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DP/ID/SER.A/1154
13 February 1989
ORIGINAL: ENGLISH

TESTING OF TEXTILE RAW MATERIALS, YARNS AND FABRICS AND PRODUCT DEVELOPMENT

DP/VIE/86/015/11-01

VIET NAM

Technical report: First mission of the Chief Technical Adviser*

Prepared for the Government of the Socialist Republic of Viet Nam
by the United Nations Industrial Development Organization,
acting as executing agency for the United Nations Development Programme

Based on the work of Roy Nield,
Chief Technical Adviser

Backstopping officer: Antero Eräneva, Agro-based Industries Branch

United Nations Industrial Development Organization
Vienna

* This document has not been edited.

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ABBREVIATIONS

CTA	Chief Technical Adviser
Est	Estimate
EH2	Expert Hanoi, Post 11-02, etc.
ES2	Expert Ho Chi Minh City, Post 11-02, etc.
F/H1	Fellowship, Hanoi No. 1, etc.
F/S1	Fellowship Ho Chi Minh City No. 1, etc.
JD	Job Description
MOLI	Ministry of Light Industries
N/A	Not available
NPD	National Project Director
Prodoc	Project Document
Req XX	Requisition No. XX
ST/H1	Study tour, Hanoi No. 1
ST/S1	Study tour, Ho Chi Minh City No. 1
TRI	Textile Research Institute, Hanoi
TRM	Tri-Partite Review Meeting
TTRM	Terminal TRM
UTE	Union of Textile Enterprises

I EXECUTIVE SUMMARY

The first mission took place during the period 13 November 1988 to 13 January 1989.

The equipment list was reviewed in the light of quotations received. Some minor changes were made. Orders were placed to the value of $192,730. UNIDO were requested to obtain more information on the remaining items and this work is in hand.

Nomination forms for two study tour groups and seven fellowship groups were completed and submitted to MOLI for signature. Unsigned copies were given to Ms B Tassew of the UNIDO Training Section who will follow them up when she visits Hanoi in February.

Job descriptions for the 6 experts were agreed with the NPD.

A revised Work Plan was agreed with the NPD.

A programme of work to be carried out by the NPD in the absence of the CTA was provided.

II INTRODUCTION

The main object of the project is to increase the availability of good quality textiles for domestic consumption which is in line with the Government's development plan for the period 1986-90 which emphasizes the need to expand the production of consumer goods - especially clothing.

The immediate objective of the project is to strengthen the capability of the southern subsidiary of the Vietnam Textile Research Institute in the areas of physical and chemical testing, product development and dissemination of information to enable it to expand and improve its advisory services in these areas to the textile industry in the South.

The textile industry in Vietnam comprises about 880,000 spindles and 11,000 looms, roughly equally divided between the North and the South, and generally operating at 50 per cent installed capacity. The industry is faced with serious difficulties leading to low productivity and product quality: The raw material base - both as regards fibres and dyestuffs and auxiliaries - is heterogenous, making effective process control difficult; equipment, for the most part, is outdated, run down and originates from too many different sources for effective maintenance and spare parts supply. The scarcity of capital precludes new investment on a scale that would be necessary and, finally, access to technical information from abroad is inadequate.

Despite these formidable difficulties the industry has made notable progress during the past few years. Yarn production increased from 31,000 tons in 1981 to 51,000 tons in 1985 and fabric production from 116 million metres in 1981 to 203 million metres in 1985. This is equivalent to 3,4 metres per capita - still a very low figure by international standards - and the Government plans to increase it to 8 metres per capita by the year 2000.

To supplement other measures, necessary to meet the target of increased availability of good quality textiles for clothing, the Government established, in 1980, a Ho Chi Minh City subsidiary of the Vietnam Textile Research Institute to serve the textile industry in the South while the main institute in Hanoi covers the factories located in the North. The mandate given to the Ho Chi Minh City subsidiary Institute was to

- test fibre raw materials, dyestuffs and auxiliaries for quality and suitability for the intended end products;

- develop specifications for new products in accordance with the requirements of the Ministry of Light Industry and the Union of Textile Enterprises and advise on their manufacturing;

- carry out quality checks in the factories and assist in quality control in general at all stages of the production process;

- develop standards for yarns and fabrics;

- disseminate technical information;

- develop and adapt technological processes in order to assist the factories in coping with their perennial spare parts shortage.

The Institute has embarked upon these tasks with enthusiasm and, despite being handicapped by limited physical facilities, its services to the industry are already being appreciated. It collaborates closely with about 40 textile factories in the South, covering all textile production processes and fibres from cotton to silk, viscose, rayon and polyester. It carries out about 800 yarn and fabric examinations per year, produces specifications for 20 new fabric designs and tests 400 dyestuffs and auxiliaries. In addition, work is being done on developing new size formulas and improved methods of processing natural silk.

The quality and quantity of this work could be greatly enhanced if the physical facilities of the Institute were improved and the staff given an opportunity to gain new technical knowledge through first hand contacts with the rest of the world. Their basic technical training is sound and they would be able to assimilate new knowledge quickly and subsequently adapt and apply it in accordance with the needs of the industry. The Institute thus meets all the fundamental prerequisites for UNDP assistance, and this project has been designed to address only priority areas where the need of external assistance is most pressing.

III RECOMMENDATIONS

1. The study tours should take place as soon as possible so that the senior staff will be back in time to receive the equipment and experts.

2. Training should follow the sequence - fellowship, installation and commissioning of equipment, working with expert.

3. The Purchasing Department of UNIDO should follow up the recommendations in Annex 1.

4. UNIDO should initiate recruitment of the Experts.

5. The NPD should follow the programme outlined in Annex 5 and try to implement the Revised Project Work Plan (Annex 4) as closely as possible.

6. The NPD should see that the formalities for the appointment of the CTA for the remainder of the project are completed as soon as possible.

7. The CTA should prepare for future missions keeping in mind the need to write reports for and to participate in important meetings, e.g. TRM's and the mid term cluster evaluation of UNDP assisted projects in the textile sub-sector.

8. UNDP should settle the dates for the TRM's etc. as soon as possible.

9. Where several items of equipment are being supplied by the same company, they should be packed as one consignment and sent by sea freight to economise on shipping costs.

10. Since the Prodoc was written the Government of Vietnam has decreed that as from the end of 1989, the Textile Sub Institute will be made responsible for carrying out quality assurance tests on all Vietnamese yarn exports. It will be impossible to do this in a meaningful way without access to an automatic single thread strength tester such as the Uster dynamometer. The dynamometer was left out of the equipment list on the grounds of cost, but now it appears that it will be indispensible. This should be taken into account in any Project revision.

11. Consideration should also be given to the provision of a Word Processor for use in preparing monthly News Letter (500 copies x 20 pages).

IV ACTIVITIES AND OUTPUTS

Purpose of the Mission

The main objectives of the mission were

- to review the equipment list and finalize the technical specifications in order to facilitate procurement as early as possible.

- to finalize the training programmes and assist in completion of the nomination forms.

- to revise the project work plan taking account of events since the Prodoc was written.

- to prepare a work programme for the NPD in the absence of the CTA.

- to prepare a report and make recommendations of the action to be taken to expedite implementation of the project.

Programme

This mission was combined with another mission to the Textile Research Institute in Hanoi, which is receiving assistance through a UNIDO project DP/VIE/86/014 (see separate report). The dates of the combined mission were 13 November 1988 to 13 January 1989, inclusive.

Although there are two separate UNIDO projects, they are so interlinked on the Vietnamese side that it seems only reasonable to consider them concurrently, with a view to achieving maximum coordination.

Counterparts

The NDP is Mme Pham Thi Minh Chau, Vice-Director of the TRSI. The Director of the TRSI is Dr. Tran Quoc Thinh who is also the Vice-Director of the TRI. The Director of the TRI is Dr. Pham Hoang Ninh.

Communication

Discussions were conducted in English or French, usually through an interpreter. This report (in draft form) and all other important documents were translated into Vietnamese and copies given to the NPD.

Buildings

Work is in hand to extend and improve the premises. Several new rooms have been built. The physical and chemical laboratories have been painted and a new fluorescent lighting system installed. This work will be completed before any equipment is delivered. These two laboratories and the finishing laboratory will be adequate to house the new equipment. The accommodation for the pilot plant is big enough but of poor standard. It is hoped that this will be rectified before the equipment is delivered.

Equipment

The equipment list was reviewed in the light of quotations received and rationalized by UNIDO. Following detailed discussions, some minor changes were found to be desirable whilst more information was required on certain other items. Accordingly, UNIDO were requested to go ahead and order those items about which there were no queries and to take the recommendation concerning the others. Full details are given in Annex 1.

A copy of the ASTM Standards Vol 7.01 has been ordered.

Training

Nomination forms for 2 study tours (10 candidates for a total of 10 man/months) 4 of the 7 fellowship groups (16 candidates for a total of 39 man/months) have been completed and submitted to MOLI for signature. Details are given in Annex 2. Unsigned copies have been given to Ms Tassew, a senior member of the training section of UNIDO, who will be visiting Hanoi in February to expedite implementation of the UNIDO training programmes and who will follow up our applications.

Experts

Job descriptions for the six experts were prepared in conjunction with the NPD, viz:-

ES1	CTA
ES2	QC/Testing Adviser
ES3	Silk Weaving Expert
ES4	Sizing Expert
ES5	Silk Finishing Expert
ES6	Dyeing/Finishing Expert

It is proposed that the CTA (ES1) should be the same person as EH1 of DP/VIE/86/014 and that the QC/Testing Adviser (ES2) should be the same person as EH2 and that they should have split missions.

Copies of the JD's are attached as Annex 3.

Work Plan

A revised Work Plan, agreed with the NPD, is attached as Annex 4, which also includes the Work Plan for DP/VIE/86/014 since the two programmes should be coordinated.

Programme of Work for the NPD

A work programme for the guidance of the NPD in the absence of the CTA is attached as Annex 5.

Meetings

In addition to frequent meetings with the NPD and her staff, high-level meetings were held at MOLI, UTE, UNDP and the General Department of Standardization and Quality Control (Centre III).

Mill Visits

Visits were made to Thang Loi Spinning Mill and Thang Cong Textile Mill.

V CONCLUSIONS

Considerable progress was made during this first short mission in connection with equipment, training and identification of the particular areas of expertise which should be covered by the experts.

The next mission of the CTA should be not later than the fourth quarter of 1989 with possibly a short visit in April/May 1989 to keep up the momentum.

The staff of the Institute, from the Director down, are enthusiastic about the project and UNIDO are being extremely cooperative. If this situation can be maintained the project should be a great success.

VI ACKNOWLEDGEMENTS

The CTA wishes to thank all those persons in the Government, UNDP and UNIDO who participated in this mission for their cooperation, advice and hospitality, and in particular

Dr. Dang Vu Chu, Vice-Minister of Light Industry
Mr. Nguyen Hieu, Director of International Cooperation Dept of MOLI
Mr. Bui Van Long, Director General of UTE
Mme Duong Minh Anh Lan, Deputy Director General UTE
Dr. Phan Hoang Ninh, Director of TRI
Dr. Tran Quoc Thinh, Director of TRSI
Mme Phan Thi Minh Chau, NPD
Mr. David Smith, Res. Rep. UNDP
Ms Jean Marc Bonnamy, SIDFA
Mr. Phan Due Thang, Programme Officer, UNDP
Ms Lars Adermalm, Programme Officer, UNDP

ANNEX 1

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

INTEROFFICE MEMORANDUM — MEMORANDUM INTERIEUR

Eräneva/Nield/em

TO/A: Mr. R. Logan, Chief, DA/GS/PUR — Date: 12 January 1989
Attn: Mr. Yamashita
Through: Mr. J. Lequien, Head, IO/T/AGRO
FROM/DE: A. Eräneva, ADV

SUBJECT/OBJET: VIETNAM: DP/VIE/86/015

This supersedes my IOM of 9 December 1988. The CTA, Mr. Roy Nield, has now further discussed the equipment offers with the project authorities and advises on all items as follows:

Req. 88/7, item 3 - Knit shrinkage tester

Recommendation: Please delete this item which is not needed for the project's work programme and replace by the Shirley crease recovery tester (SDL 3a).

Req. 88/7, item 5 - Crimp tester

Recommendation: Please delete the crimp tester and replace it by the Hatra crimp rigidity apparatus, including autowrap (SDL 48 and 86).

Req. 88/8, item 3 - Experimental skein dyer

Recommendation: Place the order with Roaches (as we have now checked that the unit has its own heating unit).

Req. 88/8, item 4 - Laboratory mercerizer

Recommendation: Delete this item (as it is not availabe).

Req. 88/9 - Silk vesting equipment

Please request quotations from the following companies who are supplying similar equipment to an FAO project in Vietnam.

Please add to the list

- hand-operated measuring meter;
- drying oven with balance (which would be more useful than, say, a serimeter).

1. Shin-Etsu Trading Co. Ltd.
   A.Y. Bldg. 2-2, Kita-Aoyama 3-Chome, Minato-Ku
   Tokyo (Japan)
   Cable address: CTYSINGETU TOKYO
   Telex: SINGETU J26323

2. Toyo Corporation
   Zenko Bldg., 4-3, Kanda, Nishifuda-Cho, Chiyoda-Ku
   Tokyo 101 (Japan)
   Cable address: TOYOENTERPRISE
   Telex: 03-256-5223

3. Korea Sericultural Machinery Co., Ltd.
   Mail M 28, Sungnae-Dong
   Kangdong-Ku
   Seoul (Korea)
   Cable address: "JAMGI" SEOUL
   Telex: K 24554

Please send catalogues and prices to UNDP for review by the NPD, Mme. Pham Thi Minh Chau.

Req. 88/10/1 - Silk manual winding machine

This should be a short-length dual-purpose machine. Half the spindles should be suitable for winding from skein to bobbin and the rest for assembling 1, 2 or 3 ends on to a package suitable for uptwisting.

Req. 88/10/2 - Silk twisting (throwing) machine

Recommendation: This machine should have the minimum number of spindles.

Please request quotations from

1. Korea Sericultural Machinery Co. Ltd (address above)
2. Korea Sericultural Association
   Silk Centre Building, 17-9 Yeoeuido-dong
   Yeongdeungpo-gu, Seoul

3. Mr. C.S. Park (Machine Marketing Division)
   Lucky-Goldstar International Corporation
   20 Yoido-dong
   Yeongdeungpo-gu, Seoul 150

4. Murata Machinery Ltd.
   136 Takeda-Mukaishirocho
   Fushimi-ku, Kyoto, 612 Japan

5. Iguchi Kogyo Co. Ltd.
   394 4-3-5 Kamomachi
   Okaya-City, Japan

Req. 88/11 - Sample design loom

Recommendation: Hold this item in abeyance. The CTA will visit the supplier and revert.

Req. 88/12 - Circular knitting machine

Obtain quotations from

1. Ssangyong Machine Ind. Co. Ltd. (Model SS4J-CS)
   No. 27-168 HWA Yang-dong
   Seung-dong ku, Seoul, S.Korea
   possibly through
   Kolon International Corp.
   CPO Box 1052, Seoul, Korea.

N.B. 78 feeders would be preferable to the 24 mentioned in the ProDoc.

3. Fukuhara Industrial + Trading Co. Ltd. (Model FXC-3S)
   75-11 3-Chome, Kyobasin, Higashi-ku, Osaka, Japan

Req. 88/13/2 - Piece glass (Alfred Suter + Co. type)

Recommendation: Please order from a general instrument supplier, e.g. Stutz.

Req. 88/14 - Camera

Recommendation: Please delete the camera which was erroneously included in the list and obtain quotations for an overhead projector.

Req. 88/15 - Refrigerators (4)

Recommendation: Please delete this and obtain quotations for four air-conditioners, 12.000 BTU capacity.

Req. 88/16 - Air-conditioner

Recommendation: Please invite quotations for an air-conditioner with the following specifications:
200 m3 laboratory space should be maintained at 27 degree C 65% RH under extreme ambient conditions of 40 degree C and 80% RH.

Req. 88/17 - Plain paper copier

Recommendation: Order from Kwan, HKG a machine similar to Req. 88/7 of DP/VIE/86/014.

SUMMARY OF THE PRESENT SITUATION AS REGARDS PROJECT EQUIPMENT

EQUIPMENT LIST

REQ.NO.	ITEM	SUPPLIER	COST ($)	
	FUNDS COMMITTED IN 1988			
88/2	Pressley (replaces stelometer)	Baer	2.591	
88/3	Micronaire	SDL	4.947	
88/4	Fineness/maturity	SDL	23.113	
88/5	Fibre blender	SDL	6.022	
88/6	Evenness tester	Uster	75.112	
88/7/1	Cloth abrasion)			
88/7/2	Cloth thickness)	Heal	10.686	
88/7/4	Pilling tester)			
88/19	Fibrograph	SDL	38.082	
Sub-total	Physical testing			160.553
88/8/1	Wash fastness tester	SDL	6.888	
88/8/2	Crock tester	Heal	746	
88/8/5	Viscosimeter)			
88/8/6	Lab. steamer)	Roaches	6.345	
88/8/7	Hydrometers)			
Sub-total	Dyeing and Finishing			13.979
88/13/1	Piece glass with pointer)			
88/13/3	Tensionmeter)	Heal	1.494	
88/13/4	Chart hygrometer			
88/1	Vehicle and spares		16.704	
Sub-total	Miscellaneous			18.198
	Total funds committed 1988			192.730

REQ.NO.	ITEM	SUPPLIER	COST ESTIMATE ($)
	ITEMS NOT YET ORDERED		
88/7/3	Crease recovery (replaces knit shrinkage)	SDL	2.000
88/7/5	Hatra equipment (replaces crimp)	SDL	5.000
88/8/3	Skein Dyeing machine	Roaches	7.745
88/8/4	Lab mercerizer	Cancel	-
88/9	Silk testing equipment		68.900
88/10/1	Manual assembly winder		6.000
88/10/2	Twisting machine for silk		13.500
88/11	Sample design loom	AVL	22.858
88/12	Circular knitting machine (silk)		50.500
88/13/2	Piece glass		100
88/14	Overhead projector (replaces camera)		1.000
88/15	Air conditioners(4)(replaces refrigerators)		800
88/16	Air conditioners		20.000
88/17	Plain paper copier	Kwan	1.500
Sub-total			199.903

SUMMARY OF EQUIPMENT COSTS

Funds committed in 1988		
- Physical testing	160.553	
- Dyeing and finishing	13.979	
- Miscellaneous	18.198	192.730
Items not yet ordered (estimate)		199.903
		392.633
Budget in Project Document		394.040

cc.: NPD, Mme. Chau
Dr. Nield

ANNEX 2

SUMMARY OF STUDY TOURS AND FELLOWSHIPS

Study Tours

ST/S1 — Textile Testing and Quality Control
5 x 1m = 5m/m
UK + France + W. Germany or Hungary

ST/S2 — Production of Silk, Synthetic and Blended Fabrics
5 x 1m = 5m/m
Japan + S. Korea + Singapore

Fellowships

F/S1 — Cotton Fibre, Yarn and Fabric Testing
3 x 3m = 9m/m
UK (Combine with F/H1 of VIE/86/014)

F/S2 — Standard Test Procedures in Textiles
2 x 3m = 6m/m
Decide after completion of F/S1

F/S3 — Silk Testing, Winding, Twisting and Finishing
3 x 3m = 9m/m
India + S. Korea

F/S4 — Production of Cotton/Synthetic Yarns and Fabrics
3 x 2m = 6m/m

F/S5 — Fancy Yarns and Fabrics
2 x 3m = 6m/m
Postpone decision until TRSI's work programme in this field is more definite.

F/S6 — Shuttleless Weaving
2 x 1m = 2m/m
Postpone until 1990.

F/S7 — Circular Knitting
1 x 1m = 1m/m
Supplier of knitting machine.

ANNEX 3

Rev.1, 12.01.89

UNITED NATIONS

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
UNIDO

Job Description
DP/VIE/86/015/11-01/J13102

Post title	Chief Technical Adviser
Duration	12 months (split missions; initial mission two months)
Date required	As soon as possible
Duty station	Ho Chi Minh City
Purpose of project	The development objective of the project is to increase the availability of good quality textiles for domestic consumption. This objective is included in the III UNDP Country Programme for Viet Nam and is in line with the Government's development plan for the period 1986-90 which emphasizes the need to expand the production of consumer goods - especially clothing. The immediate objective of the project is to strengthen the capability of the southern subsidiary of the Viet Nam Textile Research Institute in the areas of physical and chemical testing, product development and dissemination of information to enable it to expand and improve its advisory services in these areas to the textile industry in the South.
Duties	Preparation of R+D work programme and coordination of all project activities and inputs.
Qualifications	Textile technologist with extensive R+D experience covering a wide area of activities. Some experience of silk processing would be an advantage.
Language	English

Background information

The textile industry in Viet Nam comprises about 880,000 spindles and 11,000 looms, roughly equally divided between the North and the South, and generally operating at 50 per cent installed capacity. The industry is faced with serious difficulties leading to low productivity and product quality: The raw material base - both as regards fibres and dyestuffs and auxiliaries - is heterogenous, making effective process control difficult; equipment, for the most part, is outdated, run down and originates from too many different sources for effective maintenance and spare parts supply. The scarcity of capital precludes new investment on a scale that would be necessary and, finally, access to technical information from abroad is inadequate.

Despite these formidable difficulties the industry has made notable progress during the past few years. Yarn production increased from 31,000 tons in 1981 to 51,000 tons in 1985 and fabric production from 116 million metres in 1981 to 203 million metres in 1985. This is equivalent to 3,4 metres per capita - still a very low figure by international standards - and the Government plans to increase it to 8 metres per capita by the year 2000.

To supplement other measures, necessary to meet the target of increased availability of good quality textils for clothing, the Government established, in 1980, a Ho Chi Minh City subsidiary of the Viet Nam Textile Research Institute to serve the textile industry in the South while the main institute in Hanoi covers the factories located in the North. The mandate given to the Ho Chi Minh City subsidiary Institute was to

- test fibre raw materials, dyestuffs and auxiliaries for quality and suitability for the intended end products;
- develop specifications for new products in accordance with the requirements of the Ministry of Light Industry and the Union of Textile Enterprises and advise on their manufacturing;
- carry out quality checks in the factories and assist in quality control in general at all stages of the production process;
- develop standards for yarns and fabrics;
- disseminate technical information;

- develop and adapt technological processes in order to assist the factories in coping with their perennial spare parts shortage.

The Institute has embarked upon these tasks with enthusiasm and, despite being handicapped by limited physical facilities, its services to the industry are already being appreciated. It collaborates closely with about 40 textile factories in the South, covering all textile production processes and fibres from cotton to silk, viscose, rayon and polyester. It carries out about 800 yarn and fabric examinations per year, produces specifications for 20 new fabric designs and tests 400 dyestuffs and auxiliaries. In addition, work is being done on developing new size formulas and improved methods of processing natural silk.

The quality and quantity of this work could be greatly enhanced if the physical facilities of the Institute were improved and the staff given an opportunity to gain new technical knowledge through first hand contacts with the rest of the world. Their basic technical training is sound and they would be able to assimilate new knowledge quickly and subsequently adapt and apply it in accordance with the needs of the industry. The Institute thus meets all the fundamental prerequisites for UNDP assistance, and this project has been designed to address only priority areas where the need of external assistance is most pressing.

27.01.89

UNITED NATIONS

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
UNIDO

Job Description
DP/VIE/86/015/11-02/J13102

Post title	Textile quality control/testing adviser
Duration	Two months
Date required	September 1989
Duty station	Ho Chi Minh City, with possibility of travel within country
Purpose of project	To strengthen the capability of the Vietnam Textile Research Sub-Institute in the areas of physical and chemical testing, product development and dissemination of information to enable it to expand its advisory services in these areas to the textile industry in South Vietnam.
Duties	The adviser will work in co-operation with counterpart personnel and under the leadership of the Chief Technical Adviser (CTA). The adviser will not be expected to install or operate the various testing machines but rather to assist the national staff to: 1. establish testing routines in accordance with the best international standards; 2. evaluate Vietnamese (plantation and dispersely grown) and imported cottons; 3. evaluate Vietnamese produced and imported cotton and blended yarns and fabrics; 4. develop, systemize and introduce state standards, regional standards and branch standards for Vietnamese cotton and yarn properties based upon experience statistics; 5. establish quality assurance and certification procedures for imported cottons and imported and exported yarns; 6. advise textile mills on problems relating to testing and quality control.
Qualifications	At least 10 years experience in fibre, yarn, and fabric testing and quality control and certification for export. Wide knowledge of quality standards expected in other countries.
Language	English
Background Information	As in job description for post 11-01.

27.01.89

UNITED NATIONS

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
UNIDO

Job Description
DP/VIE/86/015/11-03/J13102

Post title	Silk weaving expert
Duration	Two months
Date required	Last quarter 1989
Duty station	Ho Chi Minh City, with possibility of travel within country
Purpose of project	To strengthen the capability of the Vietnam Textile Research Sub-Institute in the areas of physical and chemical testing, product development and dissemination of information to enable it to expand its advisory services in these areas to the textile industry in South Vietnam.
Duties	The adviser will work in co-operation with counterpart personnel and under the leadership of the Chief Technical Adviser (CTA), and will specifically be expected to: 1. assist in designing silk and silk/synthetic blend fabrics; 2. advise on the processes of preparation for weaving and weaving on the equipment at the Textile Sub-Institute and in factories; 3. assist in the development of quality control and classification procedures for silk grey cloth and finished products according to international standards; 4. organize seminars on the latest technology of silk processing, modern tastes and fashions in silk products and present day marketing requirements in the world for members of the Sub-Institute, the Textile Union and textile factories, etc.
Qualifications	Degree or diploma in textile processing and several years experience in silk weaving and preparation for weaving.
Language	English
Background Information	As in job description for post 11-01.

27.01.89

UNITED NATIONS

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
UNIDO

Job Description
DP/VIE/86/015/11-04/J13102

Post title	Sizing expert (for fine count yarns, Pe/cotton)
Duration	One month
Date required	August 1990 (approx)
Duty station	Ho Chi Minh City, with possibility of travel within country
Purpose of project	To strengthen the capability of the Vietnam Textile Research Sub-Institute in the areas of physical and chemical testing, product development and dissemination of information to enable it to expand its advisory services in these areas to the textile industry in South Vietnam.
Duties	The adviser will work in co-operation with counterpart personnel and under the leadership of the Chief Technical Adviser (CTA), and will specifically be expected to: SPECIFY DUTIES TOWARDS THE END OF 1989 I.E. WHEN THE STUDY TOURS AND MOST FELLOWSHIPS WILL HAVE BEEN COMPLETED AND PARTICULAR NEEDS WILL HAVE BECOME CLEAR (NIELD)
Qualifications	Textile technologist with several years experience in the sizing of cotton and cotton blend yarns
Language	English
Background Information	As in job description for post 11-01.

27.01.89

UNITED NATIONS

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
UNIDO

Job Description
DP/VIE/86/015/11-05/J13102

Post title	Silk degumming and finishing expert
Duration	Two months
Date required	February 1990
Duty station	Ho Chi Minh City, with possibility of travel within country
Purpose of project	To strengthen the capability of the Vietnam Textile Research Sub-Institute in the areas of physical and chemical testing, product development and dissemination of information to enable it to expand its advisory services in these areas to the textile industry in South Vietnam.
Duties	The adviser will work in co-operation with counterpart personnel and under the leadership of the Chief Technical Adviser (CTA), and will specifically be expected to: 1. review the methods, equipment and chemicals, etc. used at the Sub-Institute and in factories for degumming and make recommendations; 2; advise on the dyeing and finishing of silk products with all kinds of dyestuffs; 3. advise on the printing of silk fabrics; 4. make recommendations for finishing silk fabrics to improve softness, crease resistance, etc., 5. organize seminars on the latest technology in silk degumming and finishing for staff of the Sub-Institute, the Textile Union and textile factories, etc.
Qualifications	Degree or diploma in textile processing and several years practical experience in silk degumming and finishing.
Language	English
Background Information	As in job description for post 11-01.

27.01.89

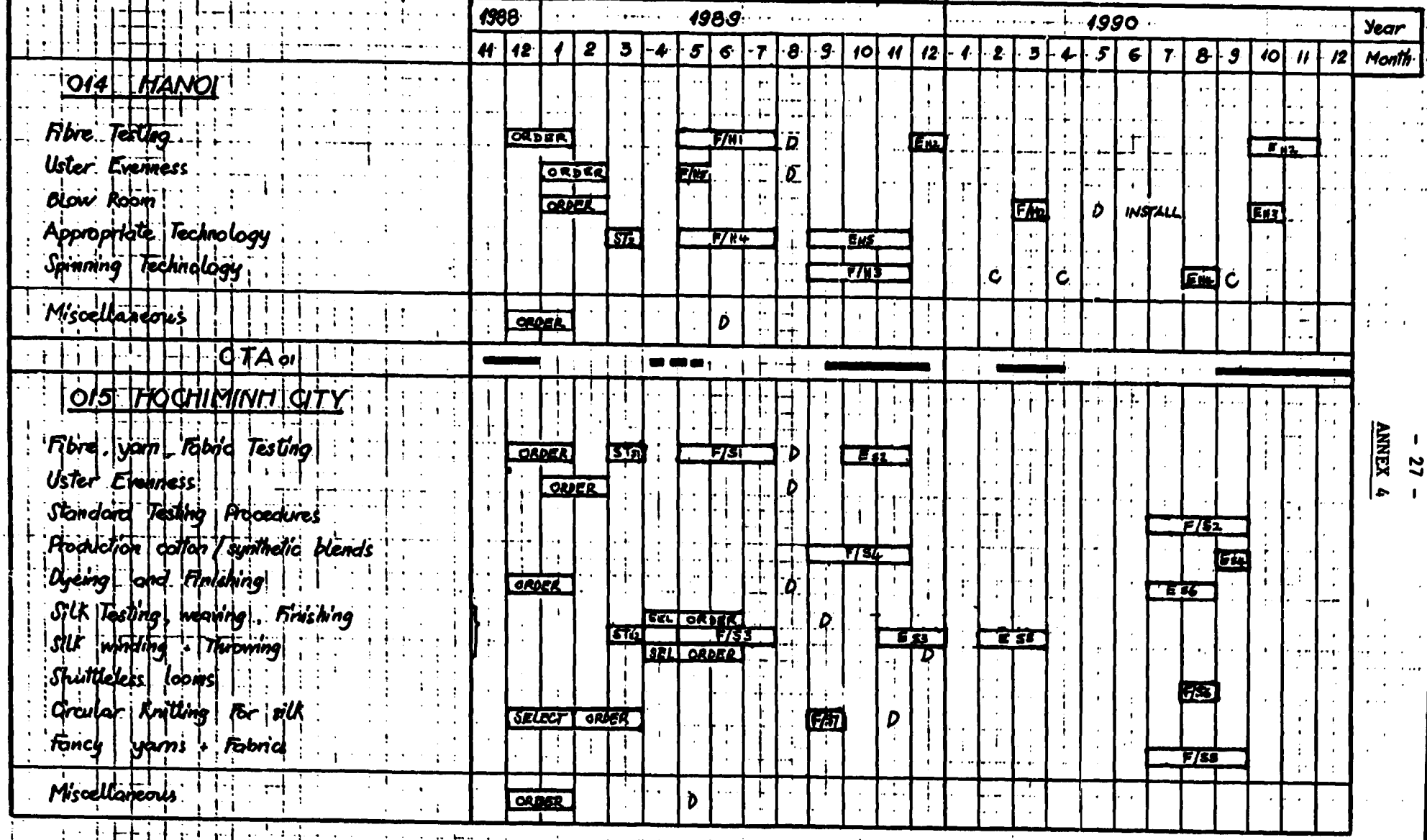
UNITED NATIONS

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
UNIDO

Job Description
DP/VIE/86/015/11-06/J13102

Post title	Dyeing/finishing expert
Duration	Two months
Date required	July 1990
Duty station	Ho Chi Minh City, with possibility of travel within country
Purpose of project	To strengthen the capability of the Vietnam Textile Research Sub-Institute in the areas of physical and chemical testing, product development and dissemination of information to enable it to expand its advisory services in these areas to the textile industry in South Vietnam.
Duties	The adviser will work in co-operation with counterpart personnel and under the leadership of the Chief Technical Adviser (CTA), and will specifically be expected to: N.B. SPECIFY DUTIES TOWARDS THE END OF 1989 WHEN THE STUDY TOURS AND RELEVANT FELLOWSHIPS WILL HAVE BEEN COMPLETED AND WHEN THE PARTICULAR NEEDS WILL HAVE BECOME CLEAR (NIELD).
Qualifications	Textile chemist or technologist with extensive, practical D/F experience.
Language	English
Background Information	As in job description for post 11-01.

REVISED WORK PLANS FOR PROJECTS 014 AND 015



ST = Study Tour
F = Fellowship
E = Expert

SEL = Select Equipment
D = Delivery of Equipment
C = Consultant

ANNEX 5

WORK PROGRAMMES FOR NPDs IN ABSENCE OF THE CTA

As the CTA will only be present for split missions, the NPDs are requested to carry out the following in his absence.

Equipment

Selection and ordering:

- Submit specifications for the remaining items of equipment to UNIDO (via UNDP). It is a good idea to write the specifications in some detail and then say "e.g. Model XYZ from maker ABCD".

- Select circular knitting machine from quotations received from UNIDO.

- Reply to any queries from UNIDO promptly.

Delivery

- Take delivery of each item as it arrives and check that it is in good condition. If so, sign Page 9 of the Purchase Order and send it to UNIDO for the attention of PAC (through UNDP). File Section 5.

- If there is any damage, report to UNIDO immediately.

Installation

- See that each item is installed correctly in a suitable location.

Vehicles

- Take delivery of vehicles.

- Appoint a well-trained driver for each vehicle who should:

  - drive correctly (e.g. changing gear at proper times)

  - wash the vehicle every day and clean the insides.

- carry out simple maintenance tasks as specified in Toyota handbook.

- ensure that the vehicle is correctly serviced at intervals specified in Toyota handbook.

- be polite and helpful at all times.

- Have maintenance and servicing instructions translated into Vietnamese for the driver's information.

- Ensure that the vehicle is safely garaged.

Study Tours

- Check that Nomination Forms are fully and correctly completed and signed.

- Forward forms to MOLI for signature.

- Check that forms are then delivered to UNDP (Hanoi).

- UNDP will then forward them to UNIDO for processing.

- Assist (if necessary) in obtaining passports, visas, health certificates, etc.

Fellowships

Nomination Forms

- Check that nomination forms are fully and correctly completed (at least 4 copies).

- Check that forms are signed by candidates on each copy (NOT PHOTO-COPY OF SIGNATURE).

- Check that forms are signed by doctor on each copy.

- Obtain signature of TRI official on each copy.

- Ensure language certificate is attached.

- Deliver forms to MOLI for signature on page 1.

- Check that completed and signed forms (3 copies) are taken to UNDP for signature.

- UNDP will then forward them to UNIDO.

N.B. Until signed forms are received by UNIDO, UNIDO will not take any definite action, so it is very important to complete the above mentioned formalities as soon as possible.

Travel

- Assist (if necessary) in obtaining passports, visas, health certificates, etc.

Briefing

- Give each candidate a detailed briefing prior to departure including a list of:

  - countries and institutes to be visited
  - people to contact
  - specific equipment and/or processes to be studied
  - skills to be acquired
  - details of information to be brought back
  - kind of work candidate will be expected to do on return

- Remind candidates they will be expected to write a report for UNIDO when they return.

Debriefing

- Discuss details of programmes carried out and benefits derived.

- Ensure that returned candidates write full reports.

- Send reports to UNIDO.

Experts

CTA

- Folow up request to MOLI to appoint CTA for remainder of projects 014 and 015.

- N.B. MOLI should write officially to UNDP who will then telex UNIDO.

- This should be done as soon as possible as otherwise the CTA may not be available on the specific dates required.

Other Experts

Selection

- Review CV's provided by UNIDO in conjunction with MOLI. Select preferred candidate.

  N.B. If none is suitable, write to UNIDO explaining why and requesting CV's of more candidates.

- Give UNDP name of selected candidate and approximate date required.

- UNDP will then request UNIDO to recruit selected candidate. This could take several months.

On Arrival

- Help expert to complete all formalities quickly.

- Introduce expert to counterparts.

- Discuss work programme.

- Check progress from time to time.

- Provide secretarial assistance, etc.

Any Other Matters that may Arise

- Many other problems will arise during the implementation of these projects. Try to solve these problems as they occur. Otherwise record them for discussion with the CTA during his next mission.

Reporting

- Keep files of all documents and correspondence relating to the projects.

- Make a "note for the file" of every important decision and the action taken for the information of the CTA and for inclusion in the Final Report.