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REHABILITATION OF GARMENT INDUSTRY  
SI/TON/86/872/11-01B  
KINGDOM OF TONGA

Technical report: Analysis of ten garment manufacturing units  
and description of training activities  
conducted in them\*

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

Based on the work of Ron Matthews  
Garment manufacturing expert

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## I. INTRODUCTION

As the departure date for the end of this project approaches, far more demands are being made of my time. There is a much greater awareness of the benefits that training can bring and all the garment units I have been connected with are requesting more and more assistance.

One very big problem in Tonga is that there are very few Nationals with management and organisational ability and consequently the most efficient units are those managed by people from overseas. This, I believe, to be mainly due to the Tongan culture and the strong family connections and traditions. Generally the people working in the units are all relatives and the person in charge is reluctant to give instructions in case the family becomes upset.

The management training attempted on this project does not appear to have been successful.

At the request of the Ministry of Labour, Commerce and Industry, more units have been included in the training programme than were originally intended so many more people have benefitted from specialised training in the project.

The training has generally been well received but there is a lot more to do to fully utilise the tremendous skills the Tongan people possess.

### Units where training has taken place

Tamafua Co-operative Societies  
A.I.C. Store and Workshops  
Gateway Garments  
Anna Holaki (Police Training unit)  
Patchwork Shop  
Lolomani Industries  
Fakalato Garment Centre (Sepa Mafi)  
Tongan Defence Force (Army and Maritime)  
Olgar Moa, Vava'u Island  
Temaleti Vakasivola

## II TRAINING

Intensive training has taken place by weekly training sessions held in the Ministry conference room, Tamafua and Gateway Garments as appropriate and convenient.

Most sessions were well attended but not always by the same people depending on the subject to be covered and the amount of work the units had in hand.

Most training has been carried out at individual units to satisfy individual requirements. This varied widely and changed daily. It was impossible to plan in advance because there was the constant need to earn wages and whatever orders for garments came in, they took priority.

When I have made arrangement to train on shirts or trousers for example, on arrival at the unit they may be making evening dresses, children's suits or even wedding gowns.

The training however was well received, and fortunately I could adapt to suit their training needs as they occurred. This meant my original terms of reference were fulfilled more in some units than others.

Due to the circumstances I was unable to cover very much practical instructor training although the theory was covered in group training sessions.

When I attempted practical design of exercises this was not seen to be relevant.

### III CONCLUSION

The people in Tonga have exceptional sewing skills, and exceptional ability to cut out garments from pictures in magazines or photographs, without the use of patterns. The results were often a very poor fit and quality of finish did not seem important.

In most cases, they had little knowledge of measurement and the use of tape measures, and because the garments vary so widely there were no patterns. Even shirts were cut without patterns and only one unit could or would attempt to make trousers.

Now, I am pleased to say, that several units can see the relevance of patterns, measure efficiently and make garments - including trousers - of good quality. There is still a lot of training to be done to improve management and productivity but the awareness of the benefits that training can bring is now appreciated.

Quality of finish and fit has vastly improved and people who previously sent abroad for clothes to be made are now having clothing made locally.

At least four units will be moving to larger premises between December 1987 and April 1988 but they will require specialist help to set up and make these units efficient.

The Tongan people are different from any other nationalities I have met and there are very few with managerial abilities due to the special culture and strong family traditions. It is significant that the most efficient business organisations are managed by expatriates.

In my opinion, this training project has been worthwhile, because previously the garment industry in Tonga had come about through necessity and units had been formed by families, without any kind of formal training. This project has provided the first step to the acceptance of formal training.

There are many talented women in Tonga with unique abilities for cutting out and making all kinds of garments through to finished article but production is very slow. I have been able to improve output in some units using different production methods but there is a reluctance to change completely to line production.

The present system of production fits in well for customised garments, and bad timekeeping or absenteeism does not have the same effect it would have using any other system.

My grateful thanks for the success of this project must go to all the people at the Ministry of Labour, Commerce and Industry in Nuku'alofa and to Papiloa who provided a hire car at a very reduced rate to enable me to transport materials and equipment to the various units. Otherwise the project would not have been so successful.

UNIT ANALYSIS

1. Tamafua Co-operative Societies

Although every effort has been made with this unit they still have a desperate struggle ahead to remain a viable business proposition. The problem is mainly due to the inactivity of the committee who is supposed to guide, advise and support the workforce. The workers are extremely competent sewing machinists and cutters but they urgently require the appointment of a manager/supervisor to relieve them of the managerial tasks they are attempting to perform and at the same time produce garments.

Several large orders have been completed successfully but this has often required the workers to work through nights to complete the orders on time.

It has been extremely difficult to persuade the workforce to stop sewing for periods of training because if they don't take enough money to cover their wages they cannot pay themselves.

I have had meetings with the committee and made recommendations. (See Appendix 2)

Patterns are now being used extensively and the quality of the finished garments has improved, but they still use whatever colour thread is available in the workshop without consideration of the effect on the finished product. This is because they have to spend time looking round the shops for correct colours and accessories which reduces the time they can earn money.

There are only three workers on sewing and there are twelve machines, a very large cutting table and lots of space. This could become an excellent training unit and a viable production unit if the right person was appointed to manage, organise and control.

This unit desperately requires an industrial pressing table and other accessories to become more efficient.

2. A.I.C. Store and Workshop

Training here has been welcomed and accepted by the owner and the workforce.

The store is situated in the town centre and the factory several kilometres out of town behind the owner's house.

Garments are cut out at the store and taken in bundles to the factory for making up. The machinists are paid piece rate for completed work and consequently productivity is reasonably high. Quality of finished products has now improved and extensive use of patterns has improved the production rate and garment fitting.

This business is flourishing because they import and retail materials and accessories, make garments to customers' requirements, make garments for stock, to retail in the store and recently produced garments for export.

Training here has been very rewarding and appreciated.

APPENDIX 1 - 2

3. Gateway Garments

This unit has a retail store in the town centre and a garment producing section at the rear.

Recently they have opened larger premises with new machinery on the outskirts of the town.

In these larger premises they have now started multiple cutting of school uniforms and are training for line production. The first in Tonga.

This Company has an expatriate manager with experience in Fiji and Australia.

The main benefits this Company has received from this project is the training for pattern construction and design and they have attended most of the group training sessions held weekly. One group training session was held on these premises which gave me the opportunity to show and explain multiple cutting, line production, and different machines that are available to improve productivity and garment finish. They are still pressing with a domestic iron but I understand an industrial pressing table is on order.

This Company would benefit from further training when the building is complete, all the machines in situ, and trainees recruited.

The garment producing unit in the town centre will continue to produce garments to order.

4. Anna Holaki (Police Training Unit)

This person at present is one of two people producing uniforms for the police.

The room within the Police Training Camp is adequate with good cutting tables but the limited machines make good quality very difficult (and time consuming) to achieve.

New premises are to be built, new machines ordered and the new unit expects to start production in February/March 1988.

At present they have no pressing facilities - not even a domestic iron - and no overlock machines.

The two people working here have welcomed the help and training in pattern construction and seam finishing and have regularly attended the group training sessions.

Other training has been restricted due to lack of facilities and inadequate machines.

5. Patchwork Shop

This unit is producing many kinds of patchwork products mainly for export, of very high quality.

The unit is extremely well managed and organised by a lady from overseas. This is the only garment unit in Tonga using job cards and a proper costing system for the products.



Due to the type of product and quality standards already achieved, training has been very specialised and limited.

#### 6. Lolomani Industries

This is a very large building approximately 17 kilometres from the town centre, producing small rugs at present.

The owners intend to start garment production early in 1988.

Although they have 12 flat bed sewing machines (industrial) there are only two treadle machines and one domestic machine in use.

Training time has been spent on pattern construction, seam finishes and production techniques.

Only 2 sewing machinists are employed at present, both sewing rugs, but the owners assure me they intend to recruit for garment production.

As the owners do not understand any basic sewing techniques and seam finishes a lot of time has been spent teaching them this and they will need further help when they decide what garments they intend to produce.

When I first arrived in Tonga, the owners said they were going to recruit a Supervisor and several machinists, but I have seen no positive action although they both have regularly attended the group training sessions.

I am now told they are waiting until markets are established before a decision is made what garments to produce.

#### 7. Fakaloto Garment Centre (Sepa Mafi)

This is a newly formed sewing unit with 3 flat bed machines, 1 overlocker and 2 domestic machines. They are now producing good quality garments and have the orders for all the Customs Officers' uniforms in Tonga and other Government departments.

Training time has been spent on pattern construction, garment construction and quality. The quality standards have vastly improved.

Management techniques, production methods and costing of products have been discussed at length but there is reluctance to change. There are very strong family ties in this unit, otherwise I believe the business would expand rapidly.

#### 8. Tonga Defence Force (Army and Maritime)

At the request of the Ministry, this was a late addition to the units I was asked to help.

Within the barracks, two ladies make the uniforms for some 300 army personnel and 80 maritime.

They have 1 treadle sewing machine and 1 domestic electric machine. The table used for cutting is of a very poor standard and broken in parts. There are no pressing facilities.

APPENDIX 1 - 4

Under the circumstances, the garments produced were of reasonable quality but the fit was poor. I have supplied patterns for shirts and trousers and taught seam finishes with the machinery available.

I have had discussions with the Senior Officer and suggested they desperately require an industrial flat bed machine and an overlock machine to produce garments of better quality and improve productivity. Materials are being wasted due to the cutting methods. This I have attempted to improve but time is a restricting factor.

The two sewing machinists are very willing to learn new methods and regularly attended the group training sessions since the introduction by the Ministry.

9. Olgar Moa Vava'u Islands

This unit is located about two hours flight from Nuku'alofa and consequently I was only able to spend 1 week during the project, at the request of the Ministry.

There is a new sewing factory under construction which is expected to be completed by early December 1987.

At present sewing is being done in a wooden building which is part of a cafe and a shop.

Cutting and sewing space is very limited but the clothing produced is of good quality.

During the week at this unit I have been able to teach pattern construction and design, different pocket construction and design, and repair an overlock machine that has not been in use since purchased second hand a year ago.

When the new building is complete there are 3 flat bed machines (Singer) 3 treadle machines, 1 steam press (all second hand) available to go into production but they will require to be checked over because they have been in store for some time.

The three ladies involved are extremely talented, as are most Tongans, and they expect to recruit other sewing machinists.

They will be producing a very wide range of clothing, both for Tongan people and tourists.

10. Tamaleti Vakasivola

This unit has been operating in small premises in the town centre producing good quality garments. In February/March 1988 a new factory is expected to be completed to commence line production of school uniforms.

I understand the new factory will employ 15 people in total and the machinery will include 8 Flat bed lockstitch machines, 2 overlockers, 1 button-holer, 1 button-sew, and a straight cutting knife. The proprietor has spent 4 - 5 years in Australia training to be a designer.

The space in the present unit was inadequate and unsuitable to carry out much formal training.

Tamafua Co-Operative Society

The main problems at Tamafua appear to be due to the inactivity of the Committee.

The workers are excellent and capable but they need more support in areas they should not be involved in.

I would recommend that members of the Committee are allocated specific roles to assist the smooth running of the organisation.

Roles to be allocated:

Title: Treasurer

Job Description

- To be responsible for the payment of wages as due
- To receive all income from work done and record same
- To present up to date accounts at each Committee meeting showing total income and expenditure for the period
- To liaise with other members of the Committee as and when necessary.

Title: Sales and Marketing

Job Description

- To be responsible for promoting sales of garments such as uniforms and following up any enquiries re same
- To advise the workshop Manager of the type of goods to be producing for stock if work is not in hand
- To look for alternative sales outlets, i.e. shops to sell goods produced

Title: Stock Controller

Job Description

- To be responsible for maintaining supplies of expendable items such as interfacing, cottons, zips, buttons, spare needles, pins and materials for pockets, waistbands etc.
- To liaise regularly with the workshop manager who should keep a strict check and record the use of these items.

Title: Maintenance Controller

Job Description

- To be responsible for the maintenance and repair of the premises and machines
- To bring in expertise when required
- To liaise with the workshop manager when repairs are required
- To liaise with the Treasurer and other members of the Committee as appropriate for large expenditure

Title: Workshop Manager

Job Description

- To be responsible for the measuring, cutting out and making of garments to satisfy customers' requirements
- To be responsible for the quality of finished goods
- To be responsible for the allocation of work within the workshop
- To be responsible for the recording of work done and time taken to complete
- To liaise with Committee members as appropriate.

As I see the situation at Tamafua, there is not enough volume of business to support a non producing Management team, but with some effort from the Committee, the unit could be a viable proposition. If the roles outlined above were accepted or perhaps shared, they would not take up much time after the initial setting up of systems.

The workers are very capable people who could produce garments of good quality but they spend far too much time doing tasks other than sewing.

I believe the present system of payment of wages is totally unsatisfactory and a new system should be given priority.

Suggested Price List for Tamafua

Ladies or Child's Dress - plain	8 \$ extra for styling
Ladies or Men's Shirts	7 \$ including interfacing
Skirts or Vala's	6 \$ extra for zips etc.
Shorts	10 \$ extra for zips etc
Ladies Coat/Jacket	15 \$ extra for buttons
Man's jacket Safari style	15 \$ extra for buttons
Trousers (3 pockets)	15 \$ extra for zip
Ladies suit - Jacket and skirt	18 \$ extra for buttons and zips
Styled skirts	10 \$
Evening dress	16 \$
Long sleeved shirt	10 \$
Ladies top - no sleeves	5 \$

These prices are based on estimated time taken to produce at 3 \$ per hour.

Three people producing for 6 hours per day gives an income of 54 \$ per day.

Wages for 4 people including secretary = 34 \$ per day.

Please note - although the secretary is not included in production estimate, most of her time should be spent on ancillary tasks such as pressing, button-holing, sewing on buttons, keeping the workshop tidy and dealing with customers. She should be taught how to measure and record customers' requirements.

Tamafua Co-operative Sewing Unit

Report on meeting with Mr Fonanga, Registrar of Co-operative Societies, Nuku'alofa, Tonga, 9.11.87.

Mr Fonanga said he had sent letters to the Committee at Tamafua asking for positive action to make them financially viable. He was not satisfied that any positive action had been taken and intended writing a further letter for explanations before cancelling the registration and putting them into liquidation.

It was stated the only action he would be happy with, is the full time appointment of an experienced Manager/Supervisor to carry out a proper management function.

This, I suggested, was a bit drastic, as the premises are ideal, they have cutting space and adequate machines to become a good producing unit. They do lack management and direction.

Since I arrived in July there has been a maximum of 4 people sewing and a total labour turnover which I attribute to the totally unsatisfactory system of payment of wages and insecurity. It may be significant that on completion of a large order when the income was in excess of 450 Pa'anga, two people left immediately the cash was received and 1 person was absent for approximately 3 weeks and then another person left. I understand that sometimes the workers have to wait for wages until there is enough money in the cash box, before they can pay themselves.

I advised the Registrar that a manager/supervisor with experience is urgently required, but there is not enough volume of business at present to support such a person, full time. Initially this would be expensive and the workforce would be reluctant to co-operate.

One immediate solution may be for the Committee members to take a more active role until a suitable person could be recruited.

If the suitable person came from overseas, his/her services may only be available with financial aid for perhaps a maximum of 6 months and then the same problems will recur.

I stressed that many people, including the Ministry, were anxious for Tamafua to survive.

He asked me for a further meeting before I left Tonga.

#### Recommendations to the Ministry of Labour, Commerce and Industry

During my stay in Tonga, I have been unable to identify a Tongan National with the necessary attributes to take on the role of manager/supervisor of Tamafua, but I am sure there are such people.

As the Ministry is very keen obviously for Tamafua to survive I make the following suggestions for consideration:

1. Advertise the post of manager/supervisor for a garment factory to be employed and paid on a temporary basis by the Ministry.
2. Arrange training for this person not only in management skills, but also in the techniques of basic instructor training, possibly with UNIDO help.
3. Offer basic sewing machinist training on a commercial basis to other companies to bring in revenue to contribute to the Manager's salary. In other words, sell training from Tamafua as well as garments.

APPENDIX 2 - 4

Tamafua has the machines and space and at present grossly under-utilised.

After a reasonable period of time, the person appointed should more than adequately cover the salary paid by increased production and also supply a training need for Tonga.

I realise there may be "political" problems that need to be overcome, but I believe the potential to be there.

APPENDIX 3 - 1

TRANSPORTATION IN TONGA

From 12.8.87 to 4.9.87	Taxis (Business only)	220 T\$
From 4.9.87 to 4.10.87	Hire Car & Insurance	780 T\$
From 5.10.87 to 4.11.87	Hire Car - no Insurance	600 T\$
		<hr/>
		1,600 T\$
		<hr/>
Received from UNDP Fiji	500 US\$	= 706.22 T\$
Received from UNDP Fiji	600 US\$	= 831.87 T\$
		<hr/>
		1,538.05 T\$
		<hr/>
	Shortfall outstanding at 4.11.87	61.95 T\$
		<hr/>
From 5.11.87 to 13.11.87	- Hire car, no Insurance	160 T\$
Air Fare to Vava'u Islands	14.11.87	160 T\$
Excess baggage - training materials		13.60 T\$
Taxis and phone calls - Vava'u	16.11.87 to 21.11.87	13.50 T\$
		<hr/>
		487.10 T\$
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	+ Shortfall outstanding at 4.11.87	61.95 T\$
		<hr/>
		549.05 T\$
		<hr/>
		= approx US\$ 402
		<hr/>
	Petrol not included in above - to 13.11.87	172.95 T\$

NOTE

Mr Contreras, UNDP SIDFA came from Fiji on Saturday, 24.10.87/

Mr D B Sahae, UNIDO Chief Technical Adviser said it was confirmed that US\$ 400 was still available for local travel and Mr Contreras would authorise this to be sent on his return to Fiji.

Before this, a telex had been sent to UNDP Fiji, asking for US\$ 600 and after that, the Ministry would make up every shortfall.

The US\$ 600 was paid to me by Sahae on 15.10.87.

I have been assured by D B Sahae that the US\$ 400 was approved and expected any day.

On my return from Vava'u Islands - working at the request of the Ministry - I was told to claim for reimbursement of outstanding amount when I get to Vienna. The total amount outstanding to me is 549.05 T\$ 0 approximately US\$ 402. Sakae also has receipts for photocopying totalling 18 T\$ he has promised to refund.

APPENDIX 3 - 2

• All petrol has been paid for by me which totals to 13.11.87, 172.95 T\$ = approximately US\$ 123.

• The Ministry so far have contributed nothing.