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ESTABLISHMENT OF A CLOTHING UNIT IN THE DEPARTMENT  
OF SUPPLIES TO ORGANIZE AND SUPPORT TECHNICALLY  
LOCAL MANUFACTURE OF SCHOOL AND OTHER UNIFORMS

US/BOT/87/097/11-03

BOTSWANA

Technical report: Fourth mission\*

Prepared for the Government of Botswana  
by the United Nations Industrial Development Organization

Based on the work of Colin Whitehouse  
Garment Technologist

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Agro-based Industries Branch

\* This document has not been edited.

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ABBREVIATIONS

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CTA	Chief Technical Adviser
UNDP	United Nations Development Programme
GTM	Garment Technologist/Management
P & P	Purchasing and Procurement
M & R	Maintenance and Repair
U.K.	United Kingdom
C.V.	Curriculum Vitae
UNIDO	United Nations Industrial Development Organization
BDF	Botswana Defence Force
BEDU	Botswana Enterprise Development Unit

Exchange Rates:

During the period of the mission, January 8th 1990 to March 31st 1990 the following exchange rates prevailed.

US\$1 = P2.08

## 1. INTRODUCTION

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The purpose of this mission was to continue the technological help and assistance in garment manufacture within the newly established Clothing Unit of the Department of Supplies, Ministry of Finance and Development Planning. The objective of the Unit is to coordinate and support technically, local manufacture of uniforms for various government agencies.

Attached to the Department of Supplies, the Garment Technologist was to

- devise and conduct training courses in
  - garment production management
  - pattern cutting and grading
  - quality control
  - production planning
- provide direct assistance to garment manufacturers
- train his counterparts in garment technology
- assist in the selection of candidates for sewing machine technician fellowships
- preparation of a final mission report.

This report sets out the activities completed and the results achieved during the mission.

## 2. FACTORY VISITS.

The factory visits were continued during this trip but were of a more practical and frequent nature. Some of the owners have started to use the new systems and methods we teach in the workshops. Where they have been used and found to be successful the owners have been encouraged to try more. Because they now have more knowledge about garment breakdowns and quality levels this is starting to take effect with improved delivery dates. More and more the owners are beginning to request help and advice from the department and are accepting that help and using it. As samples and specifications are also now available to the manufacturers this is an added control over the uniformity of the garments. The counterparts are now taking over more and more of the systems and putting into practise all of their recent training.

As they take over each system we are trying to also broaden their horizons a little and pushing them just a little further all the time. One of the most important things to come out of the visits is the consultancy report that is given to the owners with our list of recommendations for improvements. This has proved extremely useful and leaves behind ideas and plans that can be adopted at a later date. A copy of one of these reports is attached, our normal procedure is to send the report to the company and give a little time to digest it and then set up a meeting to discuss it. The merits of each recommendation is fully discussed and ideas put forward as to the best way to implement it giving the pro's and con's and where possible estimated costs. We plan to do as many of these reports as time will allow as the service will end with the end of the project.

3. SPECIFICATIONS.

Nkwedi Ramalebang has now been put in charge of specification writing and is proceeding to try to get every item controlled by the department to have a full and accurate make and size specification. The issuing of them has caused a few problems as the manufacturers have never had to use this kind of system before but they are gradually getting used to the idea and all agree that it will be for everyones benefit in the end. So far there have been twenty-one items covered with quite a few more almost ready, the next step will be to have two sealed samples made to each specification so that each time a contract is issued it can be accompanied by one of the samples for the manufacturers guidance while the second sealed sample remains at the office so the department staff can use it as a model when delivery checks are made.

The ladies size charts are under way but are proving to be very difficult to pull together. This whole area of sizes is extremely complex and to do a through job would take quite a long time, however the first trial ones should be ready by July.

#### 4. QUALITY CONTROL.

Montsamaisa Ramanobo and Beryl Phala have been put in charge of the quality procedures. They are now visiting each supplier to the department and doing a written in-work check on randomly selected garments. This information is compiled monthly and now gives a clear indication of problem areas and highlights the manufacturers strengths and weakness. The future success of the department is linked to the specification writing and the quality control procedures and their interpretation by both the department and the manufacturer.

It can not be stressed too strongly that this whole business of in-work checks and the report writing, analysis and follow up is the whole point of the exercise. By checking every supplier and going back to them with constructive criticism to give them help in their weak areas can only help the department to get better quality items but it also helps the supplier to be more professional and therefore more commercially viable. Things wont change overnight, it will take time for the supplier to realise the benefits it can bring, no-one will want to voluntarily go to the expense of employing quality inspectors in their factory if they have worked all this time without using them. From the departments point of view it is a long term exercise that will require continuity with all other sections of the unit, procurement, delivery, warehousing, workshops courses, sample making, specification writing etc.

The monthly results must be checked by the department heads and acted upon. After the first few months of operation the information will start to provide some historical background and the system can be expanded based on this information. Above all the manufacturers must be cajoled into using a numerate and accountable quality control system in their factories. Representatives of the department must visit on a regular basis and report accordingly.



## 5. WORKSHOPS.

The workshops have continued to be in good demand and are proving to be quite successful in terms of after use of the course subject material. As we are going around on the factory visits it is now quite apparent that some of the suppliers are putting into use the things they are learning during a workshop. One of the things that is only now beginning to get through is the production planning course where the main point we are getting over is the use of minutes instead of just pieces.

The point of the exercise is to break down the garment into individual operations and convert each operation into a time which is then divided into the available time. From this figure we can develop into production targets, for the section or individual, daily and hourly, delivery dates, incentive bonus, number of necessary operators and machines, machine types, section loading, work in progress, purchasing requirements, training requirements etc. As most of this was previously done, if done at all, by guesswork it has come as quite a revelation to most people who now have a simple formula to the answer to most of the questions relating to production planning. This should help a great deal particularly on delivery schedules as some of the quoted delivery dates are hopelessly wrong after being based on inadequate information.

All of the workshops are being well attended and during this mission we have recorded 354 student days covered by the four experts. This gives a total 838 for the project so far. Emphasis is placed on on the practical aspects of each subject rather than the theoretical and each student has to operate individually and demonstrate that they understand the course material. This is particularly true on the pattern construction workshop where the student usually starts with no previous knowledge and three weeks later take home patterns cut and graded for approximately fifteen different styles each one having been completed by themselves 100%. From each workshop we are selecting at least one person to invite them to attend an advanced course which is to be held in August 1990.

The manufacturers, in particular the small entrepreneurs, are very pleased with the help we have been able to provide as their only previous form of training was to send someone to South Africa and this proved to be impractical in most cases.

## 6. EQUIPMENT.

With the exception of the fabric inspection machine, which is not a U.N.I.D.O. purchase, all of the equipment is here and working. There is a small problem with the washing machine door which we are waiting for the supplier to fix but everything else is o/k.

All of the testing equipment is in daily use by the counterpart staff as are the machine maintenance tools. The two young men in charge of the machine maintenance training are still awaiting a workbench which does slow them up a little but I understand that this is being dealt with.

It has been strongly recommended that a small library should be started and kept in the laboratory. Some of the local staff are purchasing their own books which is highly commendable but not satisfactory for various reasons.

The video equipment is in constant use on nearly every workshop and is now about to be used in conjunction with the machine maintenance workshops.

## 7. CONCLUSIONS.

In this fourth visit we have successfully completed the planned work schedule. The emphasis has been split almost evenly between workshops and factory visits. The visits were aimed at getting the quality control system working. All of the workshops appear to be popular and the results are beginning to show in various companies.

There has been some delays caused by transport difficulties with four experts needing to be in four different places at the same time. It should be mentioned that the department is now starting to get busy in its own right with people visiting factories for checking quality, discussing contracts, supervising samples etc. They will only get busier, but on many occasions the department staff are held up through lack of transport. Maybe now is the time for the department to allocate one vehicle and driver solely for the use of the uniform division.

Full cooperation has been given during this mission, from all department of supply staff, plus the personnel in the factories.

B.E.D.U. have been very helpful to us during this mission in that they let us use their premises and equipment free of charge to run our machine maintenance courses. We have tried to reciprocate by training their staff and fixing their machines where possible both in Gaborone and Francistown.

Two more counterparts have joined the unit - Miss Beryl Phala and Miss Metha Ikaneng which nearly completes the full complement.

All of the planned workshops and courses, with the exception of the advanced pattern construction one in August, have now been carried out by all of the experts, no new ones are envisaged only repeats of ones already done. The venues and students have all been contacted and booked.

On February 21st a demonstration was held here at the department for about thirty invited guests to give the counterparts the opportunity to demonstrate their knowledge. The whole thing went extremely well and everyone, guests and department personnel, were of the opinion that it was successful.

There is still one outstanding fellowship for Miss Gaolathle Dichabeng which was postponed and is now due to take place in September 1990. Mothusi Maruping and David Garasego have returned from their machine course in England and are now enthusiastically using their new found skills both for the department and the entrepreneurs.