste and similar items ?	
	Yes ----------	☐
	No ----------	☐
18.	Has there been any improvement such as better understanding between workers and management?	
	Yes ----------	☐
	No ----------	☐

Section 5 : Remarks or Comments.

19.	If a second, more advanced workshop, were planned would you like to attend ?	
	Yes ----------	☐
	No ----------	☐
20.	If other workshops were arranged for your supervisory and lower management staff would you direct them to attend ?	
	Yes ----------	
	No ----------	

QUESTION NO.	SUBJECT AND QUESTIONS	ANSWER TICK APPROPRIATE BOX.
21.	Any other comments you would like to make would be most welcome. Please feel free to offer any criticism or constructive suggestions.	

Thank you for your assistance.

ANNEXURE VIII

FACTORY MANAGEMENT DEVELOPMENT PROGRAMME

EVALUATION

OF

MANAGEMENT

IMPLEMENTATION

WITHIN THE FACTORY

WORKSHOP NUMBER - - - - - LOCATION - - - - - - - - -

PARTICIPANTS NAME - - - - - - - - - - - - - - - - - - -

FACTORY -

POSITION (OWNER,) (MANAGER, ETC) - - - - - - - - - - - - - - - - - - -

PERSONS COMPLETING THIS REPORT

M. N. HOLMES ☐

K. BANSUN ☐

KARTONO ☐

SOFYAN ☐

DATE OF THIS REPORT - - - - - - - - - - - - - - -

REPORT NUMBER - - - - - - - - - - - - - - - -

REPORT AND QUESTIONAIRE

ON

FACTORY MANAGEMENT DEVELOPMENT PROGRAMME

EVALUATION

ON

MANAGEMENT IMPLEMENTATION

WITHIN THE FACTORIES

Aim of the Exercise

To produce 'Factual Evidence' of the results obtained by the participants of the various workshops on Factory Management held since May 1976.

Notes to persons using the questionaire to obtain results.

The first part of the exercise - 'Factory Size' is not only intended to confirm the expansion (if any) but is mainly to be used to help to put the 'participant or owner' at ease and to create the right 'Mental Set' before proceeding to the main sections.

Reporting personnel should 'talk' to the management and explain the 'Aim of the Exercise'. Unless the form is completed in this 'atmosphere of friendliness' much will be lost.

Although many points are included under each section these are intended to stimulate management to further thought so that the maximum number of items implemented (and the degree) are recorded.

All the writing should be done by the reporting personnel thus leaving management with more 'thinking time'.

Reporting personnel should complete the 'sections' only in the presence of the management and nothing should be added later.

However, this does not include 'Summary' which should only be completed after the visit.

[illegible] completed at the end of each section. [illegible] considered [illegible]. It is vital that this assessment [illegible] section [illegible] immediately after completing that section [illegible] situation at a particularly appropriate [illegible] will [illegible] unwanted bias.

It should be remembered [illegible] use of this '15 point scale' is based on the fact that [illegible], therefore there should be as many 'points' [illegible] recorded above in the complete project. [illegible] completion of all the reports in the project it is permissible to adjust the profile on the scale providing 'all' are adjusted proportionately.

Finally, reporting personnel [illegible] remember that the information collected will eventually be used to indicate what, if any, further action is required and also the direction of such action. Therefore every effort must be made to report all '[illegible]' items and there must be no hesitation in recording [illegible] when this is factual.

S U M M A R Y

(TO BE COMPLETED BY 'REPORTING' STAFF AFTER VISIT)

	YES	NO
A. Has any implementation been carried out ?	☐	☐
B. If so, in what areas ?		
a). General Management	☐	☐
b). Marketing Management	☐	☐
c). Personnel Management	☐	☐
d). Production Management	☐	☐
e). Finance Management	☐	☐
f). Materials Management	☐	☐
g). - - - - - - - - - - - - - - - - - -	☐	☐
Other Areas h). - - - - - - - - - - - - - - - - - -	☐	☐
i). - - - - - - - - - - - - - - - - - -	☐	☐
j). - - - - - - - - - - - - - - - - - -	☐	☐

C. Assessment using the '15 point' scale

a). General Management	
b). Marketing Management	
c). Personnel Management	
d). Production Management	
e). Finance Management	
f). Materials Management	
g). Others	

D. Special Comments

E. Overall Assessment

1. FACTORY SIZE

Number of machines and personnel showing any changes.

1.1 Number of Machines :

		BEFORE	AFTER
	a). Looms		
	b). Pirn Winding 'Spindles'		
	c). Cone Winding 'Spindles'		
	d). Warping Machines		
	e). Drawing Frames		
Others Items	f). - - - - - - - - -		
	g). - - - - - - - - -		
	h). - - - - - - - - -		
	i). - - - - - - - - -		

1.2 Number of Personnel

		BEFORE	AFTER
	a). Weavers		
	b). Winders		
	c). Warpers		
	d). Sizers		
	e). Drawers		
Others Items	f). - - - - - - - - - -		
	g). - - - - - - - - - -		
	h). - - - - - - - - - -		
	i). - - - - - - - - - -		

Any other comments of Factory Size

_____

_____

_____

_____

_____

_____

2. MARKETING MANAGEMENT	YES	NO
2.1 Has the Marketing Policy changed since the Seminar ?	☐	☐
If NOT, does this mean no action ?	☐	☐
If YES, how has it changed ?		
a). Towards being 'Market Oriented'	☐	☐
b). Towards diversification	☐	☐
c). Towards Market Research with a view to later development.	☐	☐
d). Towards exporting	☐	☐
If a) b) c) or d). Please indicate progress already achieved in these areas		
_____		
_____		
_____		
_____		
_____		
2.2 Any other Marketing Development or Progress such as :		
a). New Pricing Methods	☐	☐
b). Appointement of Salesmen	☐	☐
c). Improved Packaging	☐	☐
d). Introduction or Improved Advertising	☐	☐
e). Improved despatch or carriage of goods	☐	☐
Other Items f). _____	☐	☐
g). _____	☐	☐
Please amplify on any of above items		
_____		
_____		
_____		
_____		

	YES	NO

2.3 Any other comments on Marketing :

	YES	NO
2.4 General Assessment on the Progress and Development on '15 point' scale.		

MARKETING

A+	☐			D+	☐
A	☐	C+	☐	D	☐
A-	☐	C	☐	D-	☐
B+	☐	C-	☐	E+	☐
B	☐			E	☐
B-	☐			E-	☐

3. PERSONNEL MANAGEMENT	YES	NO
3.1 Has the general policy towards personnel Management remained as it was before ?	☐	☐
If not, has it changed with respect to ?		
a). Recruitment	☐	☐
b). Working conditions	☐	☐
c). Improved discipline	☐	☐
d). New wage structure	☐	☐
e). Incentives	☐	☐
f). New organisation [illegible]	☐	☐
g). Introduction of [illegible]	☐	☐
Other Items h). _____	☐	☐
i). _____	☐	☐
j). _____	☐	☐
k). _____	☐	☐
Please amplify on any of the above		
_____		
_____		
_____		
_____		
_____		
_____		
3.2 Has the size of labour force increased or decreased ?		
If so which ? Increased	☐	☐
Decreased	☐	☐
Please amplify and give reasons - also numbers involved		
_____		
_____		
_____		

PERSONNEL CONTINUED	YES	NO
3.3 Has any training been introduced ? If so please amplify and indicate :	☐	☐
a). Type of training. _____		
b). Length of training in weeks. _____		
c). Numbers of personnel involved. _____		
d). Any other relevant information. _____ _____		
3.4 Has punctuality : Remained the same	☐	☐
Increased	☐	☐
Decreased	☐	☐
Has absenteeism : Remained the same	☐	☐
Increased	☐	☐
Decreased	☐	☐
Please give percentages for last twelve months before and after if available :		
a). Punctuality : 'Before' _____		
'After' _____		
b). Absenteeism : 'Before' _____		
'After' _____		
3.5 Has the 'take home' pay of workers increased ?	☐	☐
Please indicate :		
a). Which groups or sections _____		
b). By how much _____		
c). Number of personnel affected _____		

PERSONNEL CONTINUED	YES	NO
Any other comments on 'take home' pay		
3.6 Any other comments on Personnel :		
3.7 General assessment on the progress and development on '15 point' scale.		

PERSONNEL

A+	☐			B+	☐
A	☐	C+	☐	B	☐
A-	☐	C	☐	B-	☐
B+	☐	C-	☐	E+	☐
B	☐			E	☐
B-	☐			E-	☐

4.	PRODUCTION MANAGEMENT	YES	NO
4.1	Has there been any improvement in productivity generally ?	☐	☐
	If so please indicate		
	a). Efficiency increased from _____ % to _____ %		
	b). Total shift/daily/weekly production increased : from _____ to _____		
	Any other comments on general productivity or production.		
	_____		
	_____		
	_____		
	_____		
	_____		
4.2	Have any of the following items been introduced, amended or improved ?	☐	☐
	a). Recording of Production	☐	☐
	b). Evaluation of Machine Performance	☐	☐
	c). Evaluation of Operator Performance	☐	☐
	Any comments on above items		
	_____		
	_____		
	_____		
	_____		

	YES	NO
4.3 Have the various 'production' sections such as pirn winding, warping, drawing and cone winding been 'balanced' to ?		
a). Looms	☐	☐
b). Each other	☐	☐

If so please amplify :

_____

_____

_____

_____

4.4 Have any changes or improvements been made in the supply of ?		
a). Pirns to looms	☐	☐
b). Cones to warping	☐	☐
c). Warpers beams to sizing	☐	☐
d). Sized beams to drawing	☐	☐
e). Drawn warps to looms	☐	☐

If so please indicate the number of items held in 'readiness' for each section :

	BEFORE	AFTER
a). Stock of wound pirns		
b). Stock of cones for warping		
c). Stock of 'warped' beams		
d). Stock of 'sized' beams		
e). Stock of 'drawn' beams		

Any comment on above :

_____

_____

	YES	NO
____________________		
____________________		
4.5 Have any improvements been made in changing to 'Larger machines' as follows ?		
a). Larger pirns	☐	☐
b). [illegible]	☐	☐
c). Longer warpers beams	☐	☐
d). ____________________	☐	☐
e). ____________________	☐	☐
f). ____________________	☐	☐
Any comments on above :		
____________________		
____________________		
____________________		
____________________		
4.6 Work flow : Have any improvements been made to ?		
a). General Work Flow	☐	☐
b). Changes in 'Machine' lay out	☐	☐
c). Changes in 'Section' lay out	☐	☐
Any comments on the above :		
____________________		
____________________		
____________________		
____________________		
____________________		

4.7 Any other comments on Production	YES	NO

4.8 General Assessment on the Progress and Development on '15 Point' Scale.

PRODUCTION

A+				D+	
A		C+		D	
A-		C		D-	
B+		C-		E+	
B				E	
B-				E-	

5. FINANCIAL MANAGEMENT

		YES	NO
5.1	Have any changes or improvements been made in the area of financial management ?	☐	☐
	If so please indicate in which items :		
	a). General Accounting	☐	☐
	b). Introduction of any financial controls	☐	☐
	c). Working capital control	☐	☐
	d). Cash flow control	☐	☐
Other Items	e). _____	☐	☐
	f). _____	☐	☐
	g). _____	☐	☐
	h). _____	☐	☐

Any comments on above items :

_____

_____

_____

_____

5.2	Has the use of any 'Financial Ratios' been introduced such as ?		
	a). Labour cost to Production	☐	☐
	b). 'On Cost' to Production	☐	☐
Other Items	c). _____	☐	☐
	d). _____	☐	☐
	e). _____	☐	☐

Any comments on above items :

_____

_____

_____

5.3 General Assessment on the progress and development on '15 scale point' scale.

FINANCIAL

A+	☐			D+	☐
A	☐			D	☐
A-	☐	C+	☐	D-	☐
B+	☐	C	☐	E+	☐
B	☐	C-	☐	E	☐
B-	☐			E-	☐

6. MATERIALS MANAGEMENT	YES	NO
6.1 Has there been any improvement in the area of materials management ?	☐	☐
If so, have improvements been made in any of the following areas ?		
a). Purchasing procedures	☐	☐
b). 'Acceptance' checking	☐	☐
c). 'Life' of items bought	☐	☐
d). General 'Quality Checking' on Accessories.	☐	☐
e). Assessment of most profitable order size - particularly for yarn.	☐	☐
Other Items f). _____	☐	☐
g). _____	☐	☐
h). _____	☐	☐
i). _____	☐	☐
Any comments on the above :		
_____		
_____		
_____		
_____		
6.2 Yarn -		
Have any improvements been made in ?		
a). Yarn purchase methods	☐	☐
b). Yarn quality checking by such methods as slack/board wrap test	☐	☐
c). Yarn storage	☐	☐
d). Yarn handling (in stores)	☐	☐
e). Yarn handling (in process)	☐	☐

	YES	NO
MATERIALS CONTINUED f). _____ Other g). _____ Items h). _____ Any comments on the above : _____ _____ _____ _____	☐ ☐ ☐	☐ ☐ ☐
6.3 Have any improvements been made in general storage methods ? If so please specify _____ _____	☐	☐
6.4 Has there been any noticeable improvement in "reduction of costs" of stores and accessories ? If so please comment : _____ _____ _____	☐	☐
6.5 Waste Control - Has any action been taken on 'waste control' ? If so, have improvements resulted ? Please comment on 'degree' of benefit _____ _____ _____	☐ ☐	☐ ☐

MATERIALS CONTINUED

6.6 Any other comments on 'Materials'

MATERIALS MANAGEMENT

6.7 General assessment on the progress and development on '15 scale point' scale.

MATERIALS

A+				D+	
A		C+		D	
A-		C		D-	
B+		C-		E+	
B				E	
B-				E-	

7\. [illegible]

		YES	NO
7.1	[illegible] ?	☐	☐
	If [illegible] is there any '[illegible]' [illegible] :		
	1. [illegible]	☐	☐
	2. [illegible] (e.g. [illegible])	☐	☐
	3. [illegible]	☐	☐
	4. [illegible]	☐	☐
	5. [illegible]	☐	☐
	6. ______________________	☐	☐
	[illegible] Items 7. ______________________	☐	☐
	8. ______________________	☐	☐
	9. ______________________	☐	☐

[illegible] :

____

____

____

____

____

____

____

7.2	Is the 'General Financial' position of the company 'Improved' ?	☐	☐

Comments could be general and not actual figures.

____

____

____

GENERAL MANAGEMENT CONTINUED

7.3 Any other comments on General Management

GENERAL MANAGEMENT CONTINUED

7.4 General assessment on the Progress and Development on '15 point' scale.

GENERAL MANAGEMENT

A+				D+	
A		C+		D	
A-		C		D-	
B+		C-		E+	
B				E	
B-				E-	

ANNEXURE IX.

ANALYSIS OF EVALUATION EXERCISE

WORKSHOP NO. AND LOCATION	PARTICIPANT NO.	FACTORY TYPE	FACTORY NO.OF LOOMS	% EFFICIENCY INCREASE DECREASE	GENERAL FACTORY PROGRESS SATISFACTORY EXCELLENT	SATISFACTORY GOOD	SATISFACTORY FAIR	NOT SATISFACTORY POOR	LABOUR FORCE SIZE BEFORE W/S	LABOUR FORCE SIZE AFTER W/S	LABOUR FORCE SIZE INCREASE DECREASE	LABOUR FORCE WAGES TAKE HOME PAY PERCENTAGE (%) INCREASE
1. MAJALAYA	1/6	P/L	60	30		x			67	126	+ 59	15
	1/9	P/L	100	18	x				151	210	+ 59	15
	1/11	P/L	200	19		x			147	147	0	15
6. MAJALAYA	6/1	P/L	25	22			x		22	22	0	15
	6/3	P/L	27	6		x			69	111	42	20
	6/8	P/L	30	20			x		37	37	0	15
SUB TOTAL	6			115/6 = 19%	1	3	2	0	493	653	+ 160	95/6 = 15.8%
2. MEDAN	2/3	P/L	300	10			x		200	200	0	50
	2/4	P/L	60	15			x		83	98	15	40
	2/5	P/L	150	20			x		130	116	- 14	35
	2/7	H/L	-						81	71	- 10	40
	2/11	P/L										
SUB TOTAL	45			45/3 = 15%	0	0	3	0	494	485	- 9	165/4 = 41%
3. PEKALONGAN	3/4	P/L	152	34	x				154	154	0	40
	3/6	P/L	277	10	x	x			368	338	- 30	50
	3/7	P/L	86	32					NK	NK	NK	40
	3/10	P/L	190	10	x				147	135	- 12	50
	3/11	P/L	300	2			x		310	328	+ 18	50
	3/12	P/L	50	15		x			87	126	+ 39	20
7. PEKALONGAN	7/2	P/L	24	25			x		19	19	0	20
	7/3	P/L	65	23		x			103	110	+ 7	40
	7/6	P/L	100	15			x		164	218	+ 54	5
	7/7	P/L	308	- 5				x	225	225	0	NK
	7/11	P/L	48	27	x				126	139	+ 13	30
SUB TOTAL	11			188/11 = 17%	4	3	3	1	1,703	1,792	+ 89	345/10 = 34%
4. KLATEN	4/6	P/L	114	25	x				212	173	- 39	10
	4/8	P/L	72	15			x		104	104	0	25
	4/9	P/L	18	25		x			29	34	+ 5	NK
SUB TOTAL	3			65/3 = 21%	1	1	1	1	345	311	- 34	35/2 = 17%
5. SURABAYA	5/1	P/L	168	5				x	66	66	0	30
	5/3	P/L	135	NK				x	73	48	- 25	25
	5/6	P/L	138	NK				x	95	95	0	30
	5/7	P/L	72	- 10				x	104	104	0	20
	5/8	P/L	300	NK				x	238	238	0	25
SUB TOTAL	5			15/2 = 7%	0	0	0	5	576	551	- 25	130/5 = 25%
8. YOGYAKARTA	8/5		34	- 10				x	27	27	0	N/K
	8/9		205	?			x		470	470	0	28
	8/13		405	- 24				x	450	450	0	10
	8/19	H/L	-	N/A					33	33	0	10
	8/6	BATIK	-	N/A					32	32	0	N/K
SUB TOTAL	5	-	-	-27/3 = -9%	0	0	1	2	1,012	1,012	0	48/3 = 16%
GRAND TOTALS	35	-	-		6	7	10	9	4,623	4,804	+ 181	818
LOOMS	-	-	4,243		881	506	1,266	1,590				
AVERAGES	-	-	-	14.3%							3.91%	818/30 = 27%

8 NOT EVALUATED

TOTAL EVALUATION VISITS 43

NUMBER EVALUATED 35 = 35% OF TOTAL FACTORIES CONCERNED

EFFICIENCY CHANGE: HIGHEST + 34 %; LOWEST - 25 %; AVERAGE + 14.3%

WORKERS TAKE HOME PAY CHANGE: HIGHEST + 50 %; LOWEST + 5 %; AVERAGE + 27 %

LABOUR FORCE CHANGE: BEFORE 4,623; AFTER 4,804; INCREASE 181 = 3.91 %

ANNEXURE X

Jakarta, 9th February 1976.

Mr. Santosa,

Mr. Wibowo,

Subject : Syllabus for pretraining of counterparts to be assigned to the Weaving Experts for staffing the Technical Service Centres.

While I am in general agreement with the design and contants of the course, I would however suggest some shifts in emphasis to equip the trainees to meet the needs of the small scale weaving sector more effectively.

The suggestions I am venturing to make are born out of my study of the small scale weaving industry. It has to be remembered that their crying need in the technical area is for assistance in basic weaving technology and factory operations rather than in high level textile technology or sophisticated management techniques. The staff of the Technical Service Centres must therefore be suitably and adequately trained to meet these. The following modifications in the syllabus for pre-training, as designed now, are therefore being suggested solely with this end in view :

1. Textile Fibres :

A total of 48 hours has been allocated to the study of the theory of Textile Fibres during the course period of six months, at the rate of two hours per week.

In my view this is excessive and can be easily cut down to 16 hours during the entire period.

The 32 hours that will thus become available, would then be reallocated on the basis of 16 hours for Textile Calculations and 16 hours to Maintenance & Workshop Practice in addition to the 24 hours now provided for the latter (ref. 7 of the curriculm)

2. Textile Calculations ;

The current level of knowledge amongst most small weaving factory operators of some basic textile calculations is very deficient. It is imperative therefore that guidance be provided to them in this, for purposes of both accurate costing and production planning. The following are some examples of typical textile calculations of which the factory operators should have knowledge and which is to day lacking ;

a). Calculation of machine speeds in the various preparatory processes and the loomshed, including average width and speed of looms in the shed.

... / ...

b). Production per hour or shift, based on above speeds.

c). Operating efficiencies, in the various processes, based on above calculated (expected) productions.

d). Sortwise efficiency of all cloths woven, in the loomshed.

e). Individual weavers efficiencies.

f). Warp take-up.

g). Warp regain.

h). Weft regain.

i). Weft contraction.

j). Weight of warp and weft yarn required per piece, and per loom shift, of the various sorts.

k). Nominal size percentage on warp.

l). Size percentage retained on warp yarn.

m). Size gain in grey cloth.

n). Waste losses in various processes.

The staff of the Technical Service Centres must have a thorough grounding in the above and other similar calculations, in order to enable them to assist factory managements in their turn.

3. Maintenance and Workshop practice.

A total of 24 hours of practical work in the above area has been provided for in the course of the six months pretraining period. This is wholly inadequate in view of the absolutely imperative necessity to give the trainees a thorough orientation in maintenance procedures and workshop practice having regard to the extremely poor standard of maintenance in all sections of the small scale weaving industry. This aspect cannot be over emphasised. Apart from indoctrination in both the theory and practice of maintenance procedures, the trainees should receive practical training in simple workshop operations like filing, drilling etc.

It is noticed that a total of 96 hours have been allocated for " Evaluation and Textile Quality Control ", for both theoretical and practical work. Atleast some of the subjects proposed to be covered in this, such as, Statistical Quality Control techniques are too sophisticated for the level of trainees involved and superflous to the needs of the situation.

It is more necessary for the trainees to appreciate the importance of correct working methods, handling of material in process etc. at the shop floor level and to recognise the effect of these on the ultimate quality of the finished product.

To give just one example it must be demonstrated how defective winding of weft pirns, could lead to more frequent shuttle changes, weft breaks etc. thus increasing possibilities of weft cracks or thick and thin places in the fabric through increase in looms stoppages and start ups.

.../...

Further, the trainees should have a clear idea of and be able to recognise the various types of cloth defects, indentify their causes, and acquire the knowledge to rectify these.

In other words, the emphasis in the whole syllabus must be on methods to be adopted at the floor level rather than sophisticated statistical quality control techniques.

It would therefore be worthwhile to consider cutting down the time allocated to this subject from 96 during the entire course to 48 and these utilised more directly for the purposes mentioned above.

The 48 hours thus available should be divided equally between Factory Management and Industrial Engineering.

These should cover subjects like the following under Factory Management :

1. Factory Organisation and Lay-out.
2. Flow of material in process.
3. Material handling and storage.
4. Production planning and control.
5. Waste points and control etc.

Subjects to be covered under Industrial Engineering should be ;

1. Basic principles of Work Study
2. Theory and practice of
   Time and Motion Study.
3. Operational studies e.g.
   End breakage rates in winding, warping, weaving, frequency of creeling etc.
4. Principles of work assignment e.g. number of spindles per winder, number of looms per weaver etc., based on above.
5. Establishment of labour performance standards, and calculation of performance indices.

Importance of Relative Humidity.

There is to-day a woeful lack of awareness in all small weaving factories without any exception of the imperative need for proper humidity conditions in a weaving shed for good weaving. Factory operators throughout the country simply do not know that weaving sheds should be provided with the necessary facilities for maintaining the relative humidity at a requisite level viz. 80/85% to ensure good yarn performance to minimise warp breakages and cloth defect and thereby maximise efficiency. It must be brought home very strongly to the trainees, who will be the future technical personnel of the Technical Service Centres, that they must do everything possible to educate factory managements in this aspect. This they can do only

if they themselves are convinced of this and their training course cannot therefore emphasise this matter too strongly.

The effect of Relative Humidity at various levels on yarn performance in the loom shed must be illustrated very clearly and the importance of this stressed with all the emphasis that it is possible to command.

We trust the above suggestions will be considered helpful and shall always be happy to discuss these further if you should so desire.

(Sd)

B. RAJAPAN

ANNEXURE XI

EXTENSION SERVICES PROVIDED BY TSC'S

1. TSC - PEKALONGAN, CENTRAL JAVA

(1) FIELD SERVICE BY TSC TECHNICIANS (POWER LOOM)

No.	Name of factory	No. of Looms	Services	
			Duration	TSC Technicians
1.	Faltatex	94	July- August 1976	2
2.	KOPINDO	154	-do-	2
3.	HASACO	44	May - June 1977	2
4.	Permaitex	40	May - June 1977 Dec. - June 78 79	2 1
5.	Jelita	180	Oct. - Dec. 1977	2
6.	DRC	80	Jun - Sep 79	2
7.	New Mafahtex	90	Nov - Dec 78	1
8.	Pismatex	76	Feb - Apr 76	1
9.	Naga Mas	30	Oct - Dec 77	1
10.	Rosatex	71	Dec - Feb 78 79	1
11.	Sari Putra	40	Dec - Jan 78 79	1
12.	Abdurachman	40	Dec - Feb 78 79	1

(2) TRAINING COURSE HELD BY TSC PEKALONGAN

No.	For	Duration	Participants	
			No. of Persons	No. of Mills
1.	Power Loom Technicians	19 -30 Aug 76	18	13
2.	Dyeing & Finishing	22 & 23 Jun 76	30	29
3.	Management	14 Nov 77 - 18 Jan 78	18	16
4.	Dyeing & Finishing	4 -15 Feb 78	20	18
5.	Power Loom Technician	21 Jan - 4 Feb 78	30	29
6.	Management	29 Oct - 3 Nov 78	30	29
7.	Power Loom Technician	24 Jun - 4 Feb 78	17	15

2. TSC - PEMATANG SIANTAR, NORTH SUMATRA

(1) FIELD SERVICE BY PEMATANG SIANTAR TSC TECHNICIANS (POWER LOOM)

No.	Name of Factory	Duration
1.	Subur, Balige	3-28 Aug, 1-29 Sep 1977; 13-25 Nov 1978.
2.	Tiga Kayu Jior, Balige	6-25 Dec 1978.
3.	Timbul Pardomuan, Balige	
4.	Marojahan, Pematang Siantar	3-28 Aug 1978.
5.	Simanjoentak, Medan	19 Jan - 22 Mar, 15-29 June, 4-18 July 1978; 15-28 Jan 1979.
6.	Trimurni, Medan	
7.	Sima Concern, Medan	19 Jan - 23 Mar 1978
8.	Sumatratex, Medan	5 Jul - 31 Aug 1977

(2) TRAINING COURSE FOR POWER/HAND LOOM OPERATOR HELD BY TSC PEMATANG SIANTAR

No.	Location	Duration	No. of Participant
1.	Silalahi	20-30 Oct 77	23
2.	Batubara	4-13 Oct 77	20
3.	Tarutung	17-26 Oct 77	20
4.	Sipirok	30 Jan - 10 Feb 78	30
5.	Pematang Sinatar	6-17 Mar 78	18
6.	Palipi, Samosir Island	1-12 Aug 78	30
7.	M u a r a	19-30 Sep 78	40
8.	Balige	14-25 Nov 78	20
9.	Lumban Julu	10-29 Jan 79	23
10.	Tiga Runggu, etc.	15-26 Feb 79	25

3. TSC - KLATEN, CENTRAL JAVA

(1) FIELD SERVICE BY KLATEN TSC TECHNICIANS (POWER LOOM)

No.	Name of Factory	No. of Looms	Services	
			Duration	No. of TSC Technicians
1.	Pabrik Cambric BATARI, Solo	300	12 & 13 Dec 1978	1
2.	P P B S, Solo	24	12 & 13 Dec 1978	1
			19 - 24 Feb 1979	2
3.	Karang Tunggal, Yogyakarta	20	27 & 28 Dec 1978	2
			15-19, 29-31 Mar 1979	2
4.	Perbaik, Solo	24	31 Jan - 2 Feb 1979	3
5.	M S, Klaten	76	25 & 26 Apr. 1979	1
6.	BAKA, Klaten	28	10 - 12 May 1979	1
7.	Mahditex, Klaten	72	10 - 12 May 1979	1

(2) TRAINING COURSE FOR FACTORY FOREMAN HELD BY KLATEN TSC

No.	Topics	Duration	Site	No. of Participant
1.	Cotton dyeing technology	24 - 31 Jul 1978	Sleman, Yogyakarta	30
2.	Designing development for hand loom	7 - 26 Aug 1978	TSC, Klaten	10
3.	Hand loom factory management	6 - 17 Oct 1978	"	10
4.	Dobby for handloom and cotton dyeing	13 - 18 Nov 1978	Sukoharjo, Solo	29
5.	"	23 - 28 Nov 1978	Sragen, Solo	25
6.	"	15 - 16 Dec 1978	Sleman, Solo	10
7.	Entrepreneurship for handloom factory	16 - 17 Dec 1978	Sleman, Solo	7
8.	Printing technology	20 - 31 Dec 1978	Polanharjo, Klaten	13
9.	Cotton dyeing technology	2 & 3 Jan 1979	"	13
10.	Towel weaving	5 & 6 Feb 1979	Sleman, Yogyakarta	19
11.	Cotton dyeing technology	8 - 10 Feb 1979	"	21
12.	"	5 - 10 Feb 1979	Sukoharjo, Solo	21
13.	"	29 Jan - 1 Feb 1979	Cilacap	10
14.	Mill administration	7 Feb 1979	Sukoharjo, Solo	21
15.	"	8 Feb 1979	Sleman, Yogyakarta	20
16.	Process control in weaving shed	5 - 12 Feb 1979	TSC, Klaten	12
17.	Towel weaving	20 Feb - 3 Mar 1979	Sleman, Solo	32
18.	Cotton dyeing technology	19 - 26 Mar 1979	Cawas, Klaten	20
19.	"	26 - 31 Mar 1979	Polanharjo,	20

ACTIVITIES OF TECHNICAL SERVICE CENTRE AT MALY IN 1978/ 1979.

NO.	Activity	Date	Nature of Service	Total participants
1.	Lecture & Training in preperation and weaving	March 1978	Identifying of problems in factories.	8
2.	Lecture and training sale promotion	21 March/ 1 April '78	Function and method of marketing.	33
3.	Visit of 3 factories	April 1978	In plant Training in 3 factories	6
4.	"	May 1978	"	6
5.	"	June 1978	"	6
6.	"	July 1978	"	6
7.	Lecture and training especially for hand knitting	20 July/ 31 July	Theory, practical design and marketing of hand knitting	32
8.	Visit of 3 factories	August 78	In plant Training in 3 factories	6
9.	"	Sept. 78	"	6
10.	Lecture and training, management for the small scale textile industry	18 Sept./ 24 Sept '78	Management	18
11.	Lecture, achievement motivation training	24 Sept./ 29 Sept. 78	Achievement motivation	18
12.	Factory Management II			14

No.	Activity	Date	Nature of Service	Total participants
13.	Visits of 3 factories	Oct. 78	In plant Training in 3 factories	6
14.	"	Nov. 78	"	6
15.	Training, dyeing	20 Nov.- 25 Nov. 78	Dyeing for various yarn	13
16.	Visit of 3 factories	Dec. 78	In plant Training in 3 factories	6
17.	Training, dyeing yarn for hand knitting	12 Dec - 1 Jan. 79		31

ACTIVITIES OF TECHNICAL SERVICE CENTRE AT L[illegible] IN 1978 1979.

SL. NO.	DATE	NATURE OF SERVICE	NO. OF PARTICIPANTS
1.	March 78 4 days 27th to 30th	Study tour to [illegible] of cooperative of [illegible] in [illegible] and some factory visits.	17
2.	April 1978	Training in specific handloom and printing.	7
3.	April 1978 12 days	Technical Training and guidance in weaving and factory visits.	[illegible]
4.	May 1978 12 days	- do -	[illegible]
5,	May 1978	Training in dyeing for silk	17
6.	June 1978	Technical Training and guidance in preparation and weaving and factory visits.	[illegible]
7.	June 1978	Garment training	25
8.	June 1978	Management workshop	12
9.	July	- do -	[illegible]
10.	July	Technical assistance in dyeing	[illegible]
11.	July 1978	Survey of possibilities and studies made for export of [illegible].	-
12.	August 1978	[illegible]	-

SL. NO.	DATE	SUBJECT	NO. OF PARTICIPANTS
13.	September 1978	Technical guidance	
		in Weaving	2
		in Knitting	1
14.	September 78	Training in dyeing for handloom	13
15.	September 78	Workshop and Design Training	15
16.	October 1978	Technical guidance in Weaving	1
17.	November 1978	- do -	1
18.	November 1978	Training in weaving and dyeing	2
19.	November 1978	Guidance in dyeing with basic colours	6
20.	December 1978	Data collection	-
21.	January 1979	Weaving Training	
		Exibition Consultation Training in Bamboo Weaving	14
22.	February 1979	Exibition Weaving Training Guidance in Handloom Garments	-
23.	March 1979	Training in dyeing of Synthetic dyestuff (Naftol) Training in Handloom Towel Study four to Bali comparative study Exibition	39

Annexure XII

COUNTERPART PERSONNEL

No.	Name	Qualification & Experience.	Function.	Period of Assignment.
1.	Mr. Santosa	- M.Sc. Textiles - M.A. Economics - A.T.I. - Faculty member ITT Bandung. - Director Research & Development DITJENTEKS. - Agency for Industrial & Development Research. - 28 yrs Govt.Service	Co-Project Manager.	Sept. 2'75 to date
2.	Mr. Idi Soebroto	- B.Sc Textiles - M.Sc Electric Eng. - Director of Textile Academy. - Director of Govt. Enterprise of Textile Manufacturer. - Officer in DITJEN-TEKS & Ministry of Industry. - 21 yrs in Govt.Service.	-Market Research -Market Dev & Promotion. -Garment Industry Consultant	1/5/76 - 30/1/78 1/4/78 - 31/9/79 1/1/80 - to date
3.	Mr. Soeroeri Edi Santoso.	- M.A. Economics - 15 Yrs in Govt.Service.	Market Research	1/7/76 - 31/3/77
4.	Mr. Sachrul Abbas Ras.	- M.A. Economics - 15 Yrs in Govt.Service.	- DO -	1/4/78 - 30/9/79
5.	Mr. Rasjidin Dimar	- B.Sc Textiles - 17 Yrs in Govt.Service. - Manager of MSC Jakarta.	- DO -	1/10/79-to date April'77- to date
6.	Mr. Kartono	- M.Sc Textiles - 8 yrs in Govt.Service - Head Sub. Div Power & Electrical Installation, ITT.	Factory Management	1/4/78 - to date

No.	Name	Qualification & Experience.	Function	Period of Assignment.
7.	Mr. K. Bangun	- M.Sc Economics - 12 yrs in Govt.Ser- - Head Sub.Div. Regis tration ITT.	Factory Mana- gement.	1/4/78 - to date
8.	Mr. Sofyan	- M.Sc Textiles - 5 yrs in Govt.Ser- vice - Staff member ITT	- DO -	- DO -
9.	Mr. R.G.A. Kasoenar - no.	- B.Sc Textiles - 16yrs in Govt.Ser- vice - Coordinator of Finish - ing Research ITT.	Dyeing & Finish - ing.	1/9/78 - to date
10.	Mr. Hendrodyantopo	- M.Sc Textiles - 10 yrs in Govt.Ser- vice. - Head Dyeing Labora- tory ITT.	- DO -	1/4/78 - to date
11.	Mr. Mian Panggabean	- B.Sc Textiles - 9 yrs in Govt.Ser- vice - Head Library ITT.	- DO -	1/4/78 - 31/3/78
12.	Mr. Malikoes Soedip- tyo.	- M.Sc Textiles - 15 yrs in Govt.Ser- vice - Head Sub.Div. Tech- no Economics ITT.	Weaving	1/5/76 - to date
13.	Mr. R.E. Dachlan	- M.Sc Textiles - 11 yrs in Govt.Ser- vice - Coordinator of Wea- ving Research ITT.	- DO -	1/4/76 - to date
14	Mr. Achyar	- M.Sc Textiles - 12 yrs in Govt.Ser- vice - Staff member Knitting Centre ITT.	Knitting	1/12/77 - 31/7/79
15.	Mr. Wagimun	- M.Sc Textiles - 19 yrs in Govt.Ser- vice - Coordinator of Tex- tile Standardisati- on ITT.	- DO -	1/1/77 - to date

No.	Name	Qualification & Experience	Function	Period of Assignment
16.	Mr. Okim Djamhir	- B.Sc Textiles - 13 yrs in Govt.Service - Coordinator of Knitting Research ITT	Knitting	1/4/76 - 30/11/77
17.	Mr. Sulistyono	- 18 yrs in Govt.Service. - Head Warp Knitting Laboratory ITT.	- DO -	1/8/79 - to date
18.	Mrs. Ae Rizal	- Dept. of Art & Design ITB. - 1 year in Govt.Service Design Section	Textile Design	1/11/77 - to date
19.	Mr. Kosasih Muchlis	- B.Sc Textiles - 1 year in Govt.Service - Staff member ITT	- DO -	1/11/77 - to date
20.	Mr. Tony Hartono	- B.Sc Textiles - 13 yrs in Govt.Service - Staff member ITT	- DO -	1/7/77 - to date
21.	Mr. Samidjo	- M.Sc Textiles - 17 yrs in Govt.Service - Head Sub.Div.Yarn Processing ITT	- DO -	1/7/77 - to date
22.	Mr. Sulaeman	- B.Sc Textiles - 1 year in Govt.Service - Staff member ITT	Knitting Design	1/11/77 - to date

Annexure XIII

UNITED NATIONS

TEXTILE INDUSTRY DEVELOPMENT PROGRAMME IN INDONESIA
UNDP/UNIDO PROJECT (INS/74/018)

Telephone 349329

8-12 Jalan K.H. ...

Reference

JAKARTA

12th June 1979

Dear Mr. Santosa,

Market Research fellowships.

I am writing with further reference to my letter dated 26th February 1979, regarding Messrs. Kambali Abhal and Yayan Mulyana nominees for the above.

I regret to say that I am afraid that little or/no progress has beenmade by Mr. Kambali in acquiring sufficient proficiency in English for him to benifit from the fellowship.

I would suggest therefore that Government may be pleased to make an alternative nomination.

As regards Mr. Mulyana I am arranging to see him again when I am in Bandung later this month and will revert to you regarding him.

The matter of the fellowships concerned has acquired great urgency, having regard to the fact that the project is now approaching its closing stages. Further arrangements for their placements with the various institutions in India have also progressed to an advanced degree so that their trainigg can begin almost immediately.

Yours sincerely,

B. RAJARAM
Project Manager
Jakarta.

Drs. Santosa S. Teks
Co Project Manager
INS/74/018
Jakarta.

cc.: Mr. F. M. Iqbal
SIDFA UNIDO
Jakarta.

(ANNEXURE XIV)

L I S T O F R E P O R T S

NUMBER :	TITLE :	AUTHOR :
1.	Report on Balitex , Denpasar	B. Rajaram & K. Vaahtokari.
2.	Report on Pertenunan Insan, Majalaya	B. Rajaram & Malikus.
3.	Report on Kopindo , Pekalongan	B. Rajaram & R.F. Dachlan.
4.	Report on Haji Sidik Weaving Factory	B. Rajaram & Malikus.
5.	Follow-up report on Pertenunan Insan	B. Rajaram & Malikus.
6.	The Role of the Small Scale Weaving Industry in the Indonesian Textile Market.	K. Vaahtokari
7.	Revised (from technical report No. 25 , IMS/ 71/531) A practical guide for the First Step of Improvement Weaving in Indonesia.	T. Hoshiyama
8.	Suggestion No. 1 to the weaving of C.V. Jember, Majalaya.	- DO -
9.	Suggestion to Pertenunan Pawitan II, Majalaya	- DO -
10.	Suggestion No. 2 to the weaving of C.V. Jember, Majalaya. (For warp preparation of winding, warping and sizing processed in P.T. Tjandi Djaya).	- DO -
11.	A market study on selected industrial textiles in Indonesia.	K. Vaahtokari
12.	Suggestion No. 1 to the weaving of P.T. Tiga Dara, Pekalongan.	T. Hoshiyama
13.	Suggestion No. 1 to the H. Chaidiri Mashuri Weaving Mill, Pekalongan	- DO -
14.	Suggestion No. 2 for warp preparation of warping and sizing processed in P.T. Piatex.	- DO -
15.	Suggestion No. 1 to the Ilyas Weaving Mill, Majalaya.	- DO -
16.	Suggestion No. 1 to the weaving of Sofatex, Pekalongan.	- DO -
17.	Suggestion No. 1 to the Furniatex Weaving Mill, Majalaya.	- DO -

NUMBER :	TITLE :	AUTHOR :
18.	Report on Seminar on Textile Factory Management held at Majalaya, June 6th - July 13th 1977.	M.N. Holmes
18A.	Seminar Notes on Seminar on Textile Factory Management held at Majalaya, June 6th - July 13th 1977.	- DO -
18B.	Summary of Discussion on the Seminar on Textile Factory Management held at Majalaya, June 6th - July 13th 1977.	- DO -
19.	Suggestion No. 1 to the weaving of Kemisan II, Pekalongan.	T. Hoshiyama
20.	Suggestion No. 1 to the weaving of P.T. Mafahtex, Pekalongan.	- DO -
21.	Report on Workshop on Textile Factory Management held at Medan , August 29th - October 8th 1977.	M.N. Holmes
21A.	Summary of Discussion on the Workshop on Textile Factory Management held at Medan , August 29th - October 8th 1977.	- DO -
21B.	Ikhtisar Diskusi Lokakarya Manageman Pabrik Tekstil di Medan, 29 Agustus - 8 Oktober 1977.	- DO -
22.	Report on Workshop on Textile Factory Management held at Pekalongan , November 14th 1977 - January 21st 1978.	- DO -
22A.	Summary of Discussion on the Workshop on Textile Factory Management held at Pekalongan, November 14th 1977 - January 21st 1978.	- DO -
22B.	Supplement to technical report No. 22.	- DO -
23.	Suggestion No. 1 to the weaving of Koperasi Batik Buaran, Pekalongan.	T. Hoshiyama
24.	Quarterly Report by the Dyeing and Finishing Expert on the Small Scale Textile Sector of Majalaya - Pekalongan , January - March 1978.	J.E.H. Bennett
25.	Suggestion No. 1 to the weaving of P.T. Gunatex, Pekalongan.	T. Hoshiyama
26.	Training Course at Pemalang in Dyeing and Printing, February 1st - February 10th 1978.	J.E.H. Bennett
27.	Warp Knitting Course at Bandung.	H.L. Sterenberg
28.	A sketch of the Small Scale and Medium Scale Textile Industry of Indonesia.	B.Rajaram.

NUMBER :	TITLE :	AUTHOR :
29.	Some approaches to the development of Small Medium Scale Textile Industry in the field of Management.	M.N. Holmes.
30.	Some approaches to the development of the Small & Medium Scale Weaving Industry in Indonesia.	T. Hoshiyama
31.	An approach to Textile Designing & Product Development in the Small & Medium Scale Sectors of the Textile Industry of Indonesia.	H. Poppe
32.	A quick survey of the Indonesian Knitting Industry and some approaches for improvements and development	H.L. Sterenberg
33.	Report on Workshop on Textile Factory Management held at Klaten, March 1st - April 13th 1978.	M.N. Holmes
33A.	Summary of discussion on the Workshop on Textile Factory Management held at Klaten, March 1st - April 13th 1978.	- DO -
33B.	Summary Workshop, Klaten.	- DO -
33C.	Report on Implementation and Consultancy work carried out by the Textile Factory Management Development Team at the Gangsar Weaving Factory Klaten, March 1st - April 13th 1978.	- DO -
34.	First Report on Falitex Small Scale Factory in Pekalongan.	J.E.H. Bennett
35.	Ikhtisar Diskusi Lokakarya Managemen Pabrik Tekstil di Pekalongan, 14 Nopember 1977 - 21 Januari 1978.	M.N. Holmes;K. Bangun; Partono.
36.	Ikhtisar Diskusi Lokakarya Managemen Pabrik Tekstil di Klaten, 1 Maret - 13 April 1978.	- DO -
37.	First Report on P.T. Harapan, Majalaya	J.E.H. Bennett
38.	Workshop Summary , Surabaya	M.N. Holmes
39.	Suggestion No. 1 to the weaving factory Jembar II, Majalaya.	J.D. Theodore
40.	Advise given to Madura Textile during the expert visit in connection with the Management Seminar Madura.	- DO -
41.	Suggestion No. 1 to the weaving factory Karjatex, Majalaya.	- DO -
42.	Report on visit to TSC Lamongan, Surabaya	J.E.H. Bennett

NUMBER :	TITLE :	AUTHOR :
43.	Suggestion No. 1 to Tanjung Mas Weaving Factory, Surabaya.	J.D. Theodore
44.	Suggestion No. 1 to the weaving factory Sadartex, Majalaya.	- DO -
45.	Suggestion No. 1 to Pertenunan Mustika, Majalaya.	- DO -
46.	Suggestion No. 1 to the weaving factory Ginanjar, Majalaya.	- DO -
47.	Suggestion No. 1 to the weaving factory N.V. Textile Baswedan (Texbas), Surabaya	- DO -
48.	Feasibility Study on establishment of a common finishing facility by the Simatex Textile Group of Majalaya.	J.E.H. Bennett
49.	Suggestion No. 1 to the weaving factory Kasawasada, Surabaya.	J.D. Theodore
50.	Suggestion No. 1 to the weaving factory Pertenunan Ijah Asen , Majalaya.	- DO -
51.	Report on Workshop on Textile Factory Management held at Surabaya.	M.N. Holmes
51A.	Summary of Discussion on the Workshop on Textile Factory Management held at Surabaya.	- DO -
52.	Suggestion No. 1 to the weaving factory Pamadjajatex, Madiun.	J.D. Theodore
53.	Report on visit to P.T. Monytex, Medan.(Part I)	H.L. Sterenberg
54.	Feasibility study report for common sizing facility in Klaten area, Central Java.	T. Hoshiyama
55.	Report Part I on New Investment Project for P.T. Sumber Jaya Garments, Jl. Veteran 33, Surakarta, Central Java.	H.L. Sterenberg
56.	Report Part II on assisting P.T. Monytex, Medan from 23rd October - 3rd November 1978.	- DO -
57.	Report on Consultancy Work at Yuhanas Konpeksi Garment Manufacturing Company, Klaten.	M.N. Holmes
58.	Progress Report on the Small Scale Industry Dyeing Sector.	J.E.H. Bennett
59.	Ikhtisar Diskusi Lokakarya Managemen Pabrik Tekstil di Surabaya, Juni - Juli 1978	M.N. Holmes; K. Pangun; Kartono; Sofyan.
60.	Final Report of Hanspeter Poppe, Expert in Textile Design & Product Development.	H. Poppe.

NUMBER :	TITLE :	AUTHOR :
61.	Report on Workshop on Textile Factory Management held at Majalaya.	M.N. Holmes
61A.	Summary of Discussion held at Majalaya	- DO -
61B.	A Summary of the Workshop held at Majalaya from October to November 1973 and presented to the participants on the final workshop period.	- DO -
62.	Report on further implementation work carried out by Mr. Martono during August / September 1978 as Follow-up Work of the Workshop on Textile Factory Management held at Pekalongan, November 1977 to January 1978.	- DO -
63.	Technical & Quality Improvement in Indonesian Knitting Factories.	H.L. Sterenberg
64.	Technical Improvement and Quality Standardization in Weaving with Special Reference to Majalaya, Surabaya and Ponorogo Regions.	J.D. Theodore
65.	Technical Improvement and Quality Standardization in Weaving with Special Reference to Pekalongan, Klaten , Jogyakarta and Medan Regions.	T. Hoshiyama
66.	Textile Factory Management in the Small Scale Textile Industry in Indonesia its strengths & weaknesses.	M.N. Holmes
67.	Technical Improvement and Quality Standardization in Dyeing & Finishing with Special Reference to the Majalaya and Pekalongan Regions.	J.E.H. Bennett
68.	UNIDO Seminar on Strengthening the Potentials of the Small and Medium Scale Sectors of the Textile Industry (Bandung, 20th - 21st December 1978).	B. Pajaram
69.	Workshop on Information & Communication in Marketing.	L.M. Navatsmark
70.	Market Development & Promotion of the Small and Medium Sectors of the Indonesian Textile Industry.	- DO -
71.	Perbaikan teknik dan standarisasi mutu dalam pencelupan & penyempurnaan terutama yang berhubungan dengan daerah Majalaya dan Pekalongan	J.E.H. Bennett
72.	Terminology in Weft Knitting	H.L. Sterenberg
73.	Quarterly Progress Report, May - September 1978.	J.E.H. Bennett
74.	Report Part Three on assisting P.T. Manytex Medan from 16 - 27 January 1979.	H.L. Sterenberg
75.	Suggestion to " Eddytex Weaving Mill " Pedan, Central Java.	T. Hoshiyama

NUMBER :	TITLE :	AUTHOR :
76.	Suggestion to " Robithtex Weaving Mill " Cepor Klaten, Central Java.	T. Hoshiyama
77.	Report on Klaten area, where the Technical Service Centre was inspected and arrangements made to visit the factories allocated by BIPIK.	J.F.H. Bennett
78.	Report containing some of Information gathered concerning the Simatex Group of Small Scale Textile Companies in Majalaya connected with the feasibility study No. 48 on the establishment of a common finishing facility in the Majalaya area.	- DO -
79.	Report on the Technical Service Centre at Denpasar, Bali.	J.E.H. Bennett & J.D. Theodore.
80.	Suggestion No. 1 to the weaving factory H. Saiffudin, Majalaya.	J.D. Theodore
81.	Suggestion No. 1 to the weaving factory " Pada Asih " , Majalaya.	- DO -
82.	Laporan Penyelenggara Pelajaran dan Diskusi Disain Perajutan (9 April 1979).	H.L. Sterenberg; A. Weiss ; Okim Djamhir.
83.	Suggestion No. 1 to the weaving factory Pabrik Kecil, Lawang.	J.D. Theodore
84.	Suggestion No. 1 to the weaving factory Pertenunan Berdikari, Majalaya.	- DO -
85.	Report Part II on New Investment Project for P.T. Sumber Jaya Garments, Jl. Veteran 33 - Surakarta, Central Java.	H.L. Sterenberg
86.	The manufacture of Full Fashioned Knit Outerwear.	- DO -
87.	Report on Workshop on Textile Factory Management held at Pekalongan, April to May 1979.	M.W. Holmes.
87A.	Summary of Discussion on the Workshop on Textile Factory Management held at Pekalongan, April to May 1979.	- DO -
87B.	Workshop Summary and General Conclusions. A Summary of the Workshop held at Pekalongan from April to May 1979 and presented to the participants on the Final Workshop Period.	- DO -
88.	Report Part I on Improvements and Guidance of P.T. Persodjo, Jl. Tebet Utara Raya 7-11, Jakarta Selatan.	H.L. Sterenberg

NUMBER :	TITLE :	AUTHOR :
89.	Final Report of Mr. B. Pajaram, July 1974 (Reprint).	B. Pajaram
90.	Report on factory P.T. Samitex at Jogyakarta.	J.E.H. Bennett
91.	Suggestion to " Subur Weaving Factory " Balige, North Sumatra.	T. Hoshiyama
92.	Suggestion to " Marojahan Weaving Mill " Pematang Siantar, North Sumatra.	- DO -
93.	Suggestion to P.C.Batik Batari Weaving Mill, Surakarta.	- DO -
94.	Report of Military order for 800,000 metres of Blacu to factories in Majalaya.	J.D. Theodore
95.	Suggestion to weaving of P.T. Sumatex, Medan September 1979.	T. Hoshiyama
96.	Report on Workshop on Textile Factory Management held at Jogyakarta, June'79 - July'79.	M.N. Holmes ; K. Pangun; Kartono; Sofyan.
96A.	Summary of Discussion on the Workshop on Textile Factory Management held at Jogyakarta, June - July 1979.	- DO -
96B.	Textile Management Development Programme Workshop No. 8 Jogyakarta, June 14th - July 21st 1979. Workshop Summary and General Conclusions.	- DO -
97.	A Case Study on Financial Management. The Acquisition of Low Cost Credit for use as Working Capital and Capital Investment in the Small Scale Powerloom Weaving Industry.	- " -
98.	Design Assistance for the Knitting Centre at the Institute of Textile Technology Bandung.	A. Weiss
99.	Report on Pismatex Factory , Pekalongan.	J.F.P. Bennett
100.	Report on visit to P.T. Kisar Sakti (Pardedetex) at Medan.	- DO -