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MEMORANDUM
TO: SINDISO MFENYANA, HEAD OF TASK FORCE ON MAZIMBU/DAKAWA
CC: TREASURER-GENERAL
CHERYL CAROLUS
FROM: MOHAMMED TIKLY
DATE: 3RD jANUARY 1991
MAZIMBUZDAKAWA PHASING OUT MATTERS

Since my return from Tanzania, I have prepared a number of submissions relating to urgent follow-up tasks. These should be seen as supplementary to the Report of the Inter-Departmental Delegation that visited Tanzania from December 10 to 24 1991.

Please refer to my Memoranda dated 26/12/91 and 27/12/91. I shall give you copies of Reports on Educational Matters, the VTC, the Archives Project and Donor Assistance Programmes by tomorrow.

The most pressing issue is the question of staff contracts and salaries for those remaining in Tanzania. There were strong reactions over the termination of contracts and a request that a three month notice period with pay should be honoured. We should identify the core group that will remain in Tanzania, before people register with UNHCR to return to SA this month.

It is important that a new management structure is decided for Mazimbu and Dakawa and job descriptions prepared.

The Management Committee of Mazimbu and Dakawa is critical about the lack of communication and consultation with it on phasing out matters. I was requested to convey this to you.

May I propose an early meeting of the Task Force to discuss the Report of the Delegation and some of the issues raised in the above-mentioned Reports and Memoranda.

MEMORANDUM
TO: JOHN SAMUEL/LINDELWE MABANDLA
FROM: MOHAMMED TIKLY
DATE: 3RD JANUARY 1992.
FOLLOW-UP TASKS ARISING EROM MY VISIT T0 TANZANIA
Herewith please find Reports and Memoranda relating to my visit to Tanzania as part of the Inter-Departmental Delegation which was there from December 10th to 24th, 1991. ’
May I propose a meeting of Department staff to discuss the Reports and Memos.
There are a number of urgent decisions to be made and tasks attended to, relating to staffing, funding, UNESCO/UNDP, the VTC, etc.
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INTERNATIONAL SOLIDARITY FOUNDATION
VUYISILE MINI FURNITURE FACTORY
. EVALUATION REPORT

TABLE OF CbNTENTS

The International Solidarity Foundation has been implementing a joint project together with the African National Congress to develop a furniture factory located at the Mazimbu refugee camp in Tanzania. The project was launched at the request of the ANC in 1985 and will be continued by the cooperating parties in 1992. The project was evaluated in September-. October 1991 by Mr. Matti Kontro, timber trade technician, and Mr. Seppo Poutanen, Dip1.Eng., development manager, on behalf of the Solidarity Foundation together with an ANC representative. The current evaluation report discusses the extent to which the developmental aims set for the project have been achieved and outlines the future prospects for the factory.

The Vuyisile Mini furniture factory is located at the Mazimbu. refugee camp, close to the town of Morogoro and approx. 200 km from the capital, Dar Es Salaam. The camp wes set up by the Tanzanian government to house South African refugees and is managed by the African National Congress.

A carpentry workshop was set up at Mazimbu in 1978 to operate under the auspices of the ANC department of building and construction, and has been operating as a furniture factory under the name of Vuyisile Mini since 1987, to meet the construction material and furniture needs of Mazimbu and another refugee camp Dakawa. The camps contain accommodation and study premises for a total of 3000 students. A total of

approx. 2000 people have been living at Mazimbu, and the aim was to settle a tbtal of 5000 people in Dakawa, but so far it has been occupied by approx. 1500 refugees at most.
The furniture factory has produced building materials for use in the refugee camps themselves, including roof beams and door and window frames, and also domestic and office furniture such as tables, beds, chairs, boxes, shelves and trunks. An extremely wide variety of items has been produced, varying from 60 to 140 articles at different times. Both refugee camps will be fully equipped before the end of 1991.
The Finnish Ministry of Foreign Affairs has supported the project by assigning funds for this purpose from development cooperation grants provided by the various civic organisations. The latest outline for the future of the project was discussed in the project plan for 1991 submitted to the Ministry of Foreign Affairs by the Solidarity Foundation on 30.11.1990. The most recent cooperation agreement with ANC was concluded on 29.11.1990, together with an agreement that it should be revised after the project evaluation.
Factors contributing to the future of the project are affected by arrangements for the refugees to return home and the agreements reached between the ANC and the Tanzanian government on the future of the refugee camps..
The ANC administration decided in April 1991 that it would phase out its projects in Tanzania over a transition period of 2 - 5 years. The period will exceed 2 years only if severe setbacks take place in the progress of democracy in

South Africa. As the result of an agreement between the South African government and the ANC, the first refugees from the Mazimbu camp were allowed to return to their original homes in South Africa in summer 1991.

The Mazimbu and Dakawa camps will be governed during the transition period by a management committee set up by the ANC, while the various projects, ineluding the furniture factory, will be run by a separate body. The managerial staff of the factory, who had not been selected at the time of the project evaluation, will be subordinate to the latter.

The aim of the ANC is to hand the camps and the furniture factory over to the Tanzanian government after the transition period of two years, but the government has not yet named its representative to take part in the administration of the project during the transition period and it remains unclear what. governmental institution will accept responsibility for the factory, and possibly the entire camp complex.

The purpose of the evaluation was to examine the extent to which the original aims of the project had been achieved, to explore ways of ensuring the future of the factory in 1992 and to outline the alternatives available for handing the factory over to a new owner as a profitable company. The report is composed of a foreword, an evaluation section contributed by Seppo Poutanen and Matti Kontro, and recommendations for the future of the project based on the conclusions arrived at from the evaluation.

EVALUATION OF THE VUYISILE MINI FURNITURE FACTORY, 23.09. - 11.10.1991

1 . HISTORY

1.1. Proj ect initiation

The African National Congress requested the International Solidarity Foundation in spring 1985 to implement a project to develop the Mazimbu refugee camp situated close to the town of Morogoro. The project was to include improving production at the furniture factory on the camp, diversifying the range of articles manufactured by it, achieving maximum efficiency in its use of raw materials, improving safety and training the workers in a way which would allow the production not only of the necessary building material, but also of furniture for Mazimbu and Dakawa.

The International Solidarity Foundation began planning the project in spring 1985.

Project planning

Mr. Taisto Lautamatti, production manager at the Asko furniture factory, and Mr. Leo S&Sderqvist, a mechanic, were selected as advisors for the project in September 1985, and they visited Mazimbu for this purpose in

December 1985 and again in April 1986. On the basis of their experiences they then compiled a plan for the improvement of production facilities in the carpentry workshop and a list of new -machines and equipment required.

The advisors began their work at the factory in June 1986, over two months later than anticipated, due to a delay in the granting of work permits.

Point of initiation

Founded on the premises of an earlier sisal plantation with a total floor area of approx. 1000 ml, the factory consists of a machine shop, an assembly hall, a cutter servicing unit, a warehouse and an office. It has provided employment for some 50 persons from the beginning of the project, most of whom are Tanzanians.

The factory had a fairly good stock of basic machinery at the initiation of the project, including a cross-cut saw, two surface planers, an edger, two planing machines, an adjustment saw, a compound dowelling machine, a dowelling .maehihe, two vertical spindle moulders, a chain chisel, a long hole driller, a bandsaw, a wide abrasive belt grinder, a long abrasive belt grinder and a fillet plane. The cutters were serviced by means of were two universal grinding machines, a surface grinding machine, a bandsaw cutter

grinding machine, a small metal lathe and two bench grinding machines.
Most of the machines had been purchased as second-hand items between 1979 and 1985, and many of them were out of order, due to irregular or non-existent servicing. Separate premises and machinery had been reserved for cutter servicing, but as the working methods employed were incorrect and most of the machines unsuitable for the purpose for which they were used, all the cutters had been sharpened incorrectly.
The factory staff possessed none of the skills required for production purposes, and the working methods and organisation were extremely inadequate and unplanned. Materials were used very uneconomically, while no information was available on supplies of materials and spare parts or on their quality. The working conditions were inadequate, the lighting poor and the noise level high, in addition to which there were no sawdust removal facilities nor protective equipment.
Of the advisors engaged, Taisto Lautamatti was respons-ible for improving productign and Leo deerqvist for maintaining the machinery and servicing the cutters.
The work was hampered at first by the SIOWness of the transportation of the necessary articles from the port

to Mazimbu, so that the tools required could not be taken into use immediately.
The emphasis at the beginning of the project was on repairing the existing machinery and improving working conditions. The servicing of the machines and their cutters was reorganised successfully and working methods were improved, as a result of. which ithe ivolume of production increased considerably during the advisors' first four months at the factory.
The new nmchinery delivered to the factory in 1986 included the following items: a sawdust removal system, an edge form grinding machine, a brush grinding machine, a line drill, manual drills, a power screwdriver, a rail-mounted press, manual tools, cutters and the tools required for cutter servicing. A circular saw, thought to have been donated from Sweden, was taken into use, and the factory was provided with furniture fittings, screws, paint and cement. A Toyota Land Cruiser was obtained for the use of the advisors.
The following machines were supplied from Finland in 1987 - 1988: a fillet plane, a 2-disc circular saw, a cutter, a compressor, a glue spreader, a bandsaw, a claw compressor and varnish syringes.
The raw materials used at the factory up to 1990 comprised a total of approx. 3000 m3 of pine obtained from the Soviet Union. One of the first tasks to be

completed was arranging for suitable storage conditions for large batches to prevent deterioration of the timber, which had been kept in bales in direct contact with the ground surface and with no ventilation. Additional materials used were chipboard and fibreboard provided by the ANC, which are also available locally. The factory began to use local cypress after the exhaustion of its donated pine supplies.

The range of products was developed with the construction and furnishing of refugee camps. PrototYpes and drawings were drawn up before the actual production of the furniture, which consisted of both domestic and office items, doors, windows, boxes and trunks. The number of the various articles has varied from 60 to 140.

2. EVALUATION OF PRODUCTION CAPACITY

2.1. Evaluation of machinery and materials

The factory possesses the most essential basic machinery required for the production of the existing range of items, together with the eQuipment necessary for generating compressed air, removing sawdust and servicing the equipment (for list of machines, see Appendix 1).

As most of the machines are old, they require proper maintenance to function properly so as not to cause any break in production. The most basic machines such as planes, vertical spindle moulders, disc saws and drills are available in sufficient numbers that if a.machine breaks down it can be replaced by others. Not all the alternative machines are in working order, however, and in some cases there is no one capable of operating them. The manufacture of high-quality products is restricted by the poor condition of some of the machines, such as the two-blade adjustment saw and the wide abrasive belt grinder, the latter not being used at all due to a tendency for the belt to come off. The following machines are scarcely used in production: the hot-press, the wide abrasive belt grinder, the roller glue spreader, the multi-bar drill and a lathe. The failure to use the press and lathe is attributable to the present range of articles produced. The frequent breaking of the abrasive belt in the wide grinder is due either to a fault in the machine or to a lack of skill among its operators. The glue spreader is primarily intended for use with various types of veneer which are not employed. in ’the factory, although it could also be used to manufacture laminates if guidance were provided in working’ methods and measures were taken to improve them. Use of the multi-bar drill is restricted by the nonavailability of experienced staff.

The production machinery allows flexible manufacture of the present range of articles without any major bottlenecks provided that the machines are in order and are operated by skilled staff. The estimated monthly capacity of approx. 1000 items could be increased by developing working methods further and improving skills in tasks such as sawing, bevelling and planing.
Pine proved a highly suitable raw material, and the 3000 m3 batch donated by the Russians lasted until 1990, -i.e. annual consumption was approx. ’400 m3. Since no selection in terms of quality or dimensions was possible and the level of skills among the work force was inadequate, a considerable amount of the timber was inevitably lost in the manufacturing process.
The raw material in use at present is cypress from local planted stands, the properties of which correspond to those of pine. The material is purchased from local timber merchants who provide it ready sawn in inch sizes. The dimensions are inaccurate, however, and the desired quality should preferably be selected directly at the sawmill. The large number of branches in cypress may cause greater wastage than with pine.
It is also possible to use various types of hardwood for manufacturing purposes, the material again being obtained from local merchants. The use made of hardwood is dependent on its price and the range of articles to be produced.

The auxiliaky materials required for manufacturing purposes such as glue, dowels, fittings and surface treatment materials were originally obtained from Finland, but it has now proved possible to obtain glue of practicable quality on the local market.

Training of staff

Staff training commenced in 1987 with the aim of providing all employees with the ability to operate all thev essential machines and allowing a flexible alternation of working tasks in the factory after the training period. The staff became familiar with the reorganisation of the work and use of the new machinery fairly rapidly, thanks to the facilitation of the work that this involved and the improvement of work safety, but only a few of them learned to master a variety of skills. This is partly attributable to the large turnover in workers, the major reason being the lack of an instructor with a mastery of carpentry skills to continue the training work after Taisto Lautamatti had left. It is evident that the staff still lack the basic skills required at the various working stages.

The ANC failed to assign a sufficient number of persons who had been engaged in the development of the factory from an early stage to replace the Finnish advisors. Three ANC nominees were provided with training in

production, servicing and product design in Finland and can be Eegarded as being able to take over the duties of the remaining Finnish advisor once he leaves the factory. These are Factory Manager Moses Shabangu, Purchase Manager Allan Mungongo, and Production Manager Shadrak Shitole, who had also been trained in the factory.

Production plans

Production primarily involves the manufacture of furniture and some building material for the refugee camps of Mazimbu and Dakawa, the existing machinery lending itself well for the purpose. Mass production can be applied to the above project-related manufacture of standard furniture, in which case only a relatively short time is required for the new settings on the machines, provided that the articles are manufactured in fairly large batches (over 100 tables and beds, over 300 chairs). The current small batches of 1 - 50 pcs are partly due to the limited number of orders, the wide range of products and the tendency to manufacture products which deviate from the standard range. The range employed in mass-produetion should be kept small, preferably below the present figure of 70, in order to prevent difficulties in production control and to eliminate the need for large-scale storage of finished or partially finished articles.

The basis of production design and control is good (for a functional diagram, see Appendix 2). Production is divided into three labour management sectors: sawmill and material resources, nachining and assembly. The manufacturing process is initiated on the basis of a timber cutting list and proceeds through the machining phase by stages indicated on a work card. Production and product standardisation are hampered by a lack of proper technical drawings of the articles to be manufactured, the availability of which would lead to advantages in the form of simplifications "in the settings of the machines, for instance.

Weekly meetings are held between managers and foremen to discuss the number of orders, delivery prospects, manufacturing situation, stores and production achieved, while sales, production strategy and finance are discussed in separate meetings of the factory management. The meetings ensure a fairly smooth flow of information.

The assembly quality, strength, straightness and fit of the parts for the articles are good. The dowelled joints and assembly jigs function well in the present range of articles, although the assembly methods should be improved. The quality of the surface treatment is poor, however, and more attention should be paid to the quality of processing, planing and sanding, correct adjustment of the cutters and feeding rates, and the correct amount of machining. Faults arising in the course of machining cannot be eliminated even if surface

treatment is performed correctly. The spraying method currently ehployed is incorrect, as it produces an uneven varnish layer, but could be improved by a fairly simple programme of guidance in the work.

Factory organisation and ANC participation

The factory organisation in October 1991:

FACTORY MANAGEMENT
Factory Manager Moses shabangu
Production Manager Shadrak Shitole
Technical Adviser . Leo Saderqvist
Chief Accountant Julius Mollel
Sales Officer Jacob Mahlangu
Purchasing Officer Allan Mungongo
Foremen (3)
Secretary

The factory manager, production manager, sales officer and secretary, of whom the latter two will be leaving their posts in the near future, are employed by the ANC. The factory manager an& the production manager are to continue in their posts until the end of 1992. The Tanzanian chief accountant has received a good vocational education and is thus competent for his post. Uncertainty about the future of their posts among the rest of the staff hampers any’ planning and imple-

mentation of training. Further training should be provided fok the managerial staff in order to ensure the future operation of the factory or else they should be replaced by skilled, trained persons.

The contribution of the ANC to the staff, and particularly to the workers, has been smaller than expected and has required much negotiation, in addition to which the high turnover among the ANC staff has hampered the general standard of training, as those who have received training tend to leave the factory after only a short period.

The ANC has established the following organisation for the ownership of the factory:

NEC TASK FORCE
MANAGEMENT COMMITTEE
PROJECT MANAGEMENT BOARD
V.M.F.F. BOARD OF DIRECTORS
FACTORY MANAGEMENT

Although a board of directors had been nominated in principle, no written document existed in October 1991. According to preliminary information, the board is composed of two representatives from the ANC, two from the factory and one from the Solidarity Foundation. It is important that the board should be established officially as soon as possible in order to ensure that the ANC, the factory and the Foundation can negotiate

about the future of the factory, its ownership and operating pfinciples, and make the necessary decisions as rapidly as possible.

3. EVALUATION OF FINANCIAL ADMINISTRATION AND PROFITABILITY

3.1. Financial administration

Attention has been paid to developing the financial administration of the project from the very beginning, but exact financial evaluation of the operation is impossible due to the fact that the various expenses are covered by allowances and donations. In addition, its finance was managed through the ANC accounts for a number of years and the factory was consequently not even informed of the costs and profits of the operation. Product pricing, calculation of wages, stock accounting and marketing were improved by the Finnish advisors Petri Korvenranta and Riitta Vehvilainen between 1987 and 1988.

Financial administration had. been totally neglected before the Finnish advisors were assigned, and there was still no proper, re1iable bookkeeping in the factory even in 1989. Regular bookkeeping, monthly prefit calculations, stock accounting and reports on the manufacturing departments commenced from the beginning of 1990. The factory gained its actual independence after the decision at the end of 1990 to establish a

separate bank account for it, as a result of which it was necessafy to improve the financial administration. Most of the costs and profits are currently known and presented in a monthly statement.

The technical advisor has usually been responsible for financial affairs and policy decisions, but this role is now being adopted by the factory management, with minor ANC involvement.

3.2. Pricing

It was impossible to use manufacturing costs as the basis for pricing during the first few years of the project, as the materials, work and capital assets had been donated by a variety of instances, the ANC acting simultaneously as financer and customer. Calculated from the estimated total received in donations and grants, the average cost of a finished product has been approx. 37 USD since 1986.

Thanks to the improvement in bookkeeping and the opening of a separate bank account, a rational basis for pricing now exists. Wages, social. welfare payments, raw materials, fitments and equipment, and power supplies are currently included in the prices, while indirect and fixed costs are estimated as percentages of the actual costs. The gross margin covers those costs for which no exact data or estimates are available and the profit

accruing to the factory. Such a pricing system can be regarded only as a guideline, and there are a number of essential cost factors on which little or no exact information is available and which consequently have to be estimated. These include raw material wastage, energy, water, depreciation of capital assets, interest on capital and liquid assets, machine repairs, transport, data communications and taxes. Figures indicating the total consumption of electricity and water, for example, are recorded only for the camp as a whole, and the proportion accounted for by the factory can only be estimated.

It remains to be seen whether the articles attract a sufficient demand on the open market, although there has already been some interest shown in them. A rapid comparison of the products with the local hand-made furniture and their prices suggests that the price level set for them is fairly correct. The models in the product range, their colours and materials in particular, deviate from the local furniture. In any case, as the current range of articles and the mass production methods employai place the products in a different segment of the market from the items manufactured locally, .the basis on which they are priced can also be different.

The products should be marketed to major projects which involve the use of standard furniture in similar kinds of premises, such as schools, hotels and

restaurants. Persons living in dwellings of their own in cities cdhld constitute another potential group of customers, being accessible through retailers, in addition to which it may be possible for the factory to act as a subcontractor, manufacturing various components for other companies. Exports to other African countries may also constitute one future possibility. If the factory is able to achieve a sufficient number of customers using a narrow range of products, it will be possible to achieve a better gross margin and thus greater room for manoeuvre in pricing.

The products have been marketed to a limited extent only, as most of the items produced have been used to furnish the refugee camps. This furnishing was completed in 1991 and the factory will be able to continue its operation from now on only if sufficient imarketing resources can be provided. A plan already exists for this purpose, but only a small part of the preliminary 10-point marketing plan has been implemented so far, because of the lack of precise decisions on matters concerning the immediate future of the factory and its staff, such as the sales officer, who will be leaving his post soon to take up other work within the ANC. Any decision to continue the operation of the factory on the open market will require a skilled, full-time marketing manager and the necessary equipment, which in addition to the items indicated in the sales plan include working data communication facilities and21car.

3.3. Bookkeeping’

Profit calculation and stock accounting were developed simultaneously, major improvements being achieved in the latter during 1990, so that it currently covers almost the whole contents of the warehouse. The value of the existing stock is calculated and included in the monthly balance sheet, but the necessary bookkeeping and calculations are performed manually, a process which is slow and vulnerable to errors. The improvement of stock accounting and its maintenance at a sufficient level of accuracy would require the use of a computer, although the manual system should also be maintained to an appropriate extent in case of technical faults, for example.

Material and salary costs are calculated from the work cards, and the number of articles manufactured daily are reported by the production departments. The accuracy of the profit calculations is hampered by the existence of costs which cannot be estimated, such as fixed and liquid assets received as grants and donations, further purchases and costs arising from the use of the funds and materials donated and the additional costs involved ih operating the factory as an independent enterprise. The profit calculations still lack parameters which could be used to monitor factors such as working efficiency, the degree of utilization

of raw materials and discrepancies between the anticipated and adtual outcome.

The profit and balance sheet for the factory are calculated on a monthly basis, and a skilled chief accountant has been employed to improve bookkeeping and the calculation of costs.

The factory currently concentrates on the production . of furniture in particular, although the main emphasis at the- beginning of the project was more on individual structural components. Standardisation of the products has enabled the initiation of mass production, which has increased profitability. The volume of production is calculated as the number of comparable items, which was approx. 150 per month at the initiation of the project. Average monthly production since 1987 has been 700 - 800 items, varying from 350 to 1100 due to . problems such as power failure, holidays and lack of organisation. A total of 52,000 items were produced between 1986and 1991, enabling the aim of furnishing the refugee camps of Mazimbu and Dakawa to be achieved. Some of the surplus articles were sold to outsiders.

3.5. Evaluation of results achieved relative to total investments

The original aims of the project, i.e. improving the operation of the furniture workshop, diversifying the

range of products, increasing the efficiency of utilization bf the raw materials, improving work safety and training the staff in the use and servicing of the machines, were for the most part achieved well. The training of the workers in carpentry skills and the use of the machines is a continuous process which has not yet reached a sufficient level, partly owing to the rapid turnover of the workers. This gives rise to in-efficiency in production and in the use of raw materials.

The later aims of developing product and production design, administration and marketing can be regarded as having been achieved, as a good foundation has been established in these sectors, providing a good starting point for future development. The problem is that the ANC has not managed to arrange for permanent staff to be assigned to the factory who could take over the responsibility for its operation and improvement.without the help of an outside advisor and without running the risk of a decline in operations.

Most of the machinery at the factory is suitable for the production of the current range of products, although some of the machines are old and worn-out. The invest-ments made to date can be considered justified and correct. The book residual value of the machines was approx. 120,000 USD in the middle of 1991. Their real value cannot be defined, but their replacement value

can be ’estimated as approx. 600,000 - 700,000 USD exclusive of’purchase costs and freight.
The Siberian pine donated by the Soviet Union was highly suitable for the manufacture of the furniture, its lightness being the only aspect which the local consumers considered strange. The cypress obtained from the local planted stands which has been used to replace this has corresponding properties, and thus can also . be used successfully for the manufacture of furniture.
The acquisition of raw materials requires personnel resources in order to obtain suitable material of adequate quality and at moderate price as far as possible directly from the seller.
Materials such as glue, varnish, fittings and dowels were first donated from Finland, but should be obtained on the local market in future to ensure their desired . quality and quantity and a reasonable batch size. Of these, glue and fixing materials are the only articles which are available from local suppliers, whereas a continuous search is going on for sources of varnish, fittings and dowels. One of the problems is of course that hardly any foreign currency is available and the proper material or equipment cannot be obtained from any of the neighbouring countries. In addition, the task of finding the necessary materials has primarily remained the responsibility of the advisor, whose does not have the time required for an exhaustive evaluation of prospective suppliers. One solution proposed in the

case of dowels is to purchase a second-hand machine from Finland, for instance, to produce them on the spot.

The furniture factory development project is estimated to have required the following total financial investments in 1986-1991:

ISF 1,405,000 USD
ANC 405,000 USD (raw materials, wages)
FINNIDA 102,000 USD (repairs, raw materials)
NPAjk 10,000 USD (wages)
TOTAL 1,922,000 USD
0 Norwegian Peoples Aid

Since a total of 52,000 articles have been manufactured during the above period, these may be said to have cost approx. 37 USD each.

4. FUTURE PROSPECTS

4.1. Factory ownership

The factory is owned by the ANC, to whom the Tanzanian government has given the land and buildings in the area. Apart from the three senior salaried employees, the labour employed is almost entirely of Tanzanian origin.

The original aim of the factory" will be fulfilled within two months, when all the dwellings in the Dakawa camp have been furnished. In.any case, the refugees and ANC members have already begun to move out of the camps, which will be abandoned completely within a couple of years.

There are three alternatives for the future ownership and operation of the factory:

1. The ANC could hand the factory over to the Tanzanian government,
2. The ANC could own the factory jointly with the government and possibly some third party,
3. The factory could remain entirely in the ownership of the ANC.

Irrespective. of the alternative selected, all the workers employed would be Tanzanians.

Each (3f the above alternatives is possible from the point of view of the operating of the factory, provided that a competent, functioning board of management can be set up consisting of representatives of each owner. The responsibilities of the board should include approval of the balance-sheets and release of the factory management from financial liability.

4.2. Production capacity now and until 1994

The staff require training in order to improve their work. Special attention should be paid to the carpentry skills of the workers and foremen in particular and to their ability to use drawings. The senior salaried staff should be trained in the development and control of production, and skilled persons should be employed for tasks such as planning and production management. Without the necessary investment in staff, the major threat once the advisors have left will be that the operation of the factory will gradually be reduced to the manufacture of individual hand-made articles.

The current production volume of 800 - 1000 items/ month does not represent the factory's maximum.capacity. A considerably larger capacity could in fact be achieved with the current combination of machines by reducing and standardising the range of products, improving manufacturing technology, rationalising the work and developing the workers' skills. Factors possibly hampering these aims could include machine failures and exhaustion of the capacities of certain machines and processes, which cannot yet be predicted accurately.

4.3. Factory management

The factory should be registered in Tanzania as soon as possible, as this is a prerequisite for its independent operation. The ANC should first resolve the question of its future management and ownership, however, and appoint a board of directors. A foreign exchange account should be opened in connection with registration to ensure that the factory has access to the necessary materials, machines and spare parts from abroad should they not be available in Tanzania.

Evaluation of the Tanzanian market

The ANC’s need for furniture for Mazimbu and Dakawa will be met completely within a couple of months, and it should then evaluate the need for supplementary items in the camps and at other localities in Africa, for instance. The items listed as needed should ideally correspond to the range of products manufactured, in order to ensure the further development of production and the possibility of selling the same articles to outsiders to obtain foreign currency.

The factory could concentrate its marketing investments on various projects which allow furniture manufactured in large batches to be directed towards segments of the

market with no existing source of supply. It would also profitable tb evaluate foreign markets.

As there is a sufficient market for the current range of products, the range does not necessarily have to be altered. Any reduction in the range of products or increase in the numbers produced must be dependent on the number of marketing channels and the size of the market. From the point of view of production and profit, the range should be kept small, and improvements made . in the near future should concentrate on increasing the number of alternative colours, using hardwood along with cypress, and improving the fit of the parts and the packaging of the products.

5. RECOMMENDATIONS FOR THE ANC AND THE SOLIDARITY FOUNDATION

Decisions should be made immediately on factory owner- . ship and management, and the factory should be registered promptly to ensure that it can be regarded as continuing its operations in future, that the necessary plans can be drawn up for this and that it is profitable to continue to support the project in future.

Should it be decided that the factory is capable of operating as an independent industrial establishment, an immediate attempt should be made to reach a situ- ation in which the factory can survive using the profit

obtained from its operations. This basis of operation will also require the use of foreign currencies, obtainable through exports, for the purchase of investment goods, spare parts and other.materials. A successful currency exchange system of this kind should be created in cooperation with the Tanzanian government.

The achieving of an adequate, stable income requires investment in marketing, skilled staff and their training, and some financial investments. These will in turn require support in the form of grants and advisors for a period of approx. one year.

Marketing requires the employment of a skilled person, the necessary material, data communication facilities (telephone, telefax), a car and funds for market research.

The availability and training of skilled Tanzanian or ANC staff for permanent employment should be ensured. Their training should place emphasis on increasing the working skills of the foremen and managerial staff. More personal resources should be assigned to the planning of the necessary trainine, which could. be implemented either by skilled consultants or through various vocational institutions. Cooperation between local educational establishments, such as the Dakawa Vocational School, should be developed. Training should concentrate on features such as improving work safety.

The most impbrtant investments would be a computer for managerial and accounting purposes, a car for marketing, a machine for the manufacture of dowels, a blade cutting machine and a duplicating lathe should alterations in production call for this.
The International Solidarity Foundation, the financer of the project, should continue to cover the costs arising from the work of an advisor over the transition period of approx. 1 year and ensure that the staff are able to continue with the operation and development of thee factory upon termination of the advisor’s contract.
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LIITE 1/ APPENDIX 1. .
VUYISILE MINI FURNITURE FACTORY
MACHINE
1 Band Saw
2 Band Saw
3 Vertical Spindler
4 Vertical Spindler
5 Vertical Spindler_
6 Horizontal Drill
7 Multi-Bit Drill
8 Moulding Machine
9 Circular Saw
10 Double-plate Saw
11 Tenon Machine
12 Lathe
. 13 Crosscutting Saw
14 Surface Planer
15 Thicknesser
16 Surface Planer
l7 Thicknesser
18 Splitting Saw
19 Edge Sander
20 Sander
21 Belt Sander
22 Width Belt Sander
23 Mortising Machine
24 Multi-Drilling Machine
25 . Saw Mill
26 Dust Extractor
27 Air Compressor
28 Press
29 Glue Spreader
30 ’ Manual Glue Triangel
. 31 Universal Grinder
32 Universal Grinder
33 Lathe
34 Surface Grinder
35 Band Saw Grinder
36 Bench Grinder
37 Bench Grinder
38 Drilling Machine
39 Band Saw Blade Spinner
40 Band Saw Blade Spinner
Varnishing Fume Fan
Tools

;:2_2i:;29
__
EEEEQEX
- machining
plant
LIITE 2/APPENDIX 2
FURNIIURE FACTORY 3
ANC ; MAZIMBU
PRODUCTION FLOW CHART
Start of
manufacture
Manufacture
in
machining
plant
Machining
completed
report
Internal
transport
Demand
Order .
Product drawing - or quantified
-dimensions - a
Type and quality
Type of finish and colour
Delivery date and priority
Delivery address ’
Confirmed timing
Preparation of work forms
- Cutting list
- Work and material card
- Drawing
Stating date of commencing work
and issuing work number,
data into work journal.
Responsibility of machining
plant manager.
.-v--
Manufacture in machining plant
in accordance with confirmed
timing and sequence plan.
Responsibility of machining
plant foreman.
Work forms. are returned to .
cost accounts. Completion -
date filled into work journal.
"Ready" report from machining
p;ant serves load planning of
assembly plant.
Responsibility of machining
plant manager
Transfer into store for ready
machined parts or direct to
assembly.
Responsibility of machining
plan; and assembly plant
foremen.

- Assembly plAnt
Site
office
Warehouse
finished
products
Commencing
work
sequence
Assembly
Completion
report
l
Cost
analysis
--
1-2-
Preparation of work forms
- Assembly instructions
- Drawing
Responsibility of assembly plant
manager
Reservation of necessary work
_ materials and finishing 7.
materials. Transfer to assembly
plant.
Responsibility of assembly plant
foreman.
Assembly, attaching fittings,
finishing and applying surface
finish.
Responsibility of assembly plant
foreman.
Forms returned to cost accounts.
Completion date filled into work
journal.
Responsibility of assembly plant
foreman.
Cheqking by assembly plant
manager who also supplies
completion report to site
office.
To cost accounts:
- consumed rawimaterials
- consumed ancillary
materials
- work tim& spent
- unit cost
- comparison with previous
series run
Resposibility of respective
plant managers.
Finished products are transported
straight to client.
Sign despatch forms
Responsibility of assembly plant
foreman.
Transportation is the
responsibility of transportation
office. Site office books the
transport.
(Shortest possible storage time
in factory warehouse).

LIITE 3/APPENDIX 3
’ FURNITURE FACTORY : s-
ANC - MAZIMBU’ .
Coding system of products
The products are divided into five principal categories
according to application: ’
1. TL 01. Domestic furniture
2. TL 02. Office and school furniture
3. TL 03. Kitchen furniture
4. TL 04. Built-in furniture
5. TL 05. Other products
Each head category is divided into sub-categories, which are
marked in series of numbers from .101 to .999 following the
point. The first number states the group of products. for
example group; chairs .4 and the two following numbers stat
the running code of the chair drawing in’question, for instanc
01. Thet whole code number series of product group chairs runs
from .401 to .499
Example of the bomplete code system:
TL 01.401
1_L____a. Running drawing code according to product group
__-e_ Product group code number
Head category according to application
Code system sign
PRODUCT GROUP LIST
Domestic furniture TL 01.101 - .999
.101 - .199 Dining tables .
.201 - .299 Sofa tables 9
.301 - .399 Bedside tables
.401 - .499 Chairs
.501 - .599 Sofas and armchairs
.601 - .699 Beds
.701 - .799 Shelves
.801 - .899 Cupboards
.901 - .999
Office and school TL 02.101 - .999
furniture .101 - .199 Tables
.201-9 .299
.301 - .399
.401 - .499 Chairs
.501 - .599 Sofas and armchairs
.601 - .699
.701 - .799 Shelves
.801 - .899 Cupboards
.901 - .999 Drawers

Kitchen furniture TL 03(101
1 .101
.201
.301
.401
.501
.601
.701
.801
.901
Built-in furniture TL 04.101
.101
.201
.301
.401
.501
.601
.701
.801
.901
Other products TL 05.101
.101
.201
.301
.401
.501
.601
.701
.801
.901
Free code number series a
additions to the system.
re
.999
.199.
.299
.399
.499
.599
.699
.799
.999
.999
.999
.199
.299
.399
.499
.599
.699
.799
.899
.999
.999
.199
.299
.399
.499
.599
.699
.799
.899
.999
Bottom lockers
Drawers
Top lockers
Cupboards
Shelves ’
Work tops
Kitchen doors
Masking panels

Doofs
.Door frames
_ windows
Ventilation shutters
1 Cupboards
Washing boards
Curtain rods
Panels and strips
Utility goods
Kitchenware
Decoration utensils
School equipment
reserved for complemengary