



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

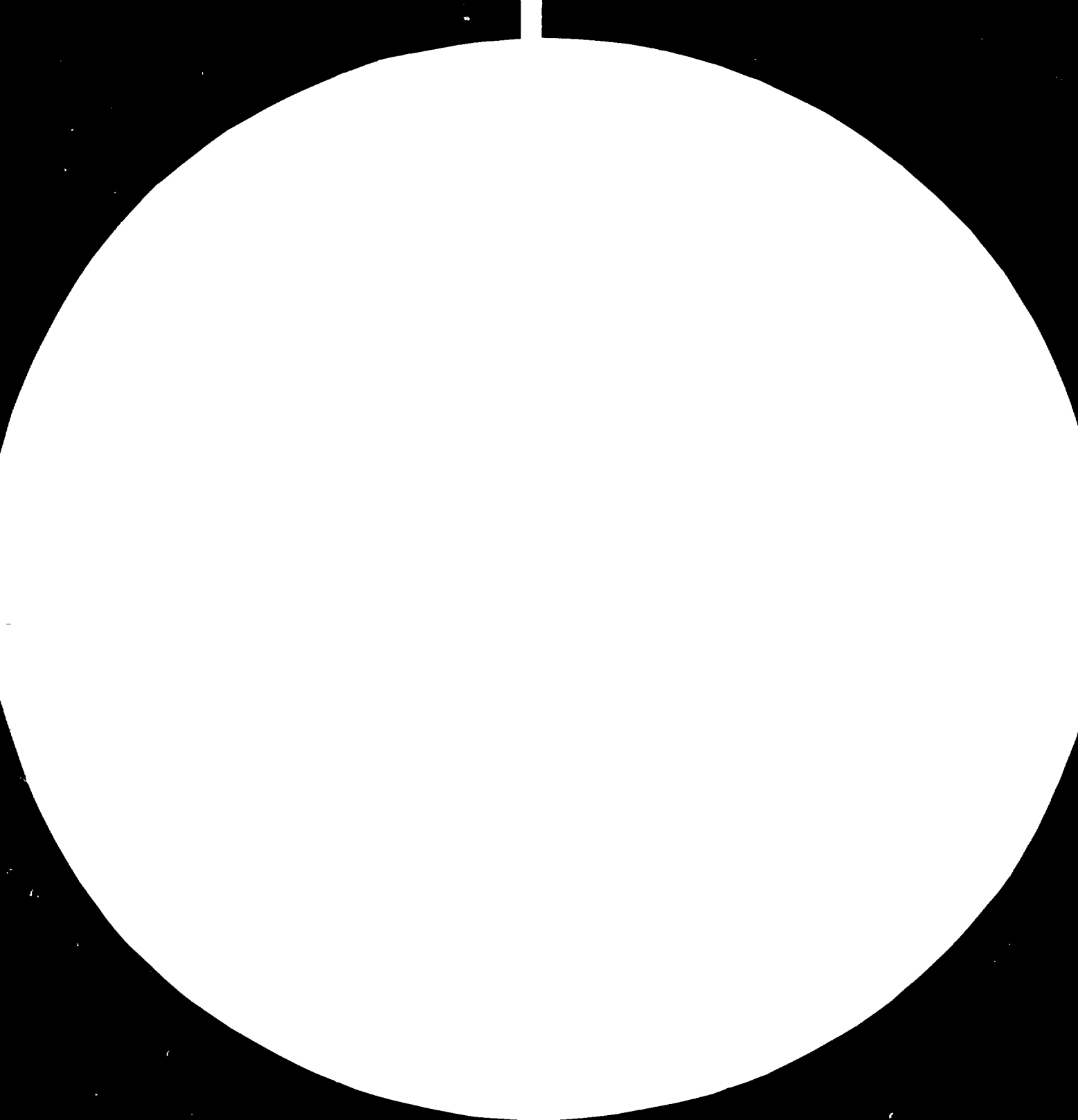
FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org





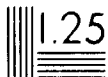
1.0 19

22



20

18



Resolution Test Chart

11777

PROJECT NO: DP/PNG/74/039/-1-1-102/31-3.L

1982

UNITED NATIONS

REPORT ON A MISSION TO PAPUA NEW GUINEA ON THE PROMOTION
OF SMALL SCALE INDUSTRY

(26/7/82 to 18/8/82)

Prepared for the Department of Commerce and Industry by

E.M. Wijenaika, Consultant

to the

United Nations

Industrial Development Organisation acting as

Executive Agency

for the

The United Nations Development Programme

NOTE :

This Report has not been cleared by the United Nations Industrial Development Organisation, Vienna, Austria which therefore does not necessarily share the views expressed therein.

Acknowledgements

The Consultant wishes to thank Mr. John Wauve Secretary Department of Commerce and Industry, Mr. A.R. Sen, Assistant Secretary, Department of Commerce and Industry and all the staff of the Department for the Co-operation extended to him during his mission.

He also wishes to express his gratitude to Mr. N. Subbaraman Resident Representative UNDP Port Moresby, Mr. Kevin Mcgrath Deputy Resident Representative UNDP Mr. J.W. Wasserstrom Assistant Resident Representative UNDP as well as all other persons whom he met for the support he received.

It was a pleasure and a privilege for him to visit Papua New Guinea again on this mission.

TABLE OF CONTENTS

	<u>Pages</u>
<i>Conclusions</i>	1 - 5
<i>Background</i>	6
<i>Findings</i>	7 - 25
<i>Summary of Recommendations</i>	26 - 28
<i>Appendix A - List of persons met during the Mission.</i>	29 - 30
<i>Appendix B - List of United Nations Volunteers attached to the Division of Small- Scale Industry of the Department of Commerce and Industry.</i>	31

CONCLUSIONS

1. *Despite acute financial constraints progress has been made in regard to the various projects that are being promoted by the Department. The situation could have been a lot worse. Hopefully in the next financial year some more funding may become available. If not, even the present levels of activity cannot be maintained.*

2. *The closure of the Silk Project is in many ways a calamity. While it could be argued that in a tight financial situation projects such as silk which require long and painful gestation periods should be axed there is also the other view that projects such as these have been specially selected for the most underdeveloped areas in the country and have always therefore received priority in government planning.*

The loss of technical know-how accumulated with great difficulty over the years and even more important the disenchantment of rural people with government sponsored projects are considerations which cannot be overlooked. It is hoped therefore that the project could be restarted even on a limited scale in the near future. Its closure has also had repercussions on the handloom weaving industry which was being geared for silk weaving.

3. *Another important project the salt project which if proved economically viable could be of great benefit to PNG is also encountering financial difficulties in regard to the operation of its pilot project at Lealea. Government has already made an investment of about K 200,000 and much work has been done already on the project.*

Contd...p...2...

Without doubt even if this project is closed due to lack of funds its feasibility will some day have to be re-examined by some future Government at a much greater cost as no country would like to be totally dependent on imports of salt which are rising with population increase and change of food habits. The pilot project requires to be operated for at least 2-3 years for its economic feasibility to be evaluated. The costs of operation along with a small sum for repair, maintenance and capital works should at least be provided.

Any pilot project has its problems. The Department despite the lack of resources had done its best and overcome a number of problems most of them created by poor engineering for which the department has not been responsible. It is hoped therefore that this project too will receive the minimum funding required to keep it operational for the next two years.

4. The third major activity that in the Consultant's opinion requires sympathetic consideration regarding allocation of funds is that of handicrafts promotion as it provides full or part time employment for about 150,000 persons. While it is true that there is another government sponsored agency operating in the same field it is also true that, that agency just cannot completely take over all of the present activities of the Department until perhaps some major structural changes in the existing organisational framework for handicraft promotion are made. This will take a long time. In the meantime the present services provided by the Department should continue.

Contd...p...3...

To withdraw funding next year will therefore mean a great reduction in this activity which will have wide repercussions in rural areas.

5. The proposed expansion of the leather goods industry could possibly survive budget cuts as the government sponsored projects could generate their own funds.

- 6.1 Projects such as cane furniture and cane export, vinegar, honey from nipa palm, buttons from shells etc presently being investigated by the Department all need funds for investigation. In particular the manufacture of cane furniture for the domestic market and also semi processed cane for export has attractive prospects for development and fairly quick returns are possible. It should be noted that most of the projects being promoted by the Department are rural based. Promotion of rural industry is not easy anywhere in the world and particularly so in developing countries which have no long experience of an industrial culture. Moreover risks are high and profits usually low. Government initiatives and assistance is therefore necessary.

- 6.2 Persons with entrepreneurial talent and initiative who are interested in industrial ventures in rural areas are also scarce. Extension assistance is therefore necessary for a long period particularly in industrial management. All this must necessarily involve time and money. Quick results should therefore not be expected from any small-scale industry development programme in developing countries.

Contd...p...4...

While the Department should keep continually looking for viable projects which use local raw materials and are based on simple technologies, it is necessary to keep in mind that the success of any development programme depends on the creation of a class of industrial entrepreneurs. This is the prime objective of the Department. One successful entrepreneur is better than five successful government projects. It is for this reason that the Consultant would stress the need to recruit on to the extension staff of the Department a good industrial manager preferably an engineer. Admittedly the backyard industrialist in Asia did not need the help of an industrial engineer but conditions in PNG are different. The assistance that can be provided by the average Business Development Officer trained in book-keeping and basic accounting to an industrial entrepreneur is limited as he would not have the experience to advise on planning and organizing production etc. The Consultant however noted that the Division of Small-Scale Industry of the Department of Commerce had been strengthened by the appointments of a Chemical Engineer and an Industrial Economist. Their expertise could perhaps at least to a limited extent be used in this field. This is a key area which requires the attention of the Department as so many entrepreneurs have been unsuccessful because of lack of expertise in Industrial Management.

- 6.3 Taking therefore into consideration the present financial situation and also the fact that nearly all the funds provided for the country programme have been committed the Consultant has restricted his recommendations for UN assistance mainly to an increase in the number of volunteers in the Department who would be in the specialised fields of industrial management, woodworking, ceramics, leather, salt and silk reeling.
7. United Nations Volunteers with specialized qualifications can make a positive contribution provided the climate in which they work is right and also if they are properly directed. In the absence of a Project Manager they should be supervised by a Senior Official in the Department who will also keep in close touch with UNDP. A recommendation to this effect has also been made in this report.

Contd....p...5...

3. *The Consultant must also record that despite the difficulty of keeping existing projects alive the Department has also taken new initiatives in planning the manufacture of closed shoes, vinegar, honey from the Nipa Palm, tools for craftsmen, printed silk fabrics and expanding the cane furniture project. This is certainly very commendable.*

9. *A major obstacle to industry promotion has been the non-availability of suitable land and accommodation for entrepreneurs, in urban and semi urban areas. Unless government provides this facility the process of industrialization will be slow. There is in particular much scope for promoting national owned service industries such as auto, radio and electrical repairs etc. It is hoped that the efforts that the Department is making to provide land and accommodation will succeed.*

10. *There are many difficulties in PNG in regard to the promotion of small scale industry as is well known but even in this context and the present financial situation the Consultant is of the view that the climate would not be gloomy for small scale industry promotion provided the necessary resources are made available to keep the level of activity of the Department of Commerce and Industry at a some what higher level than today. The Consultant trusts this will be possible as otherwise much of the benefit of the work that has already been done would have been to little purpose and irretrievably lost.*

Contd...p...6...

BACKGROUND

11. The terms of reference of the Consultant were as follows :-
- (a) to make an overall review in consultation with the Government and UNDP of the progress on Project PNG/74/039 in relation to its long term objectives.
 - (b) to identify possible areas where UNIDO/UNDP could be of further assistance.
 - (c) to propose if necessary a project proposal for UNIDO/UNDP assistance.

The UNIDO Project No. PNG/74/039 for the promotion of small-scale industry in Papua New Guinea was started in 1975 and was officially terminated in June 1981. Its long term objectives were the increasing of national entrepreneurship in industry, decentralisation of industrial activity, development of import substitution and export oriented industries, up grading of national industrial skills and the greater participation of women in industry. During the lifetime of the project despite inadequate funding a large number of projects were started or assisted mainly with the help of Volunteers and short term Consultants. Advice was given on policy support for industry promotion. The Co-operating Agency from Government was the Department of Commerce and Industry.

The Consultant arrived in Papua New Guinea on 26 July 1982 for the present mission and left on 18.8.82. During the period he had discussions with the Government Departments involved with the promotion of industry as well as other agencies and persons. In the time available, he visited Rabaul in the East New Britain Province and Wewak in the East Sepik to look at small industrial projects. A discussion was also held with the Office of National Planning at which representatives of UNDP and the Departments of Commerce and Industry and Labour and Industry were present.

Contd...p...7....

FINDINGS

- 12.1 Overall, considering in particular the considerable constraints that exist to industrial development in Papua New Guinea and the additional difficulties that have been encountered by the Department of Commerce and Industry in regard to the further implementation of many of the activities promoted during the period of the project substantial progress has been made. It was however a pity that there has not been a better information flow to UNDP/UNIDO on the progress made. It should also be noted that budgetary economies compelled the closure of certain projects such as Silk and the Wood working and Ceramics Section of the Small Industries Research and Development Centre.

In summary the current situation in regard to the various projects promoted and assisted by Project PNG/74/039 is as follows :-

SILK

- 12.2 This was one of the most important projects of the Department of Commerce and Industry as it had wide rural applications and was export oriented. Although started in 1970 it was only after 1976 that the project received meaningful assistance in regard to funds, management advice and technical know how. Apart from the assistance provided by the Project Manager of PNG/74/039 in obtaining the necessary expertise UNIDO/UNV Volunteers helped directly with management and developing silk reeling skills. The reeling of locally produced Silk was of particular significance to the handloom weaving industry which was being developed with the assistance of another UN Volunteer who also formed part of the Project team. At the time the project officially terminated the export of cocoons and the weaving of locally produced Silk had started. The latter activity was subsequently intensified and printed Silk handloom fabrics were being produced for test marketing by the Department at the time the project was closed. However due to the financial difficulties mentioned above Government took a decision to close down the entire project in 1982 despite representations made by the Department of Commerce supported by a comprehensive appra-

isal of the project which showed that the project if adequately funded would provide in 1987 direct employment to 600 small holder families in growing cocoons as well as to about 2500 persons in reeling and weaving and would be economically viable.

While admittedly the project had yet to give the returns originally expected it should be noted that over the last few years a valuable resource of know how amongst nationals had been built up at considerable expense and a vast amount of enthusiasm generated amongst the rural people in the Southern Highlands and Western Highlands Province. All of this could be lost if the closure continues for more than a few months more.

It should be noted also that a UNIDO/FAO Mission which investigated the project in 1979 recommended its continuance.

On further representations by the Provincial Governments of the Western Highlands and Southern Highlands, the National Government agreed to participate in a Company on a tripartite basis (i.e; WHP, SHP, and Government) with each partner contributing Kina 70,000 annually for three years after which it was hoped the project would be able to finance itself.. However the Western Highlands Province has had second thoughts and this proposal cannot therefore be implemented. An alternative has now been proposed by the Department.

UNDP Suggestions for obtaining assistance from India under TCDC and also suggestions for obtaining assistance from CFTC have been pursued vigorously by the Department. Unfortunately as funding for operational activities was not possible from these sources nothing could be done. The main problem now for the Department is that officially the Silk Project does not exist and as such Government cannot therefore support proposals for outside assistance.

However the Department of Commerce has been able to obtain agreement for the breeding programme to continue under an

expatriate specialist officer till his contract expires.

Operational expenditure is vital to keep the project alive and the Consultant trusts the new Government will reverse the present decision and the project will be allowed to continue even in a scaled down way. The feasibility of operating Kagamuga Station on a limited scale which would also serve the needs of Southern Highlands should also be investigated.

SOLAR SALT

12.3 This project is also another important one as PNG presently imports all its salt requirements. Assistance has been provided for investigation of its feasibility on three occasions by UNIDO. Project PNG/74/039 was very actively involved in the implementation of the project. Assistance was obtained also from the ~~New Zealand~~^Q Government and CFTC. At the present time after much difficulties construction work on the pilot project to investigate its technical feasibility and financial viability has been completed. It was not possible however to collect any relevant data during the 1981 dry season due to unseasonal rains.

As the Department has now been able to get over most of the problems concerned with the operation of the project hopefully the data which is necessary for evaluating the project can be collected. If weather conditions hold good prospects of getting the first harvest of salt by mid September, are not unduly gloomy.

The Consultant visited the project on 29.7.82 with Mr.K. de Wit a Departmental officer.

The Consultant noted that there is now a weather station on site for the purpose of the collection of weather data and daily readings are being properly recorded. The automatic weather recorder which was set up previously did not perform satisfactorily

Contd...p...10....

A trainee technical officer to manage the project on site has also be appointed. Arrangements should be made for him to receive 3-4 months training at a salt project in a developing country during the Wet Season in PNG. Sri Lanka or India may offer training facilities under TCDC. Otherwise CFTC could be approached. CFTC assistance was obtained during the project period for a consultancy service during the first year of operation of the pilot project. This may have to be renewed. The Consultant also feels that it would be most desirable that the services of a Volunteer salt technologist be obtained for a period of two years, as it will be necessary to manage monitor and evaluate the performance of this pilot project for this period. The minimum funds required for operating the project should also be made available by Government. This is estimated at K 15,000 per year. It should also be noted that the Consultants mentioned above were optimistic about the project in their recent report.

LEATHER GOODS

- 12.4 This project has become a great success and if properly planned and implemented has great potential for still further expansion. It will be recalled that the decision to train Papua New Guineans in leathercraft was made consequent on a recommendation of a UNIDO expert Mr. El'Khair who was of the view that such training was a necessary prerequisite for the maximum utilization of the products of a tannery which would have to be established only at a later date as the existing volume of available hides was insufficient to make a tannery viable.

The project was started off with a UN Volunteer who has now joined the staff of the Department as a Contract Officer. The initial batch of trainees except for one is now operating successfully as a group at the Business Development Centre. The one that did not join the Group is also making leather goods at the Centre on his own.

A private businessman who was marketing the products of the trainees of the Small Industries Research and Development Centre has also had 4 persons trained and he too is now in production with an output of about 40 pairs of sandals a day. He will shortly go on an 'exposure' visit abroad, funded by CFTC.

A training class at Mt. Hagen has also been started with 8 trainees, Some of them have been given basic training initially in Port Moresby. There are also requests from several other towns for training facilities. Sandals, belts, bookmarks, bags appear to have a great demand.

It is clear that the leather specialist in the Department does not have the time to provide the expertise necessary for the training of so many groups as he is already training another group of 15 young people. He needs assistance and the Consultant fully supports the request of the Department for the services of another UN Volunteer to help with extension work. There has been excellent follow up by the Department on this project. Two counterparts are under training. The Department has also obtained the services of a CFTC expert to start the manufacture of closed shoes and a tannery.

CERAMICS

12.5 Ceramic projects were being promoted in Port Moresby Rabaul, Kainantu and Kieta at the time PNG/74/039 terminated.

The Department has since decided to close down the ceramics Centre at Port Moresby but the facilities at the Centre such as the kiln and potters wheels are however available to the potters who had been trained. The Centre did not have a trained ceramacist to provide instruction. The decision to close the Centre was based on the need to exercise economy in view of the financial situation.

While it is true that although the Centre had been training potters for many years, it cannot count this project as one which had good results for the reason that the number of self employed potters are few. The main reason for this is not lack of technical skills but lack of a knowledge of business management. More than one potter went to the wall because he could not manage his money properly. In the Consultants views the skills displayed by Papua New Guinean potters are of a very high order and the Department should have a qualified Ceramacist on its staff who can help develop these skills.

TIMBER PRODUCTS

12.6 In view of Papua New Guinea's extensive timber resources the development of national entrepreneurship in the manufacture of timber products should be given the highest priority. One of the major draw backs in promoting Small Scale manufacturers of timber products has always been the lack of the availability of a good extension service by the Department. The manufacture of timber products is still largely dominated by expatriate firms. During the lifetime of Project PNG/74/039 the service of a UNV woodworking tradesman was available for a very short period. However he too was relatively inexperienced in furniture design etc. Continued financial constraints made it impossible to obtain a good woodworking specialist who would be used on a countrywide basis.

The Department has been compelled to close this Section too at SIRDC again due to the financial constraints mentioned above. However it is the view of the Consultant that a woodworking specialist, if possible a Volunteer be recruited for extension work. The Department also endorses this view.

Meanwhile further opportunities abroad for training Papua New

Guinea entrepreneurs in woodworking skills should be obtained under TCDC as was done in the past. Follow up is also necessary when the trainees return.

The Consultant is also happy to note that the 1982 Chalkboard order of the Department of Education was successfully executed in time, for the first time, by the Small Industries Research and Development Centre. However the need to find a national entrepreneur to execute this annual order remains.

COIR

12.7

As is well known unlike in Asian Countries very little use is made of the coconut husk in Pacific countries even on a cottage industry basis for use in mattresses, ropes, matting or brushes. Attempts to promote the use of coir fibre during the lifetime of the project did not succeed. A study made on the possibilities of the manufacture of rubberised coir mattresses by a UNIDO expert obtained through the Project recommended that while rubberised coir mattresses would not be viable in PNG there were export possibilities for needle felt in Australia. A market survey done with the assistance of CFTC confirmed this in 1981. Now Dylup Plantation Milne Bay Province which was interested in coir fibre manufacturing proposes restarting soon its disused fibre mill which will with additional machinery manufacture needle felt for export. The Morobe Provincial Government will be a partner in the project. Inner spring mattresses utilizing coir will also be manufactured for export.

The coir produced at the Dylup factory will also be used to promote small scale coir based industries in the village areas. In fact this was the main reason for the Department's support for the restarting of the mill. It appears that at last the persistent efforts that have been made over 6 years are going to bear fruit.

INDUSTRIAL ESTATES

12.8 Two studies have been made. The first was by a UNIDO expert for the Department of Labour and Industry who recommended a sub-contracting Industrial estate in Gerehu. No progress has been made on this project so far. In any case a great deal, more work is necessary, before any concrete results can come out of it. It is understood the Department of Labour and Industry intends following up on this.

The second study was done for Commerce and Industry by CFIC experts on the initiative of Project PNG/74/039. This is a very comprehensive study. It included cost benefit appraisal of a proposed industrial estate at Lae as well as of each of the industries recommended for inclusion in the estate. An explicit letter of support was also obtained from the Development Bank by the Consultants. The concept of the project is quite different from that of the UNIDO expert.

The project is now under discussion with the Development Bank. The Executive Director of NIDA is acting as Co-ordinator. Support from Morobe Provincial Government is forthcoming.

If a final decision is made to go ahead with the project the Development Bank should recruit a Consultant on Industrial Estates to assist implementation.

The proposed industrial estate adjoining the Small Industries Centre which provide developed plots to national entrepreneurs who are greatly handicapped by lack of suitable land and buildings to start any industry is being pursued by the Department of Commerce and Industry.

Departmental follow up has been good.

HANDLOOMS

12.9 Much emphasis was placed on this activity as there was no tradition of weaving in PNG. Materials used for weaving are presently imported cotton yarn, wool and local silk.

Under Project PNG/74/039 a highly experienced handloom technician was recruited as a UNV to help plan, organise and develop this activity. He has now been taken over by CFTC and continues to advise.

The main contributions of the UNV were :

- (1) a properly organized training scheme.
- (2) establishment of a design centre.
- (3) introduction of fly shuttle and silk weaving.
- (4) accurate costing.

The closure of the Silk project was however a severe blow as considerable work had been done on silk weaving and there were good prospects of expansion. The Consultant is confident that PNG silk fabric would have found a ready market in PNG and Australia. The Consultant feels that ways and means should be found to keep silk weaving alive. A competent counter part is under training.

MOULDED RUBBER GOODS

12.10 During the project period work was completed on a Government project to manufacture rubber thongs and car mats. Although the manufacture of rubber thongs has been proved technically feasible utilizing local scrap rubber, locally manufactured thongs are unable to compete with PVC imports as there is no protection given by Government. All efforts at marketing were not successful. A very suitable counterpart has been trained. However the activity has not been closed down as it still performs a service in manufacturing rubber mats for automobiles which have a fair sale and also micro cellular sheeting for shoe soles for the leather project.

The Consultant noted also that investigations were going on as to the possibilities of using clay in the compounding of the moulded rubber mix which could considerably reduce production costs and make the price of SIRDC thongs more competitive. The Department is also exploring the New Zealand market where privileged entry is possible under SPARTACA.

AITAPE - SMALL-SCALE INDUSTRY PROJECT

12.11 This was considered to be an important project as it is located in a very underdeveloped area and it was managed by UN Volunteers recruited in collaboration with the Austrian Volunteer service. Manufacture of cane furniture, baking ovens, bricks, outboard and automobile repair and maintenance, teaching of mechanical engineering skills, gunsmithy are the main activities. Much was achieved by the first Volunteer on the project against incredible odds. Despite tremendous difficulties the project appears to be ~~is~~ doing satisfactorily. Considering however the fact that this is an underdeveloped area the Department of Commerce will have to provide continued technical and management support for a few more years without which the projects started would collapse.

A detailed study of this project's performance would be of great value for future planning of similar projects in other underdeveloped areas.

Although several messages were sent to UNV Mr. Weismuller to meet the Consultant at Wewak on 12.8.82 he did not come as expected. This was a great pity as the Consultant was anxious to discuss in particular the progress of the cane furniture project at Aitape and the Training Centre. The Consultant was also anxious that he should see the cane furniture and basket ware made by the Chinese experts provided by the government of the Republic of China and attached to the project initiated and supervised by UNV C. Kappagoda at Wewak.

PNG has enormous resources of cane which is in short supply in the world today, according to a CFTC expert whose services were obtained during the project period. Not only can good quality furniture be exported, but cane can also be exported in semi-processed form. There are already export inquiries. The domestic market too is good. Furniture manufactured at Wewak has a ready sale. This project should therefore be given priority in view of the abundance of cane in rural areas.

MECHANICAL ENGINEERING

12.12 While the development of light engineering industry has always been given high priority for many reasons little headway was made during the project period. Although the machine shop at SIRDC was expanded with the purchase of new equipment it was not possible to find a competent Trainer. At the present time there does not exist in the whole of PNG a machine shop which is owned and managed by a PNG national. Moreover in expatriate machine shops labour charges are extremely high.

The Department is now making further additions to the machine shop and the Consultant was glad to learn that a UNV will be placed in charge of the shop.

This certainly is a step in the right direction. This UNV was in the "pipeline" at the time of writing.

AUTOMOBILE/RADIO/ELECTRICAL/REPAIR AND MAINTENANCE

12.13 This is another area which has much potential for development. Despite much effort limited success has so far been achieved. This is partly due to the fact that the Department has not been able to provide an effective extension service. Many of the projects have failed not for lack technical capability but due to management inefficiency. In the Service Industries in particular regular monitoring is necessary to achieve a high level of success. The recent success stories in Port Moresby are mainly due to careful monitoring by the Head Office staff of the Department of Commerce. Scope exists in the provinces too for these activities but here again suitable extension services are necessary to play a supporting role.

In the Consultant's view the appointment of a mechanical engineer with good management experience to assist nationally owned industrial enterprises with management training and advice is a priority requirement.

FOUNDRY DEVELOPMENT

12.14

The Services of Mr. Chakrabati UNIDO Foundry expert were obtained to look into the development of the Foundry Industry in PNG in 1979. He made several recommendations and it was agreed by the Department of Labour and Industry and the Department of Commerce and Industry that the follow up should be as follows:

(a) Labour and Industry would follow up the recommendations regarding:-

1. The grinding media manufacturing Plant.
2. The mini steel Plant.
3. The special steel foundry.

(b) Commerce and Industry would follow up:-

1. The Demonstration foundry project.
2. Assisting the vocational Centre in Finschaffien to produce aluminium ingots for export.

However the entire development envisaged depended on the implementation of a Grinding Ball Manufacturing project to serve the needs of BCL and OK Tedi. Although a foreign Company was interested in the project nothing tangible has yet materialised.

The Consultant is of the view that in the present depressed state of Copper prices BCL may not be interested in pursuing this project further in view of the large capital investment involved.

It was also sad to learn that PNG's only foundry which is located at Lae had also closed down due apparently to high overheads. However part of the equipment has been purchased by the, Appropriate Technology Development Institute to start a new foundry. This did not include the electric arc furnace. It is proposed to start this foundry in another location on a small-scale, initially concentrating on non-ferrous items for the engineering industry. The ATDI has problems regarding funding of working capital etc. and

was expecting a large grant from UNIDO to whom it had made a request for assistance. It is also **not clear as to the** scope of its proposed operation.

The Consultant along with the Assistant Secretary (Technical and Small Industry) met the Industrial Development officer of the Morobe Provincial Government and discussed the proposed request to UNIDO. In the Consultant's view the next step is for the Morobe Government to submit a detailed request on its precise requirements through NPO to UNDP/UNIDO. This should be done in consultation with the Department of Commerce and Industry. On a preliminary assessment of the situation it would however appear that **three** specialist technicians whose services could perhaps be obtained under TCDC are required for the proposed foundry. Despite the closure of Trucast due to financial difficulties the Consultant is of the view that a market still exists in Lae for a ~~small~~ small foundry operation. Support should be given to this venture provided a practical proposal is submitted based on a prefeasibility study.

BORON RUBBERWOOD

12.15 The objective of the project was to utilize rubberwood from uneconomic rubber trees for manufacture of furniture after suitable chemical treatment and seasoning. This is done in other rubber growing countries notably Malaysia and Sri Lanka. As UNIDO did not have funds CFTC provided an expert who has submitted a technoeconomic report, which the Department is following up with a view to implementation in consultation with the National Plantation Management Agency.

BLACKSMITHY

12.16 This trade is being encouraged on a systematic basis in all provinces from which requests have been received. It is understood that the UNV Blacksmith will start work in Kimbe in the near future. At the present time his services are being utilized to make tools for craftsmen as they find it difficult to obtain their tools at reasonable prices. This is a good move.

HANDICRAFTS

12.17 The promotion and development of the traditional handcraft industry received considerable attention and support during the project period in view of its crucial importance in providing employment to many thousands and also because it is such a valuable cultural heritage. It was also a difficult time for the industry as the world recession and the departure of expatriate artifact dealers without replacement by nationals after independence had resulted in a dramatic fall in exports of handicrafts. During the project period the activities of the Department were therefore considerably expanded and the Department actively entered into trading in artifacts and export with reasonably good results. Training Courses for national dealers in artifacts were also organized.

From the discussions the Consultant has had it would appear that this activity continues to be operating very satisfactorily despite the existing constraints. However some of the management problems such as inventory control and sales policy which persisted during the project period still continue. This is due partly to lack of staff. The Consultant noted however that the Department was doing all it could to solve these problems. The present turnover of the wholesale trading operation is about the K 7000 per month which is quite satisfactory. The Consultant also noted with satisfaction that training classes in certain areas for craftsmen had been started. Catalogues and brochures are also being prepared for buyers.

There are at present two UN Volunteers assisting the Department in this activity, one ^{of} whom is located in the East Sepik. His main job is the purchase of artifacts which he is doing very competently. He has also advised the Consultant that he has trained three nationals in Wewak, Maprik and Angoram in the purchase of artifacts. The other Volunteer is assisting at the Handicrafts Branch of the Department at Port Moresby. She too has a very responsible job.

The Consultant was also pleased to note that the Volunteer recommended by him and UNDP for appointment as a UNV had been obtained through another Volunteer organisation by the Department

and was now stationed at Kerema. She is doing excellent work according to the Department. The rejection by UNV Headquarters of her candidature is incomprehensible to the Consultant.

The Consultant was however concerned to learn that NPEP funding for this activity too was to be withdrawn next year. This will reduce the level of activity being carried on. It has now become abundantly clear that the Department has an important role to play in the promotion of handicrafts in co-operation with Village Arts and other agencies. For good reasons it is not possible as yet to delegate this responsibility to a single organisation as a major structural change in the existing organizational framework is a prerequisite for this.

The Consultant trusts that the Department will be able to persuade Government not to withdraw NPEP funding. The Consultant was also advised by the Department that the activity would not be closed down completely if NPEP funding was withdrawn but would be carried on at a very reduced level.

13.1

UNITED NATIONS VOLUNTEER SUPPORT FOR THE PROJECT

Whatever successes that have been achieved by the Project was to a good extent due to the support given by dedicated UNV. Although the project officially terminated last year as mentioned, activities promoted earlier by the project still continue and UN Volunteers are working in the Department giving considerable assistance to handicrafts, metal working and mechanical engineering activities. Some UNV because of their good work have since been absorbed by the Department after their contracts expired.

A list of UN Volunteers attached to the small Industry Division of the Department of Commerce and Industry is at Appendix B.

13.2

Volunteers feel that they should not be treated as contract officers in the regular service of the country but as persons working for the cause of development at some personal sacrifice. The fact that all too often they are slotted into "line" positions makes it sometimes difficult for others working in

the administrative set up of a Department to understand their role. The situation gets even worse when the Volunteer has to report to an expatriate government officer in the field who does not understand this distinction or perhaps chooses not to. Some UNV also create problems by taking up the position that they are responsible to UNDP and not to the Head of the Department. Lack of previous administrative or managerial experience amongst the younger UN Volunteers also creates problems. It is therefore advisable in Departments that have a relatively large number of UN Volunteers for some senior official in the Department to be designated as a Co-ordinator for the Volunteers within that particular department with the specific responsibility of ensuring that the country gets the best out of Volunteers and also that the Volunteers get proper job satisfaction. While undoubtedly the question of counterparts is a very important one it is also a fact that in many developing countries it has not been easy to find suitable counterparts for experts and UN Volunteers for various reasons. The Consultant too despite every effort could not find a counterpart for himself. On the other hand the fact that there is no counterpart does not mean that a Volunteer cannot make a contribution. If he or she is a good Volunteer he or she can still in most cases make a valuable contribution. For example, a Volunteer skilled in leather working or weaving or blacksmithy when he passes on his skills to trainees in the country where he works makes a valuable contribution.

Hopefully these trainees will pass on their skills to others in due course. It should also be noted that lack of funds always create problems regarding counterpart positions. However it is hoped that the Department will do everything that is possible to recruit counterparts so that maximum benefit could be obtained from any new UN Volunteer who may be recruited.

13.3

As regards the specific question of the direction and supervision of UN Volunteers withⁱⁿ the Department of Commerce and Industry it was the Consultant's original recommendation which was agreed to by Government and UNDP that the Assistant Secretary (Small Industries), Mr. A. R. Sen who has worked previously for UNIDO would be responsible for this function. Mr. Sen however states that this decision has not

been conveyed to him in formal terms which is correct. The Consultant recommends that this should be done as it will ensure that

1. A UN Volunteer is utilized to a maximum in terms of his job description;
2. the UN Volunteer sends monthly performance reports through him to UNDP;
3. any problems that a UNV may encounter where he needs assistance or guidance are promptly looked into;
4. there is regular contact with UNDP. Volunteers should also be advised by UNDP that they should first try to sort out any difficulties they may have in the Department and with the Officer in Charge of a particular project before making representations to UNDP.

Some guidelines should also be prepared for issue to newly appointed UN Volunteers as to their position vis-a-vis UNDP and the Department.

Some introduction into the way bureaucracy works in the particular country of assignment is essential. It should not be left to Government officials alone to do this.

POLICY SUPPORT FOR THE PROMOTION OF SMALL SCALE INDUSTRY

14.1

At the present time there is no well defined policy or strategy laid down by Government in regard to the support that will be given to Small Scale Industry Development. Like in many other developing countries, it is necessary to offer a package of incentives to entrepreneurs in order that they will be encouraged to enter the field of small-scale industry particularly in a country like PNG where the constraints are many. Attempts made to obtain government approval for such a package of incentives did not succeed in the past. However, the Department should continue to pursue this matter in consultation with the Department of Labour and Industry.

In this regard the Consultant would like to comment that it is unfortunate that the differences of opinion continue to exist on certain policy issues between ^{the} departments as regards their respective roles. A pooling of their resources will certainly be in the best interests of promoting industry development. It

is hoped that in the new assignment of Departments the two Departments will come under one Secretary.

15.1

CERAMICS PROJECT OF THE DEPARTMENT OF LABOUR AND INDUSTRY
AT RABAU

At the request of UNDP the Consultant visited the above project which is located in the premises of the Small Industries Centre at Rabaul where a number of Small Industries are being promoted. The objective of the project being promoted by the Department of Labour and Industry is to determine the economic viability and technical feasibility of a project to produce utilitarian table-ware using local clays and glazes for the PNG Market. The terms of reference of the UNIDO/UNDP project required a detailed techno-economic study of the project. However, due to various reasons the Consultant appointed for the implementation of the project was unable to complete his work. He was however able to establish that in his opinion local clays could be used almost entirely for the body composition and also a suitable glaze could be made locally. As additional funding was now required to complete the work started or the project abandoned, an urgent decision was necessary as to the course of action to be taken.

15.2

At the time the project was formulated the Department of Commerce and Industry agreed to provide the services of a technical officer as a counterpart as well as make available part of the premises and facilities of its own Ceramics Section at Rabaul for the project though the Department as well as the Consultant had doubts as to the economic viability of the project in the face of cheap imports of ceramic ware. These doubts still exist !

Mr.L.Mohanti OIC of the Planning Division of the Department of Labour and Industry and Mr.K.Dewit of the Department of Commerce and Industry also joined the Consultant on his visit to Rabaul.

15.3

Taking into consideration all the facts it was decided by the Consultant and the two Departmental officers to make the following recommendations to the Department of Labour and Industry and Commerce.

1. that the project work should be completed and not abandoned.
2. that the Technical Officer of the Department of Commerce who was the Technical counterpart for the project in terms of the Project document should make the necessary moulds in order to start manufacturing a limited range of ceramic tableware utilizing existing machinery for test marketing and evaluating costs. These items were identified.
3. that the services of a UN Volunteer or a CFTC expert with factory production experience be obtained as soon as possible to take over the project. This will be done by Labour and Industry.
4. that the project continues to remain with Labour and Industry.
5. that Labour and Industry will closely monitor the project. This will be done in consultation with the Department of Commerce and Industry to avoid any interdepartmental conflicts.
6. that Labour and Industry will draw up a production programme and design a costing system for the guidance of the Technical Officer of the Department of Commerce and Industry who will start production in about a months time, after the moulds are ready. Assistance from the Department of Commerce and Industry would be made available if needed for designing the production programme etc.
7. the position of the counterpart regularized.

The project was also discussed with the The Deputy Premier, the Finance Minister and the Provincial Planner of the East New Britain Provincial Government. The team was advised by them that the project had the full support of the Provincial Government which would take it over if it was established that it would be viable.

6.

SUMMARY OF RECOMMENDATIONS

1. Silk

The project should be continued even as a limited operation until better times. A UNV with experience in silk reeling be recruited if the project continues.

2. Salt

i) that training facilities be obtained for the trainee technical officer at the salt project under TCDC.

ii) that a UN Volunteer be recruited to manage the project.

iii) that funds be provided for the operation of the project for at least 2 years or more.

3. Timber Products

i) a UN Volunteer qualified and experienced in wood working be recruited to help the Department in regard to the provision of extension services to small-scale manufacturers of timber products. The wood working section of the SRIDC should also be restarted.

ii) opportunities be found for small-scale wood working national entrepreneurs to go abroad for upgrading their technical and management skills.

5. LEATHER GOODS

A UN Volunteer qualified and experienced in leather goods manufacture be recruited to assist the existing project which is expanding rapidly. Any short term expertise that would be required should also be provided under SIS if possible. This is a very high priority requirement..

6. INDUSTRIAL MANAGEMENT

that a UN Volunteer qualified and experienced in industrial management be recruited on to the extension staff of the Department to help small-scale industrial entrepreneurs in industrial management.

7. CANE

that TCDC assistance be obtained from Thailand for the expansion of the cane project and possibilities of a joint venture explored. (Please see report of the Mission of Mr.O.P.Kunnangal Minister of Commerce and Industry to Thailand in 1980).

8. POLICY SUPPORT

that the Department of Commerce and Industry and the Department of Labour and Industry make a joint submission to the Government on policy support for industrial development in PNG.

9. U.N.V.

that the Assistant Secretary (Small Industries) supervises the work of UN Volunteers working in his division.

The Consultant was advised that no additional funds would be available during the present cycle as they had all been committed. In the circumstances a project proposal was not formulated. At present according to UNDP one man year remains available within the IPF for 1983, and the Department of Commerce has contributed funds to UNDP for a UNV silk reeler. Should however funds become

available UNDP would examine the possibility of earmarking funds in 1982, 1983 and 1984 for a UN Volunteer in leathercraft and perhaps another Volunteer. Possibilities of obtaining Associate Experts should also be considered. The need to ensure that Volunteers have adequate travel funds should also be borne in mind.

* * * * *

APPENDIX "A"

List of Persons met by the Consultant

- | | | |
|-------------------------|---|---|
| <i>Mr.N.Subbaraman</i> | - | <i>Resident Representative
UNDP Port Moresby.</i> |
| <i>Mr.K.McGrath</i> | - | <i>Deputy Resident
Representative UNDP
Port Moresby.</i> |
| <i>Mr.J.Wasserstrom</i> | - | <i>Assistant Resident Representative
UNDP Port Moresby.</i> |
| <i>Mr.John Wauwe</i> | - | <i>Secretary, Department of Commerce
& Industry, Port Moresby.</i> |
| <i>Mr.A.R.Sen</i> | - | <i>Assistant Secretary (Small Industries)
Department of Commerce & Industry.</i> |
| <i>Mr.K.Dewit</i> | - | <i>Principal Technical Officer
Department of Commerce & Industry.</i> |
| <i>Mr.J.Brooksbank</i> | - | <i>Executive Officer
Department of Commerce & Industry.</i> |
| <i>Mr.T.Rodrigo</i> | - | <i>Chemical Engineer, Department of
Commerce & Industry.</i> |
| <i>Mr.T.Misikaram</i> | - | <i>Officer -In - Charge
Small-Scale Industries Research &
Development Centre, Hohola.</i> |
| <i>Mr.E.Boas</i> | - | <i>Assistant Secretary, Department of
Labour & Industry.</i> |

Contd....p....30....

<i>Mr. Mohanti</i>	-	<i>Officer-In-Charge Planning Division Department of Labour & Industry</i>
<i>Mr. J. Boitau</i>	-	<i>National Planning Office.</i>
<i>Mr. F. Agar</i>	-	<i>National Planning Office.</i>
<i>Mr. Sen Gupta</i>	-	<i>CFTC Advisor on Leather.</i>
<i>Mrs. J. Lewis-Harris</i>	-	<i>UN Volunteer Handicrafts Division Department of Commerce & Industry.</i>
<i>Mr. C. Kappagoda</i>	-	<i>UN Volunteer (Handicrafts) Department of Commerce - E. Sepik. Provincial Government.</i>
<i>Mr. D. Edwards</i>	-	<i>National Planning Office.</i>
<i>Mr. Tony Power</i>	-	<i>Provincial Planner - E. Sepik. Provincial Government.</i>
<i>Mr. D. Liyanage</i>	-	<i>UN Volunteer Leathercraft.</i>
<i>Mr. W. B. Dissanayake</i>	-	<i>CFTC Adviser on Handloom Weaving.</i>
<i>Mr. D. Burrows</i>	-	<i>Project Manager ILO Project for Entrepreneur Development.</i>
<i>Mr. E. Bates</i>	-	<i>Industrial Economist. Department of Commerce and Industry.</i>
<i>Mr. S. Brown</i>	-	<i>Minister of Finance E. New Britain Provincial Government.</i>

* * * * *

APPENDIX "B"

List of UN Volunteers presently
working with the Division of Small-Scale Industry
in the Department of Commerce & Industry

<u>NAME</u>	<u>SPECIALIZATION</u>	<u>PLACE</u>
1. Mr.C.Kappagoda	Handicrafts Extension	Wewak
2. Mr.W.Weismuller	Mechanical Engineering	Aitape
3. Mrs.J. Lewis-Harris	Handicrafts	Port Moresby
4. Mr.Thiagaraja	Blacksmithy	Port Moresby

All these Volunteers have been recruited under the Trust Fund Scheme.

Mr.Dees who was recruited for the Silk project was given another position after the project was closed.

* * * * *

