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PROMOTION AND DEVELOPMENT OF SMALL AND MEDIUM SCALE
INDUSTRIES - PHASE II

DP/SOI/90/007

SOLOMON ISLANDS

Terminal report*

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

Based on the work of Vicente P. Palcong, joinery/furniture
manufacturing expert

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* This document has not been edited.

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TABLE OF CONTENTS

SUBJECT	Page/Pages
1.0- BACKGROUND and JOB DESCRIPTION	1 -2
2.0- SUMMARY OF ACTIVITIES AND OUTPUTS.....	3-15
2.1 Identification of Entrepreneurs and Assistance in Starting New Woodworking Enterprises.....	3-4
2.2. Industrial Extension Services to Woodworking Industries.....	4-5
2.3. Industrial Training.....	5-6
2.4. Organized a Woodworking Industry Association.....	6-7
2.5. Organized a Furniture Show/Exhibition.....	7-8
2.6. Ancillary Services for the Woodworking Industry.....	8-10
2.7. Activities in Coordination with other Government Institutions and Private Agencies/ Companies having a role in the development of the Woodworking Industry.....	10-14
2.7.1. Forest Division-MNR	
A. Timber Grading Rules.....	10-11
B. Timber Kiln Drying Facilities.....	11-12
2.7.2. MTWU-Quality Control/Standards for Government Furniture.....	12-13
2.7.3. Assistance to Vocational Training Centres.....	13-14
2.7.4. Preparation and Implementation of Technical Bulletins.....	14
2.7.5. Local Counterpart.....	15
3.0. CONCLUSIONS AND RECOMMENDATIONS.....	16-22
3.1. CONCLUSIONS.....	16-18
3.1.1. Sawn Timber as Raw Material.....	16-17
3.1.2. Imported Raw Materials for the Woodworking Industry.....	17
3.1.3. Assisted Small-Scale Woodworking	

Enterprises.....	17-18
3.1.4. Improvement of Skills through Industrial Training.....	18
3.2. RECOMMENDATIONS	
3.2.1. Assistance to Small-Scale Woodworking Enterprises.....	19-21
3.2.2. Further Development of the Woodworking Industry.....	21-22

ANNEXES

Annex I-List of Organized Joinery and Furniture Enterprises.....	23-25
Annex II- List of Assisted Enterprises through Industrial Extension Services and details of Assistance provided.....	26-32
Annex III- Details of Industrial Training Activities and list of persons trained.....	33-36
Annex IV- First Furniture Show-1990-official opening..	37-39
Annex V-Some photos of products displayed at the Furniture Show-1990.....	40
Annex VI- Second Furniture Show (WOODEX/FURNITEX 1991) Opening and products displayed.....	41-47
Annex VII-Record Sales of WOODEX/FURNITEX 1991.....	48-49
Annex VIII-Bisnis Nius-Headline.....	50-51
Annex IX- Excerpts from a copy of newly formulated Timber Grading Rules and Photo/seminar....	52-60
Annex X- News & photos on the Timber Seasoning Kiln.	61-63
Annex XI.Proposed 6 weeks fellowship for counterpart.	64-65
Annex XII-Proposed Industrial Training Budget for 1993...	66-70
Annex XIII- Profile of one assisted small-scale Woodworking Enterprise.....	71
Annex XIV- Product Development (Photos of some products developed at workshop level.....	72-75

EXPLANATORY NOTES

The following ACRONYMS are used in this report:

- AIDAB- Australian International Development Assistance Bureau**
- EEC- European Economic Community**
- FIB- Foreign Investment Board**
- GATT- General Agreement on Tariff and Trade**
- IMS- Integrated Marketing Services**
- MCPI- Ministry of Commerce and Primary Industry**
- MNR- Ministry of Natural Resources**
- NTTT- National Trade, Training and Testing**
- PDU- Provincial Development Unit**
- SICHE- Solomon Islands College of Higher Education**
- SID- School for Industrial Development**
- SIG- Solomon Islands Government**
- SIJFIA- Solomon Islands Joinery and Furniture Industries Association**
- SPU- Special Projects Unit**
- R.I.E.- Ranadi Industrial Estate**
- TCT- Tungsten Carbide Tipped**
- UNCTAD- United Nations Conference on Trade and Development**
- UNDP- United Nations Development Programme**
- UNIDO- United Nations Industrial Development Organization**

The monetary unit of the Solomon Islands Government is Solomon Islands Dollar (SI\$). Current Exchange rate- 1 US\$ -SI\$2.97

The use of the word "woodworking industry" means the joinery and Furniture industry as a whole.

**TO ALL Officials (past and present) and Staff of the M.C. & P.I.,
Entrepreneurs and Workers of the S.I. Woodworking Industry,
Senior Staff of the MTWU and the MNR-Forest Division, Officers
and Instructors of the SICHE-SID and other S. I. Vocational
Training Centres,-Officials of other Gov't Agencies, my colleagues
in the UNIDO Project SOI/80/002 and SOI/90/007 Phase II- MY
SINCEREST THANKS AND GRATITUDE FOR YOUR SUPPORT AND
COOPERATION DURING MY ASSIGNMENT IN THE SOLOMON ISLANDS.**

1.0 BACKGROUND and JOB DESCRIPTION.

The expert was fielded by the United Nations Industrial Development Organization (UNIDO), at the request of the Solomon Islands Government (SIG), to provide technical assistance to the Joinery and Furniture (woodworking) industry. The expert was assigned to post No. 11-04, Joinery and Furniture Manufacturing Expert in a UNIDO Project SOI/88/002, "Promotion and Development of Small and Medium Scale Industries" and then to post 11-02, Furniture expert in SOI/90/007, phase II of the same project.

Specifically, the expert was assigned to perform the following tasks:

For UNIDO Project SOI/88/002, the job description outlined the following duties;

- Visit each joinery/furniture factory and detail work that needs to be undertaken to enable the manufacturer to get the operation into commercially viable operation, e.g. production line operation, condition of machinery, selection of materials, costing of work, opportunity areas, ability of work force, etc.

- Draw up a programme of individual assistance and seminars that address the major problems observed.

- Undertake to carry out this programme in conjunction with other members of SOI/88/002, Ministry staff and entrepreneurs.

For Phase II, SOI/90/007, of the same project, the duties have been a follow-up of the duties and work done in phase I. The tasks are summarized as follows;

- Through industrial extension services, the expert will work towards providing assistance in machinery selection/installation/operation and maintenance, assistance in product development, shop layout, on the job training of workers, product costing, purchase and use of raw materials, identification of entrepreneurs and assistance in starting their own workshops, etc.

- Organize and conduct industrial training for industry workers.

- Assist in the organization, strengthening and functioning of a joinery/furniture industry association. Through the association, assist in organizing wood/furniture product exhibitions..

Develop the structure of the association to enable itself to attain a sustainable level of recognition as a national association that will play a major role in the development of the wood processing industry.

- Prepare technical bulletins for dissemination and implementation to woodworking industries and vocational training institutions.

- Establish linkages and coordinate technical assistance activities with other Government agencies and institutions having important roles in bringing about healthy growth of the wood processing industry.

- Coordinate technical assistance activities with other private companies having direct and indirect roles for the development of the wood processing industry.

2.0 SUMMARY OF ACTIVITIES AND OUTPUTS

2.1. Identification of Entrepreneurs and Assistance in Starting New Woodworking Enterprises.

At the time of the arrival of the expert in the project, there were only four small-scale woodworking industries operating in Honiara. Two (2) of these are owned by indigenous Solomon Islanders (one is only five months in operation) one (1) is 100 % expatriate owned (Fijian) and the other is a joint venture by a Chinese and a local Solomon Islander.

In the provincial areas, there were also a few organized small-scale woodworking industries. One each is located in Gizo and in Munda, Western Province, one in Kira-Kira, Makira Province and two in South Malaita, Malaita Province.

By end of 1990, there are already eight (8) registered and operating woodworking enterprises in greater Honiara area. Seven (7) new enterprises are wholly owned by indigenous Solomon Islanders. By early 1991, the local market was then dominated by the indigenously owned enterprises. The Fijian owned company found it difficult to compete with the indigenously owned woodworking enterprises so, it decided to go into the construction business. The domestic market was then left for the indigenously owned woodworking enterprises to compete.

By end of 1991, there are ten (10) new organized and registered small-scale woodworking enterprises in Honiara area. Two new woodworking enterprises were also started in Western Province and one enterprise in Kira-Kira, Makira province.

Out of the ten new woodworking businesses in Honiara area, two started through financial assistance (loan) from commercial banks and one through a grant/aid from the Peace Corps-USAID. The others started with their own financial resources.

Three new woodworking enterprises in the provinces received financial assistance (grant/aid) from the Provincial Development Unit. This financial assistance help them start their operation

In October 1992, there are already thirteen (13) organized small-scale woodworking enterprises operating in Honiara area (this does not include one company specializing in the manufacture of Bee Hive boxes.)

The success demonstrated by the woodworking enterprises that received technical assistance from the Joinery/Furniture Specialist by end of 1990 encouraged other entrepreneurs to start their own woodworking businesses.

The progress achieved by the assisted enterprises attracted more prospective entrepreneurs to start similar small-scale woodworking businesses in Honiara area, however, due to the small size of the local market, it was decided not to encourage the others to pursue their plan.

It was decided therefore to assist and develop only the existing and a few new and deserving small-scale woodworking enterprises.

All of these new woodworking enterprises are operating and performing very well, except one that was counted as "sick enterprise" by mid-1992 due to "financial mismanagement" and failure to meet its loan repayment to a commercial bank.

For list of existing organized woodworking industries, please see Annex I.

-Although the small-scale woodworking enterprises also received a lot of business assistances, this report will only concentrate on technical assistance provided by the Joinery/Furniture Specialist.

2.2. Industrial Extension Services to Woodworking Industries

Industrial extension services to the woodworking industry is the main activity that delivered a "Practical" on the -job technical assistance to the woodworking enterprises. The nature of these assistances includes the following:

- a.) Shop Layout - both for existing and new enterprises. (7 enterprises assisted).
- b.) Selection/purchase and installation of equipment and machinery. (9 enterprises assisted)
- c.) Operation and maintenance of machinery, including maintenance of cutting tools, especially those for Tungsten Carbide Tip (TCT) cutting tools. (10 enterprises assisted)
- d.) Costing of products - including selection/purchase of raw materials. (13 enterprises assisted)
- e.) Product development - includes introducing and developing new product designs and improving existing designs. (14 enterprises)
- f.) Demonstration ("hands-on") in wood finishing techniques. (18 enterprises assisted.)

Daily technical visits made at the workshop premises delivered the practical "on the-job" direct assistance to the woodworking enterprises. Industrial Extension Services is the main "core" of activity that provided

direct assistance to the private owned small-scale woodworking enterprises.

Some notable achievement of assisted enterprises through industrial extension services in Honiara includes; a.) 5 enterprises expanded workshop (factory floor) premises b.) seven enterprises increased employment and profitability, c.) two have recently acquired land at the Ranadi Industrial Estate and are now constructing new factory buildings,- making a total of four woodworking factories expected to operate inside Ranadi Industrial Estate by end of 1992.

Details of assistances provided to each woodworking enterprise through industrial extension services is at Annex II. The improvement and expansion of the business activities of these enterprises as a result of assistance given through industrial extension services are also spelt out at Annex II.

2.3 Industrial Training

Industrial training activities are "hands-on" skill-upgrading training designed to enhance the levels of skills of the workers.

Skill-upgrading training are "short courses" with a duration of 30 to 80 training hours . These are designed mainly to upgrade the level of skills of those already employed in the industry. It is designed to meet any "shortfall" of worker's technical skill with the aim of improving their productivity.

Participants in these skill-upgrading courses were shop supervisors, shop foremen and workers from private woodworking enterprises and woodworking instructors from vocational training centres. Many entrepreneurs also attended these courses.

Efforts were made to always include vocational instructors in these skill-upgrading courses. The "training of trainers" will ensure the continuity of transferring the technical skills to other trainees/workers.

Due to the distances between the islands in the Solomons, it takes considerable amount of time to reach the location of enterprises in the provinces. This makes it difficult to deliver technical assistances to each selected enterprise. Organized group training were conducted to solve this situation.

To deliver maximum benefit in a shorter period, organized skill training conducted at the provincial centres is a cost effective and a very efficient way of providing assistance to each of the woodworking industries operating in the provinces.

Industrial training for workers in the woodworking industry started in June 1990. By end of October 1992, ten sets of training courses were conducted. These training activities produced a cadre of workers which can also be readily tapped as a "pool" of skilled workers for any medium or large scale companies that plans to operate woodworking businesses in the country.

The Joinery/Furniture Specialist organized and conducted all of the skill-upgrading courses. These training courses were conducted at the following venues; a.) Carpentry/Joinery Shop of the SICHE -School for Industrial Development (SICHE-SID) in Honiara, c.) National Trade Testing and Training (NTTT) Centre at the MTWU workshop compound in Honiara, and in Gizo, Western Province and d.) MTWU Provincial Workshops in Auki, Malaita Province and also at Kira-Kira, Makira/Ulawa Province.

Local counterpart, Francis Sene has been very much involved in organizing and conducting these training courses in late 1991 and through 1992.

Areas of training includes; a.) Basic and Advance Wood Finishing Techniques. b.) Machinery Operation and Maintenance (including use of jigs) c.) Cutting Tool Maintenance and d.) Product development (furniture design).

These industrial training activities formally established linkages of training activities between the woodworking industry and the existing training institutions in the Solomon Islands. All of these centres are equipped with the required training facilities. The School for Industrial Development (SID) of the SICHE is the best equipped training centre, therefore this venue has been considered as the prime venue in the conduct of industrial training activities.

The last set of training course organized and conducted by the expert before leaving the project was held at the NTTT Centre in Honiara in October 1992. Three woodwork instructors from SICHE (one from SID and two from the SICHE-College of Education) were among the participants in this training course.

Details of courses in industrial training conducted and list of trained persons are at annex III

2.4. Organized a Woodworking Industry Association

Through the initiation and guidance of the expert, an industry association called the Solomon Islands Joinery and Furniture Industries Association, (SIJFIA) was organized in late 1990. Its initial membership were mainly those enterprises operating in Honiara area.

Although its membership is a small group of entrepreneurs, the association has proved itself a very capable representative body of the woodworking industry. Some of the significant achievement of the SIJFIA are the following:

a.) Initiated and organized two Wood Products and Furniture Products Exhibition and participation in one National Trade Fair.

b.) Coordinated with the Forest Division in promoting the need to improve quality of sawn timber as a raw material in the industry through formulation of timber grading rules and timber standards.

c.) Coordinated with government ministries concerned with the implementation of government purchase programme for furniture products.

A new set of SIJFIA Officers were elected in October 1992.

2.5 Organized a Furniture Show/Exhibition

Product exhibition is a very effective way of introducing to the buying public the type, range and quality of products manufactured by the local woodworking enterprises. Realizing the importance of this activity, the Furniture Specialist, through the association (SIJFIA) initiated and organized a product exhibition which became a once a year activity.

The first Furniture Show was held in Honiara at the Solomon Kitano Mendana Hotel. This was the first product exhibition ever held in Honiara "with both the government and the private sector pleasantly surprise at both the quality and style made available by the local producers."(quote from CTA,s terminal report, page 11). The weekly newspaper Solomon Star also reported that the Hon. Minister of the Ministry of Commerce and Primary Industries "Speaks highly of the achievement of the local furniture industry" in his speech to mark the opening of the three day Furniture Show. Please see Annex IV

The designs of products displayed at the first Furniture show were introduced and developed by the Furniture Specialist. Prototypes of these designs were developed at the Joinery Shop of MTWU and later on were adopted by the private furniture enterprises. Most of the products displayed are folding, knock-down and modular product designs. Photos of some of the products displayed at the Furniture Show are at Annex V.

After this exhibition, the SIJFIA members were invited by the Trade Section of the Ministry of Foreign Affairs and Trade Relations to

join a trade fair in Melbourne, Australia. Designs were prepared and products were completed ready for transport to Australia. However, at the last minute, the Australian High Commission in Honiara approved only one product (Soltauyo Tuna) out from a submitted list of twelve local products proposed to be exhibited at the Trade Fair.

A second Furniture Exhibition, popularly called the "WOODEX and FURNITEX 1991 (Wood Exhibition and Furniture Exhibition) held in September 9-11, 1991, at the Solomon Kitano Mendana Hotel, was a lot bigger and better exhibition compared to that one held in 1990. News on the official opening and some photos taken at the exhibition area are at Annex VI. New and improved product designs were displayed. Eleven small-scale woodworking enterprises and two vocational training centres joined the exhibition. The exhibitors made a total of SI\$11,270 on the spot-sale and a total of SI\$80,530 orders received from customers. Total sales during the three day exhibition was SI\$91,800. Please see Annex VII

The "Bisnis Nius" issue No. 13, October 1991, in its headline "Selling Formula for Forum Week" said that the "success of Honiara's recent furniture exhibition has helped promote plans to hold a National Showcase Exhibition for all Solomon Islands products next year." See Annex VIII.

In October 1991, a week after the Woodex and Furnitex 1991, a committee was formed to plan and organize a National Trade Fair 1992.

A National Trade Fair was finally held at the Multi-purpose Hall in Honiara from August 21 to 23, 1992. A wide range of products locally manufactured in the Solomon Islands were displayed at the trade fair.. The members of the Solomon Islands Joinery and Furniture Industries Association (SIJFIA) joined the trade fair, however, their participation was limited due to lack of enough space. The SIJFIA's request to pay the participation fee based on space instead of a number of companies participating was not accepted by the Trade Fair committee. As a result, about 50 % of the SIJFIA members were not able to participate. However, those SIJFIA members that were able to participate made a good sale.

2.6. Ancillary Services for the Woodworking Industry

There is a large quantity of old-second hand machinery being used by the woodworking industry in the Solomon Islands. Most of these machinery have exceeded their life span and frequently breakdown. Spare parts are all imported at very high cost.

The industry is also supplied with a large quantity of Tungsten Carbide Tip (TCT) cutting tools. Special machines and equipment are needed to service and repair TCT cutting tools. These special equipment are not available locally. Before 1990, some companies are able to send

their TCT blades overseas (Australia and New Zealand) for service and repair. It is very expensive and it takes a lot of time for these tools to be serviced and repaired overseas. Highly trained workers are also needed to maintain these special (TCT) cutting tools.

Realizing this big problem, the expert identified a possible venue for a central maintenance workshop for woodworking cutting tools. Discussions were held with the officials of the MTWU in early 1990 to equip the government owned joinery shop with maintenance equipment for all types of woodworking cutting tools. The MTWU officials were interested, and readily agreed to the proposal but there was a big problem of locating and getting funds for the purpose. Also, the proposed privatization of the MTWU Joinery Shop hindered the plan to set up a central maintenance shop at the MTWU.

In mid-1990, the expert initiated a linkage of training activities with the SICHE-School for Industrial Development. As part of these linkages, the expert proposed that the SICHE provides ancillary services to the woodworking industry by making available special machines to include a Universal (Autool brand) TCT Tool Grinder for the maintenance of tungsten carbide tipped cutting tools.

In January 1991, the SICHE-SID purchased a TCT Saw Sharpener. The expert immediately conducted training in the use of the machine. By March 1991, the SICHE-SID started servicing TCT Saw Blades from the woodworking industry at a minimal service fee. It was the first time that TCT Saw Blades used by the woodworking enterprises are serviced in the Solomon Islands. It finally solved a serious problem of servicing TCT saw blades. These special blades are now serviced locally instead of sending these blades overseas for servicing which usually involved longer time and more money spent.

TCT Saw Blades with maximum diameters of fifteen inches are now sharpened at the SICHE-SID Joinery Shop. Woodworking enterprises, vocational training centres and boat builders now rely on the TCT saw sharpener at the SICHE for the maintenance of their TCT saw blades.

The expert also introduced a manual diamond impregnated TCT router bit sharpener. This tool is now very popularly used by the small-scale woodworking enterprises.

However, only 18 inches diameter TCT saw blades are serviced by the TCT saw sharpener at the SICHE-SID. There is an urgent need to provide a complete set of maintenance equipment which includes a TCT tipping machine, Stellite tipping machine and a Universal TCT Grinder. Highly trained maintenance workers are needed to operate these equipment. There is a need to train these personnel as soon as these special equipment are made available.

The SICHE-SID officials verbally indicated that they are interested to provide a complete set of maintenance equipment as soon as funds are made available.

2.7. Activities in coordination with other Government Institutions and Private Agencies/Companies having a role in the development of the Woodworking Industry.

The woodworking industry in the S.I. is still faced with numerous problems. To develop the industry, there is a need to coordinate the activities of all government institutions and private agencies having a role in the development of the woodworking industry.

The development of the secondary wood processing industry (joinery and furniture Industry) is compatible with the development of the primary wood processing industry (logging and sawmilling). Good quality sawn timber (properly graded) is needed by the joinery/furniture industry for the industry to produce good quality wood products. Low quality sawn timber adversely affects the quality of manufactured wooden products.

The expert coordinated activities with the following agencies;

2.7.1. Forest Division-Ministry of Natural Resources (MNR)

A. Timber Grading Rules

The expert, upon arrival in Honiara, recognized a serious problem faced by the woodworking industry. This is the non-availability of properly seasoned and standardized/graded quality sawn timber. The local market is supplied with very low quality sawn timber. This contributed much to the poor quality of manufactured wooden products.

The timber license agreement (TLA) stipulates that; logging companies should mill at least 20 percent of their total production into sawn timber. This resulted having the companies milling low quality logs into low quality sawn timbers for the local market. This problem was also aggravated by the large number of small-scale sawmillers using chain saws and portable sawmill equipment with very low recovery (yield) rate, producing low quality sawn timber.

The expert started a series of discussions in early 1990 with the officials of the Forest Division of the Ministry of Natural Resources on the urgent need to formulate timber standards and timber grading rules. Meetings and discussions were also arranged with the owners/operators of sawmillers and timber exporters in collaboration with the Forest Division. It was agreed in these meetings that in the absence of an officially approved timber grading rules for Solomon Islands timbers, the

Malaysian Timber Grading Rules which is accepted in the export market will be used in the meantime.

In mid-1990, it was decided that the formulation of Timber Grading Rules for the Solomon Islands will be included in the Timber Control Unit Project ; funded by the Australian International Development Assistance Bureau (AIDAB) at the Forest Division.

A draft of Solomon Islands Timber Grading Rules and Timber Standards was presented and discussed in a one day seminar held on September 2, 1992 at the Coastwatchers Room of the Solomon Kitano Mendana Hotel. Participants in the seminar are executives from medium and large scale logging & sawmilling companies (both local and foreign owned) operating in the country, joinery and furniture manufacturers, builders and woodworking instructors. There was a very good positive response from all the sectors represented in the seminar. A portion of the Grading Rules that deals on grades of timbers for furniture manufacture and some photos taken at the seminar is at Annex IX. (The whole copy of the grading rules is too bulky to be included in this report.)

After finalization of the Timber Grading Rules, a training course will be organized at the SICHE in 1993 and eventually to issue license to qualified timber graders. The next step is to implement the Grading Rules. It is hope that this will eventually improve the quality of sawn timber in the Solomon Islands and hope it will be widely accepted in the international market.

B. Timber Kiln Drying Facilities

To promote awareness on the urgent need for kiln dried sawn timbers, the expert contacted overseas suppliers of timber seasoning plants and arranged with company representatives to conduct seminars on the operation and use of a timber kiln drying facility.

In September 1990 a Singapore based company,(I.M.S.), sent two of its representatives to Honiara (at the company expense) and conducted a seminar on the "Advantages and Techniques in the Operation of Conventional Kiln Drying of Timbers". Senior executives of sawmilling companies, officials of the Forestry Division, builders association and some senior government officials attended the seminar. This was followed by a one week individual consultation and visits to sawmilling companies.

The seminar, arranged and organized by the expert promoted the need to establish timber kiln drying facilities in the Solomon Islands. One of the companies represented in the seminar is Hyundai Timber Co. Ltd.

In late 1991, the Hyundai Timber Co. started construction of its two chamber(boiler heated) timber kiln drying plant with a total

capacity of 100 cubic meters per load (about 400 M3 per month) It was commissioned by a Singapore based company. It took five months to complete the facility. In March 1992, the facility was formally opened by the Minister of the Ministry of Commerce and Primary Industries. Please see Annex X.

The facility immediately started operation in March 1992 and it started exporting kiln dried sawn timbers by May 1992.

Two weeks after the opening of the Hyundai owned kiln drying plant, another company, the C & I Distributors formally started operating its own timber kiln (dehumidifier) drying facility with a capacity of 6 - 8 cubic meters per load or a total capacity of 30-40 M3 per month.

At present there are two timber kiln drying facility operating in the country. Both facility are located at Ranadi Industrial Estate in Honiara.

Cruz Marketing, a sawn timber dealer/exporter has also finalized plans to establish and operate a timber kiln seasoning plant. The company will start construction of its timber seasoning plant upon approval of its loan from the DBSI. The company premises is also located at Ranadi Ind. Estate.

2.7.2. MTWU-Quality Control/Standards for Government Furniture.

MTWU is the government ministry that decides on the design, quality control and standards of furniture for government offices and housing. It gives tenders to private woodworking enterprises.

The government is the biggest customer for furniture products and this makes the MTWU play a very important role in improving the quality of locally made furniture. The MTWU also operates a joinery shop well-equipped with old woodworking machines. These machines frequently broke down and always in need of spare parts. The expert was very much involved in the maintenance of the equipment.

Realizing the role of MTWU as the initiator for possible improvement of quality for government furniture, it was decided to get the cooperation and support of this Ministry in product development.

With the agreement /approval of the MTWU officials, the joinery workshop was utilized to make prototypes of new furniture designs. This was done throughout 1990. The expert, with the assistance of the MTWU foreman and his workers developed prototypes of new furniture designs. These are mostly designs for folding, modular and knock-down furniture.

The architects division of the MTWU prepared standard working drawings of the prototypes developed. Most of these product designs were adopted by the private woodworking enterprises and rural vocational training centres. (Standard working drawings of these designs are available at the MTWU architects division.)

However, a plan to further improve the standards of government furniture through better quality control suffered a set back due to the non-cooperation of an expatriate architect who was the head of the MTWU architects division. This expatriate architect did not support any revision of old designs and specifications which were introduced and developed during the pre-independence "colonial" time which is still the designs being tendered by the MTWU to the private joinery/furniture shops. This negative attitude was a major impediment in improving quality control for government furniture.

The departure of this expatriate (SIG terminated his contract prematurely) in June 1992, opened up another opportunity to discuss with the new MTWU chief architect (Ag) on the standards and quality control of furniture for government. The response was very positive. Some designs drawn from the old-standard designs were revised and new specifications (especially on finishing specifications) were proposed. The expert and local counterpart Francis Sene submitted revised specifications and designs to MTWU architects division in August 1992.

This still need to be implemented. Counterpart Francis Sene will follow-up and monitor the implementation of improved standards and quality control of furniture for government.

2.7.3. Assistance to Vocational Training Centres

The following vocational training centres were assisted;

a.) **St. Martin Rural Vocational Training Centre-Tenaru**

This centre operates a semi-mechanized joinery shop. Assistance provided were mainly in introducing new furniture designs, training the two instructors and five workers/trainees in wood turning, machinery operation and wood finishing techniques.

b.) **Styvenburg Vocational Training Centre- Star Harbour, Makira**

Assistance provided in drawing up a course syllabus for carpentry/joinery course and introducing furniture designs.

c.) **Kumonibuli Rural Training Centre- Guadalcanal**

Assisted in the preparation of a course outline for carpentry trades, identification of machinery/ equipment and tools for training and assisted in the preparation of project proposal for funding.

d.) St. Dominic Rural Training Centre-Vanga Point, Kolombangara Western Province.

Two instructors trained through attendance in a group skill upgrading training conducted by the expert in Gizo in 1990. Technical bulletins 1, 2, & 3 were prepared and given as per request of the centre officials. These bulletins were used for instructional purposes.

e.) SICHE-SID Carpentry Workshop- Honiara

Established linkage of training activities and ancillary services for the woodworking industry. Two senior instructors, one shop technician and two instructor/trainees attended two skill-upgrading courses conducted by the expert.

2.7.4. Preparation and Implementation of Technical Bulletins

Four technical bulletins were prepared. These are;

a. **Product Guide No.1 - Furniture Designs**

It deals mainly on the designs of knock-down, folding and modular furniture. It includes materials cutting lists, steps of manufacture/assembly and pictorial of the product. Prototypes of these designs were developed at the MTWU Joinery Shop. Most of the designs were adopted by the private woodworking shops and some vocational training centres.

b.) **Safe Techniques in the Operation of Woodworking Machinery.**

This is an illustrative manual on the safe operation of machinery commonly found at the workshop floor of small-scale woodworking enterprises. The purpose is to prevent workers accidents, minimize breakdown of machines and improve workmanship.

c.) **Designs and Use of Jigs in the Furniture Industry.**

This was mainly intended as a training manual for skill-upgrading training courses. It is suitable for instruction in a well-equipped joinery shop of a vocational training centre and for a factory with mechanized production process.

d.) **Maintenance of Woodworking Cutting Tools.**

It is an illustrative manual on the techniques of servicing and maintenance of woodworking cutting tools, with emphasis on the maintenance of Tungsten Carbide Tipped cutting tools.

The above technical bulletins were circulated and widely accepted by private woodworking companies and vocational training centres.

2.7.5. Local Counterpart

Local counterpart Francis Sene, has been a very capable, energetic, and a qualified colleague. His education and professional background made it easy for him to assimilate the techniques of providing technical extension services to the small-scale woodworking enterprises.

Francis is the NTTT officer within the Labour Division of the MCPI, in-charge of the carpentry and joinery trade. He is responsible in the training and testing of workers trade skills in carpentry and joinery. He coordinates training programmes with vocational training centres and liase with the private sector in terms of skill testing and certification.

Attempts to assign Francis as a counterpart to the expert in 1990 did not materialized because he went for a six month overseas training in (instructional methodology) Australia funded by AIDAB. He was also away in 1991 for another six months overseas training in Skill Instruction and Extension, funded by ROSSTRUST.

Francis is a professional and technically trained person. However, he needs further training in cutting tool maintenance, with concentration in the servicing/maintenance of Tungsten Carbide Tipped blades and Stellite Tipped blades. Proposal for his six weeks training in this field is at Annex XI.

The first counterpart assigned to the expert in 1990 left the MCPI for a post at the S.I. Consulate General in Brisbane under the MFATR. He was a counterpart for six months. His background and his post as commercial officer at the MCPI is not suitable for a practical /technical field activity required at the factory; shop floors of assisted private enterprises.

In the absence of a government recruited counterpart in mid-1990, and in 1991, the expert worked "directly" with the entrepreneurs and shop supervisors of the private woodworking enterprises. Roland Sala, the shop foreman at the MTWU joinery shop also became the local (government) counterpart due to his role in assisting the expert in product development and in the training of workers at the MTWU.

Direct support to the private sector, by working alongside with the factory supervisors/foremen as counterparts produced a very effective and tangible results in terms of transfer of technical skills. The entrepreneurs benefited directly from this support in the form of "on-the job training" through industrial extension services.

3.0 CONCLUSIONS AND RECOMMENDATIONS

3.1. CONCLUSIONS

3.1.1. Sawn Timber as Raw Material

The development of the secondary wood processing (joinery and furniture) industry in the Solomon Islands is compatible with the development of the primary wood processing (logging and sawmilling) industry.

Sawn timber is the main raw material input of the sawmilling industry for the joinery and furniture industry. Low quality sawn timber sold in the local market adversely affect the quality of locally manufactured joinery and furniture products.

The formulation of Solomon Islands Timber Grading Rules and Standards is a big step in the right direction towards improving the quality of sawn timber in the country. What is needed now is proper and immediate implementation of the Timber Grading Rules and Standards.

The establishment of a "Conventional" (Boiler Heated) Timber Kiln Seasoning Plant with 100 cu. meter capacity per load (about 400 m³ per month) followed by a smaller kiln drying facility (6-8 M³ capacity) in Honiara solved the serious problem of non-availability of properly seasoned sawn timber in the local market. It is envisaged that other sawmilling companies will also put up their own timber kiln drying facility.

Exports of kiln-dried sawn timber from the Solomon Islands was made possible by mid-1992 due to the operation of a Conventional Timber Seasoning Plant at the Ranadi Industrial Estate in Honiara.

It is now up to the customers (end-users) to specify the quality and moisture content of the sawn timber required for the manufacture of ordered joinery and furniture products.

Owners of timber kiln drying facilities also expressed their willingness to accept kiln drying of sawn timbers from joinery/furniture makers at a reasonable fee (about SI\$80- SI\$90 per cubic meter).

The formulation of Timber Grading Rules and the establishment and operation of at least two timber kiln drying plants is a significant achievement that will lead to improving the quality of sawn timber as a raw material in the industry.

However, the domestic market is very small. Further development of the joinery and furniture industry in the Solomon Islands needs to be an export-oriented industry. Entry into the export market requires a continuous and adequate supply of good quality sawn timber at reasonable cost. This is the main input of the primary wood processing industry. This is still to be achieved.

3.1.2. Imported Raw Materials for the Woodworking Industry.

Sawn timber is the only available local raw material used by the joinery and furniture industry, and still this is quite expensive. All other raw materials needed by the industry i.e., adhesives, abrasives, finishing materials, hardwares, etc. are all imported at a very high cost. Other wood based raw materials, i.e. plywood, hardboards, particle boards are also imported. At times, there is also shortage of these raw materials in the local stores/suppliers. This resulted to high production cost of locally manufactured furniture products.

Local dealers of imported raw materials for the woodworking industry put high mark-up of these materials because of the limited demand. Also, there is a quick upward price movement of raw materials e.g. lacquers and thinners and this eroded any reasonable profit the entrepreneur expected to get from a contracted job.

Due to the small size of the industry, it will not be able to support the establishment and operation of industries which manufacture the needed non-wood raw materials. These are still to be imported at very high cost.

The high cost of imported raw materials is a drawback for the local industry to enter into the export market for finished/assembled furniture products.

3.1.3. Assisted Small-Scale Woodworking Enterprises

The woodworking industry in the country is at an infancy stage. Most of the few organized and operating small-scale joinery/furniture enterprises were started two years ago. Some of these enterprises are less than one year in operation.

In spite of this, the assisted small-scale woodworking enterprises have achieved, in a very short time, significant improvement. The indigenously owned woodworking enterprises are now capable of meeting the requirements of the domestic market for furniture in terms of quality and price. The two Furniture Show/ Exhibition plus one

National Trade Fair held in Honiara displayed and proved the capability of the indigenously owned joinery/furniture enterprises in producing high quality products comparable to those imported items. This was made possible inspite of the numerous problems faced by the industry; notably the non-availability of properly seasoned and quality/graded sawn timber.

Most of the assisted and newly established small-scale woodworking enterprises achieved solid growth in terms of investment, employment, productivity and profitability during the past two and one half years. Many of these even showed strong capability to expand into medium-size manufacturing operations.

The small size of the domestic market is a major limitation to expand further the business activities of the local woodworking enterprises. The country's distant and scattered small islands, makes it difficult to reach the market in the provinces. The main market is in Honiara area with thirteen woodworking enterprises in operation.

The "commercial activities" of Rural Vocational Training Centres which usually operates semi-mechanized/well equipped joinery and furniture shops, also get a fair share of the domestic market and are strong competitors to the private woodworking enterprises. These centres operates as "training cum production" centres with very low operating cost, producing low quality and low cost products made by trainees.

3.1. . Improvement of Skills through Industrial Training

Industrial training mainly "skill-upgrading training" conducted, enhanced the level of workers skills. These training activities produced a "Cadre" of skilled work force in the specific skill areas needed in joinery and furniture manufacturing. Improvement of workers skills contributed to increased productivity and improved product quality.

Local counterpart Francis Sene will continue organizing and conducting skill-upgrading training in collaboration with the SICHE- SID and other centres. The SICHE-School for Industrial Development is equipped with the facilities suitable for carrying out training programmes for the secondary wood processing sector. Proposal to continue the programme of industrial training and proposed budget for skill upgrading training in 1993 is at Annex XII.

The savings from the industrial training budget for woodworking in 1992 can be utilized to help meet the required industrial training budget for 1993.

3.2. RECOMMENDATIONS

3.2.1. Assistance to Small-Scale Woodworking Enterprises

A number of assisted small-scale woodworking enterprises achieved significant progress and demonstrated solid growth during the past two years. Most of these were started two years ago. The entrepreneurs are quite young; most are below thirty year old Solomon Islanders. Further assistance to these enterprises is hereby spelt out.

a.) **T. S. JOINERY** - this enterprise is now able to operate on its own without need for further provision of intensive technical or business assistance. The entrepreneur is now able to manage the business properly, employing a full time bookkeeper and maintain the services of a private accounting firm. Local counterpart, Francis Sene needs only to monitor the activities of the workshop and assist in technical matters as necessary. (A profile of this enterprise published in the Business Feature page of Solomon Voice Newspaper issue of September 23,1992, is at Annex XII.)

b.) **ZEOZA FURNITURE**- this enterprise has acquired a commercial lot at the Ranadi Industrial Estate. It is expected to relocate at the R.I.E. by early 1993 after completion of its factory building. The entrepreneur is now capable of operating the business on his own. The enterprise however needs assistance in shop layout upon relocation, installation of machinery and further training of one production foreman/supervisor.

c.) **TOME & SONS JOINERY**-this enterprise experienced serious financial problem in 1992, due to "financial mismanagement". Its old workshop building is being tendered to pay its loan from a commercial bank. However, the entrepreneur managed to survive and is currently constructing his new factory building at the Ranadi Industrial Estate. Enterprise needs assistance in the layout of the factory and in the installation/operation of woodworking machines upon relocation at R.I.E. The entrepreneur should seek assistance and cooperate with the business advisers at the MCPI, who will assist him in management and record keeping. The entrepreneur has not been responsive to assistances offered by the business advisers in the past. One production/shop foreman still need further training.

d.) **T & T JOINERY**- this was started a year ago, but it is performing very well. The enterprise needs further intensive assistance through industrial extension services. Enterprise needs one shop/production supervisor to receive further training in furniture

manufacturing. Entrepreneur is an experienced businessman and he is able to manage and operate the business on his own. He employs a full time bookkeeper.

e.) G & I JOINERY- this enterprise started operation in mid-September 1992. It is operated by a Solomon Islander with financial support from an Australian businessman. It had access to kiln dried timber through a 6 to 8 cu. meter capacity timber kiln drier owned by the expatriate businessman. This enterprise has potential to be developed for an export oriented manufacturing operation. The entrepreneur indicated his interest for continued provision of business and technical assistance to help develop his business operation. The extension officers/business advisors of the MCPI should provide the assistances needed by the entrepreneur.

All the enterprises mentioned in (a) to (e) above are located at the Ranadi Industrial Estate. The entrepreneurs owned the factory land and building. (Only G & I Joinery is occupying workshop premises owned by the expatriate businessman.)

f.) The other seven (7) small-scale woodworking enterprises located in Honiara (excluding Chinese owned Hoover Furniture) needs further intensive assistance in business management and record keeping from the Business Advisers at MCPI. Assistance in technical matters as necessary will be continued by counterpart Francis Sene. These seven (7) small-scale woodworking enterprises in Honiara are still operating in rented workshop premises.

Although, these seven (7) enterprises have not achieved a very significant level of development compared to the other enterprises mentioned in items (a) and (b) above, all of these enterprises are performing well. At least three (3) have relocated and expanded workshop premises, three (3) increased investment and about 50-80 percent increased in employment and productivity.

g.) The existing and new small-scale woodworking enterprises in the provincial areas needs further intensive assistance. At this stage, the enterprises located in the provincial areas should now be given more attention through industrial extension services. Local counterpart, Francis Sene is now responsible in delivering these services. This task is one of the main duties of Francis in relation to the job description of his post at the NTTT section of the MCPI.

The Business Advisers should also continue providing intensive assistance in business management and record keeping to those enterprises located in the provincial areas.

h.) The existing small-scale joinery/furniture enterprises are now capable of meeting the requirements of the domestic market. The domestic market is small. Any other prospective operator of a furniture manufacturing business in Honiara area should be advised not to proceed, if the target market is mainly for the domestic market.

i.) It is however, still viable to expand the business operation of at least three to four enterprises to a level similar to that has been achieved by T.S. Joinery. It is not recommended to expand and fully mechanize the manufacturing operation of more than four enterprises if the target market is only for the domestic market.

3.2.2. Further Development of the Woodworking Industry

The following should be considered in the formulation of any plan or national programme to further develop the woodworking industry in the Solomon Islands.

a.) The sawmilling industry should be rationalized and developed to a level which it can provide good quality sawn timber input at reasonable cost for the local woodworking industry.

b.) Implementation of the recently formulated Solomon Islands Timber Grading Rules, with the corresponding training and licensing of graders.

c.) Encouraging more sawmilling companies to establish and operate timber kiln-drying facilities to make available kiln-dried sawn timber for both the local and export market.

d.) Due to the small size of the domestic market, entry into the export market is needed to further develop the infant joinery/furniture industry in the country. To accelerate this plan, the involvement of "foreign investors" is needed. This maybe in a joint venture arrangement. The foreign partner must know the overseas market, bring in the needed technology and capital. The local partner input will be land, labor and a consistent supply of quality sawn timber. However, any foreign owned company that operates an export-oriented joinery/furniture factory in the country must be restricted to sell in the domestic market. It must leave the local market for the indigenous owned woodworking businesses.

e.) The export market usually dictates the type, quality and quantity of products required. There is a need to seek marketing assistance from regional, bi-lateral and multi-lateral agencies to help identify the market overseas. The S.I.G. should seek advice from the

International Trade Centre (UNCTAD-GATT), the export marketing assistance agency of the United Nations. The EEC also provides export marketing assistance.

f.) Sawn timber is the only available local raw material used by the industry. All other raw materials are imported and very expensive. The S.I.G, therefore in order to help the industry, should cooperate by keeping the importation of these items at reasonably low levels.

g.) Due to the high cost of imported non-wood raw materials, the joinery/furniture industry, at the first stage should be engaged in the exports of blanks or semi-finished components-initially in a limited export with increasing volume annually.

h.) At this stage, the export of semi-finished furniture componentry can be considered. The production process of wood components do not require too sophisticated manufacturing technology and relatively need lower capitalization. However, the timber should be properly seasoned as per the moisture content required by the overseas buyer.

At a later stage, when the industry had gained enough experience in the export trade for wood componentry, the export of finished and assembled items can be considered. This requires the products to be designed in semi-knockdown or complete knock-down form.

i. The export of profiled products like mouldings is highly competitive. Quality requirements are very high. To survive in this market, it is advisable to get "captive markets" through joint venture with large overseas distributor firms of wood profiled products.

j.) Entry into the export market for joinery products, (doors, door jambs, windows, partitions) require adequate knowledge on the construction practices and regulations of the target country. Again, it is advisable to have a joint venture with established importers and distributors of these products.

k.) The Foreign Investment Board should favourably consider project proposal of companies (joint-venture or 100 % foreign owned) to operate joinery/furniture manufacturing businesses mainly for the export market. The SOLHAUS Factory proposal to manufacture outdoor furniture and other wood components for export should be reviewed and considered if it can identify secured orders overseas. However, as has been mentioned earlier, any company with export oriented operation in the Solomon Islands should leave the domestic market to the small-scale indigenously owned joinery/furniture enterprises.

LIST OF ORGANIZED JOINERY/ FURNITURE ENTERPRISES

Name of Enterprise Location & mo./yr. business started	Estimated Investment in SI\$	Name of Owner/ proprietor/operators
A. Honiara Area		
1. T.S. JOINERY -Ranadi Industrial Estate - July 1989	\$170,000	Hedley Toata
2. ZEOZA FURNITURE -Ranadi Area -April 1990	\$50,000	Steven Veno
3. HTQ FURNITURE -Ranadi Area -January 1990	\$ 25,000	Joe Magi & Jack Wane
4. T & T JOINERY -Ranadi Area -September 1991	\$ 50,000	Lawrence Teibi
5. TOME & SONS JOINERY -Ranadi Area - June 1979	\$60,000	John Diau & Tome Diau
6. R.T. FURNITURE -Ranadi Area - April 1991	\$16,000	Robert Toni
7.SOLWOOD -formerly P.T. FURNITURE -Vura 2 - May 1990	\$12,000	Felix Tafysia
8. GPR ENTERPRISE -Ranadi Indus. Estate - May 1991	\$15,000	Joseph Ziru A.Pale & P. Vahia
9. VOUZA Furniture -West Tasimboko - August 1991	\$31,000	Vouza WW1-Homeguard Community Project
10. HOOVER FURNITURE -Ranadi Area -date-N.A.	\$120,000	Paul Chan & Partners
11. S & S.FURNITURE - Ranadi Area	\$8,000	Siosi Dioko

- May 1991
- 12. STARWOOD FURNITURE \$8,000 Stanley Foi
 - White River Area
 - 1990
- 13. SOLCANE RATTAN N.A. Isabel Dev. Company
 - Furniture
 - Ranadi Indus. Estate
 - N.A.
- 14. G & I JOINERY \$50,000 George Bogese with support from C & I Distributors
 - Ranadi Industrial Est.
 - 1992

B. Western Province

- 1. SILAWA CONSTRUCTION \$60,000 Anthony Pitosopa
 - Gizo town
 - 1981
- 2. TINABESI JOINERY SHOP \$20,000 Tinabesi Community Project
 - Maravari, Vella la Vella
 - 1989
- 3. VALAPATA JOINERY \$ 44,000 Lawrence Lelokana & Valapata Community
 - Valapata Village
 - East, Vella la Vella
 - 1991
- 4. PATU JOINERY N.A. This project proposed to start in 1992.
- 5. UCC JOINERY SHOP N.A. United Church of Christ Mission
 - Munda

C. Makira/Ulawa Province

- 1. RONGOIDENI JOINERY \$30,000 Peter Poromeo
 - KiraKira town
 - 1986
- 2. DUBA JOINERY \$80,000 Herman Wemea & family
 - Kirakira Town (it operates a joinery cum sheet metal shop)
 - 1992

D. Malaita Province

- 1. BINA FURNITURE Shop \$8,000 David Peter
 - Bina Village, Auki
 - N.A.
- 2. S.O.W. FURNITURE N.A. Catholic Mission
 - Are-are, South Malaita
 - N.A.

- | | | |
|-------------------------|---------|---------------|
| 3. FARASITA JOINERY | \$7,000 | Anisi Mae'taa |
| -Auki town | | |
| - 1991 | | |
| 4. GWAIDALO JOINERY | \$7,000 | Joseph Dili |
| -Gwaidalo Village, Auki | | |
| -N.A. | | |
| 5. SOLWATER JOINERY | N.A. | John Apollos |
| PROJECT | | |
| - Langalanga Lagoon | | |
| - N.A. | | |

E. Temuto Province

- | | | |
|---------------------------------|------|-----------------|
| 1. BANUA COMMUNITY | N.A. | Banua Community |
| FURNITURE PROJECT | | |
| -Banua Village, Lata | | |
| -August 1991 | | |
| 2. SIMON TEONA FURNITURE | N.A. | Simon Teona |
| -Yo Village, GRacious Bay, Lata | | |
| -1990 | | |

F. Cheseoul Province

- | | | |
|---|----------|----------------------------|
| 1. TORISU JOINERY PROJECT | \$44,000 | Grenville Qurataro & Group |
| -Sasamuga, Cheseoul | | (Torisu Tribe) |
| -N.A. (project still located on a disputed customary land and not in regular business operation) | | |

	A	B	C	D	E	F
1						
2	TECHNICAL ASSISTANCE TO SECONDARY WOOD PROCESSING INDUSTRY					
3						
4						
5	A. LIST OF ASSISTED JOINERY AND FURNITURE ENTERPRISES					
6						
7	NAME OF ENTERPRISE	ESTIMATED	NUMBER OF	NUMBER OF	TECHNICAL INPUT/	STATUS/ RESULTS
8	LOCATION/	MONTHLY	WORKERS	WORKERS AT	ASSISTANCE PROVIDED	
9	month/year started	PRODUCTION	when started	PRESENT		
10		SI\$				
11						
12	1. T.S. JOINERY	20000	7 workers	17 regular	-assisted in Shop Layout during	-Business progressed very well. The
13	-Ranadi Industrial Estate			3 casual	the expansion of the factory	enterprise is one of the most success-
14	-started in July 1989				building.	ful assisted businesses. Factory
15					-assisted in the selection/	building expanded, shop floor area
16					purchase of machines from	increased 3 times, about 150%
17					overseas.	increased in employment and
18					-assisted in the installation and	productivity and improvement in
19					operation of the machines and in	profitability.
20					the training of workers in the use	-business has been transformed from
21					of the machinery.- assisted in	an artisan level to a semi-mechanized
22					TCT cutting tool maintenance	level of production with the purchased
23					-assisted in product development/	and installation of seven woodworking
24					selection & use of raw materials	machines in July 1992.
25					-training of workers in wood	-entrepreneur is now able to operate
26					finishing (on the job and in	the business on his own. He employs
27					organized/institutional training)	a full time bookkeeper and maintains
28						the services of a private accounting
29						firm.
30						-started construction of workshop
31						building extension to be completed
32						by December 1992.
33						

	A	B	C	D	E	G
34	2. ZEOZA FURNITURE	10000	3 workers	6 workers	-shop layout during the start	-Business is performing very well.
35	-Ranadi Area, Honiara			-gets casual	of the project.	-has acquired a commercial lot at the
36	-started in April 1990			workers as	-assisted in wood finishing	Ranadi Industrial Estate, new factory
37				needed.	techniques, including on the	building under construction and
38					workshop floor demonstration	expected to relocate early 1993.
39					of wood finishing/-owner plus	-business increased employment/
40					two workers attended an	productivity and profitability.
41					organized group training.	-entrepreneur is now able to operate
42					-assisted in costing and pricing	the business without need for technical
43					-assisted in product development	and business assistance. He, however
44					-assisted the in maintenance of	needs assistance in proper shop layout
45					TCT cutting tools (router bits &	of the new factory building.
46					saw blades.)	-enterprise has the potential to expand
47						into a semi-mechanized level of prod.
48	3.HTQ FURNITURE	8000	3 workers	6 workers	-assisted in starting the	
49	- Ranadi Area, Honiara				business, locating workshop	-business is a partnership owned.
50	-started in January 1990				premises & shop layout.	-workshop was relocated to a rented
51					-assisted in training workers	building with more space and accessible
52					in wood finishing, machinery	to customers.-Business performing
53					operation and maintenance.	very well. Three basic woodworking
54					-selection & use of raw mate-	machines, (radial arm saw, mortiser,
55					rials, assisted in product deve-	circular saw) purchased and installed.
56					lopment./assisted in the reloca-	New sanding machine bought. Planning
57					tion of the workshop during	to buy a planer machine. All machines
58					workshop expansion.	bought from profits from the business.
59					-assisted in the maintenance of	-business needs assistance in proper
60					TCT saw blades and router bits.	record keeping/accounting.
61					-assisted in costing and pricing	-it achieved 100% increased employ-
62					-entrepreneur and two workers	ment, improved productivity and
63					attended organized skill-upgrading	profitability.
64					training.	
65						
66						

	A	B	C	D	E	G
67	4. T & T JOINERY	8000	3 workers	7 workers	-assisted in starting the business	-business is only one year in operation
68	-Ranadi Area, Honiara				-assisted in shop layout-which	but has achieved significant progress.
69	-started in September 1991				includes an office & showroom	-entrepreneur owns the workshop
70					-on- the job training of workers	premises/building and maintains a
71					in joinery techniques and in wood	showroom accessible to customers.
72					finishing. One shop foreman trained	-increased employment and productivity
73					in manufacturing process.	-able to purchase portable electric
74					-assisted in the selection/purchase	tools, air-compressor and a mortiser.
75					of machinery/and in the maintenance	-entrepreneur is an experienced
76					of portable electric tools	businessman. He employs a full time
77					-assisted in product development	bookkeeper/accountant.-
78					-assisted in costing and pricing.	-one shop supervisor needs further
79						training from local counterpart.
80						
81						
82	5. TOME & SONS JOINERY	11000	6 workers	14 workers	-assisted in the purchase of second	-enterprise was performing very
83	-Ranadi Area				hand woodworking machines.	well during 1990-1991, however
84	-started in June 1979				-Shop supervisor attended two	business suffered financial problems
85					organized industrial training	due to "financial mismanagement".
86					-three workers attended two	-entrepreneur did not cooperate with
87					organized skill-upgrading training	the business advisers, MCPI and his
88					-assisted in product development	financial situation not monitored.
89					-on-the job training, through	-business always get good contracts
90					demonstration of wood finishing	but entrepreneur did not managed his
91					techniques at workshop floor level.	finances properly. Workshop building
92					-assisted in the selection and use	being tendered by a commercial bank.
93					of raw materials.	-New factory building is being constructed
94					-assisted in product development	at Ranadi Industrial Estate.
95						-land owned by entrepreneur and
96						expected to relocate by early 1993.
97						-needs business assistance from the
98						MCPI business advisers.
99						

	A	B	C	D	E	G
100						
101	6. R.T. FURNITURE	8000	3 workers	5 regular	-assisted in identifying entrepre-	-business has expanded 100%. It now
102	-Ranadi Area			2 casuals	neur and starting the business.	occupy one building which previously
103	start April 1991				-assisted in costing and pricing	it rented only one room of the building.
104					Including selection and use of raw	-business is able to purchase two
105					materials., assisted in product	woodworking machines and a set of
106					development. Shop foreman attended	portable electric powered tools.
107					two-organized skill-upgrading	-entrepreneur attended two business
108					courses at SICHE.	training, but actual implementation
109					-training of workers through on-	of the knowledge acquired in the
110					the job demonstration of finishing	training still need to be followed up.
111					techniques.	-business needs assistance in proper
112					-assisted in the maintenance of	record keeping/accounting.
113					TCT Cutting tools.	-entrepreneur has ordered one
114						morticer and one planer from overseas
115						suppliers-/machines expected Dec. 92
116	7.SOLWOOD-(formerly P.T.	9000	4 workers	7 workers	-assisted in starting the business	-business is performing well, but
117	FURNITURE.)				-entrepreneur and two workers	workshop is still temporarily located
118	-VURA 2				attended one organized skill-	at the backyard of entrepreneur partne
119	-started in May 1990				upgrading training.	residence, after it moved from its old
120					-assisted in costing and pricing	workshop at West Kola Ridge.
121					-assisted in product development	-suitable workshop urgently needed.
122						-business increased employment
123						-entrepreneur is a skilled tradesman
124						but needs training in business
125						management./ Need to follow-up his
126						record keeping/bookkeeping.
127						
128						
129						
130						
131						
132						

	A	B	C	D	E	G
133						
134	8.G.P.R. ENTERPRISE	15000	4 workers	4 workers	-assisted in starting the business	-business has relocated from a small
135	- Ranadi Industrial Estate				-one worker attended organized	workshop at downtown Honiara to
136	-started in May 1991				skill-upgrading course.	a rented building at Ranadi Industrial
137					-business assisted in costing and	Estate.- Business is performing well.
138					pricing/product development/	-entrepreneur should be encouraged
139					selection and use of raw materials	and assisted in putting into practice
140					on-the job demonstration in wood	proper record keeping/bookkeeping by
141					finishing techniques.	the business advisers, MCPI.
142					-assisted in the maintenance of	-entrepreneur is a skilled carpenter
143					TCT cutting tools.	but lacks business experience. Needs
144						further training in business
145						management.
146	9.VOUZA FURNITURE	1500	3 workers	3 workers	-one worker attended a skill-	Operators needs assistance on proper
147	-WestTasimboko, Guadalcanal				upgrading course.	operating the business. The SPU business
148	-started in August 1991				-assisted in the selection and	advisers should provide business
149					purchase of equipment and tools.	assistance, and assist the enterprise
150					-on the job training in the use and	in management and marketing.
151					maintenance of portable electric	
152					power tools and woodlathe.	
153						
154	10.S & S FURNITURE	5000	3 workers	7workers	-assisted in starting the business	-previously, business was a partnershi
155	Ranadi Area				-assisted in product development	owned, but separated in Jan. 1992.
156	started in May 1991				and in wood finishing.	-business operating in a rented
157					-assisted in product costing	workshop building at Ranadi area
158						-entrepreneur attended seminar on
159						costing and pricing, record keeping
160						but this still need to be implemented
161						SPU business advisers to follow-up
162						and monitor this activity.
163						-owner is operating the business on
164						part time basis-(full time employed
165						at the Honiara Town Council.

	A	B	C	D	E	G
166						
167	11. STARWOOD FURNITURE	5000	2 workers	4 regular	-two workers trained through skill	-Business operated part time only,
168	-White River Area, Honiara			-casuals	upgrading training	proprietor employed full time at SIDT.
169	-started in 1990			recruited	-assisted in product development,	-business operating normally, but
170				as needed	wood finishing, selection of raw	prospects of improving /expanding
171					materials.	the business is difficult because the
172						proprietor operates the business on
173						part time basis. (Full time employed
174						at S.I.D.T.)
175	12. G & I JOINERY	N.A.	3 workers	3 workers-	--assisted in starting the business	-business just started. It has the
176	-Ranadi Industrial Estate				-provided product designs	support of an expatriate businessman
177	-started in September 1992				-assisted in positioning machinery	based in Honiara. It has access to kiln
178					and layout of shop room.	dried timbers. Enterprise has
179						potential to be developed for an export
180						oriented operation.
181						
182	13.SILAWA CONSTRUCTION	9000	N.A.	15 workers	-business assisted in product	-business is operating well. It is also
183	Gizo, Western Province				development and in selection of	engaged in building construction.
184	started in 1981				equipment	
185					--two workers trained in skill-	-business is equipped with old/second
186					upgrading training conducted in	hand woodworking machines.
187					Gizo and another two workers	
188					trained in machinery operation in	
189					Honiara.	
190						
191	14. TINABESI JOINERY SHOP	2000	N.A.	10 workers	-two shop foremen attended a skill	-business is a community joinery
192	-Maraveri, Vella la Vella				upgrading course in Gizo	project that is funded through a grant
193						from the Netherlands Government.
194						
195	15.VALAPATA JOINERY	1000	5 workers	5 workers	-shop foreman attended a skill-	-business operating normally.
196	-Valapata Village				upgrading course in SICHE, Honiara	-project funded through PDU
197	East Vella la Vella				-assisted in selection/purchase of	
198	Western Province				machines from overseas	

	A	B	C	D	E	G
199						
200	16.RONGOIJENE JOINERY	N.A.	N.A.	5 workers	-entrepreneur plus one worker	-business is operating normally. It is
201	-Kirakira, Makira Province				attended a skill-upgrading course	equipped with basic woodworking
202	-started in 1986				conducted in Kirakira in 1992	machines, which includes a band saw
203					-assisted in maintenance of band	circular saw, thickness planer, sander
204					saw blades	and portable electric powered tools.
205						
206						
207	17.DUBA JOINERY	N.A.	6 workers	6 workers	-assisted in starting the business	-business operating normally.
208	-Kirakira, Makira Province				-entrepreneur attended a skill-	-It is equipped with the band saw,
209	-started in March 1992				upgrading course at the SICHE in	thicknessing machine and a circular
210					Honiara.	saw.
211					-two workers attended a skill-	-business funded through grant from
212					upgrading course held in Kirakira	PDU
213					in March 1992.	-business started in February 1992
214						and is operating very well.
215						
216	18. TURISO JOINERY PROJECT	N.A.	N.A.	N.A.	-project assisted in selection and	-project not in normal operation.
217	-Sesemuga, Choeseou Province				purchase of tools and machinery.	-workshop is located in a disputed
218	-				-project leader attended skill-	customary land.
219					training course conducted in GIZO	
220					and in SICHE, Honiara.	
221						
222	NOTE-					
223	Six other joinery/furniture shops assisted in Malaita province by having operators and workers					
224	attended two Skill Upgrading courses conducted in Auki in 1991 and in 1992, at the MTWU Joinery Shop.					

INDUSTRIAL TRAINING FOR THE WOODWORKING INDUSTRY.

Details of Industrial Training Activities and List of Trained Persons.

Venue of Training-

- a.) SICHE-School for Industrial Development, Honiara
- b.) NTTT Training Centre- MTWU Compound, Honiara
- c.) MTWU Provincial Workshop- Gizo, Western Province
- d.) Provincial Joinery Shop-Auki, Malaita Province
- e.) Provincial Joinery Shop-Kirakira, Makira/Ulawa Province

Areas of Training:

- a. Woodworking Machinery Operation and Cutting Tool Maintenance
- b. Wood Finishing Techniques
- c. Furniture Design/Prototype/Product Development

1. HONIARA AREA

a.) Venue- SICHE-SID, Carpentry Shop

Date- June 1990

Name of Trainee/worker

Company & Position

- | | |
|----------------------|--|
| 1. Steven Veno | ZEOZA FURNITURE-owner/manager |
| 2. John Diau | TOME & SONS JOINERY- owner/manager |
| 3. Tome Diau | -do- -shop supervisor |
| 4. Felix Tafysia | ANISI FURNITURE- manager/supervisor
(now SOLWOOD FURNITURE) |
| 5. James Samani | T.S. JOINERY -Shop Foreman |
| 6. Tommy Wao | do- Shop Supervisor |
| 7. Ezekiel Rungukuvu | VOUZA FURNITURE- shop foreman |
| 8. Tommy Diau | REDBEACH JOINERY (proposed)- owner |
| 9. Roland Wale | ANISI FURNITURE- carpenter |
| 10. Harold Daga | SICHE-Senior Carpentry Instructor. |
| 11. Robin Suri | TOME & SONS JOINERY- carpenter |

b. Venue- NTTT Training Centre- MTWU Compound, Honiara
(Training arranged by NTTT- Trainor provided by UNIDO)

Date- May 21-31, 1991

Name of Trainee/worker

Company & Position

- | | |
|--------------------|---------------------------------------|
| 1. Ted Moritua | STAR CONSTRUCTION-carpenter |
| 2. Lionel Kua | GUADALCANAL PROV. AUTHORITY-carpenter |
| 3. Norlan Sala | Honiara Consumer Coop.- carpenter |
| 4. John Nonoroa | Private Contractor/carpenter |
| 5. Norman Radukana | Faniuri Building Constructon- Foreman |
| 6. Waren Augustine | Private Contractor |
| 7. Perol Kituru | Private Contractor/carpenter |

**c. Venue- SICHE-SID Carpentry Shop
Training in Woodworking Machinery & Cutting Tool
Maintenance**

Date- June 25-28, 1991

Name of Trainee/worker	Company & Position
1. Tome Diau	Tome & Sons Joinery-Supervisor
2. Gordon Mark	Tome & Sons Joinery-carpenter
3. Joe Magi	HTO Furniture- owner-manager
4. Gideon Dede	-do- -carpenter
5. Patrick Murry	GPR Enterprises- carpenter
6. John Naphali	S & S Furniture-carpenter
7. Patrick Wale	Starwood Furniture- Shop Foreman
8. Christopher Bako	R.T. Furniture- Carpenter
9. Eric Hasimae	-do- -carpenter
10. Alpheous Theonugo	SICHE-SID, Maintenance Supervisor

**d. Venue- SICHE-SID Carpentry Shop
Training in Machinery Operation and Cutting Tool
Maintenance**

Date- September 16-20 1991.

All trainees come from Western Province and Temuto Province

Name of Trainee/worker	Company & Position
1. Lazarus Kale	Silawa Construction-Gizo- carpenter
2. Dent Peter	--do-- -Gizo- Shop Supervisor
3. Dennis Evapitu	Tinabesi Joinery Project- Maravari, Vella la Vella- Group leader
4. Grenville Qurataro	Torisu Joinery Project- Sasamuga, North Chcoseul- Group leader
5. Lawrence Lelokana	Valapata Joinery Project- East Vella la Vella Group Leader
6. William Tokilata	UCC Joinery Shop-Munda. carpenter
7. Barth Sami	Banua Community Project- Temuto Prov. Shop Foreman

e. Venue- NTTT Centre-MTWU Workshop Compound, Honiara

Date- May 4-14, 1992 (10 working days)

**Training in conjunction with the scheduled training
programme of NTTT, Labour Division, MCPI.**

Name of Trainee/Worker	
1. Derrick Hetohebala	6. Jimmy Here'e
2. Cyprian Taamora	7. John Rerry Oge
3. Anthony Hasci	8. Christopher Wate
4. Joseph Haridi	9. Julio Mane
5. Moses Kamo	

The trainees were identified and selected by Counterpart Francis Sene of the NTTT, Labour Division

1. Venue- NITT Centre-MTWU Workshop Compound, Honiara

Date- October 14-16, 1992

Name of Workers/Trainees	Company and Position
1. Alpheus Theonogu	SICHE-SID Joinery Shop-Supervisor
2. James Kenihoasia	SICHE-SID- Senior Instructor/carpentry
3. Samuel Benoiter	SICHE-Instructor trainee-Woodworking
4. Johnstone Rex Poleita	SICHE- Instructor trainee-Woodworking
5. Charles M. Saeni	Private Contractor-Carpentry
6. Michael Afu	HTQ Furniture- Carpenter/Joiner
7. Zophaniah Anisi	M.A.L.- carpenter
8. Evson Dick Nekea	S.I.P.L.- carpenter
9. Christopher Bako	R. T. Furniture- Shop Foreman
10. Jimmy Sanga	M.H.S.- carpentr

2. WESTERN PROVINCE

a. Venue- NTTT Centre at the MTWU Workshop compound-GIZO

Date- August 3-7, 1990

Name of Trainee/Worker	Company & Position
1. Roy Vegua	MTWU Joinery Shop-Supervisor
2. John Naku	St. Dominic Trng. Centre-Instructor
3. Moses Kadu	-do_ -instructor
4. Peter Pambulo	Gizo Furniture- manager
5. Frank Soalakevu	Tinabesi Joinery Project- Group Leader
6. A. Stephen Arete	Tinabesi Joinery Project- carpenter
7. George E. Barikana	UCC Joinery Shop- Foreman
8. Belden Patovaki	Reef Pacific Co. Ltd.- Supervisor-Carentry Div.
9. Senda Philip	KFPL (CDC) Carpentry Foreman
10. Dennis Evapitu	Tinabesi Youth Joinery- Foreman
11. Ben Valoda	Silawa Construction- carpenter
12. Peter Barikana	Private Contractor/carpenter
13. Grenville Qurataro	Turiso Joinery Project- group leader
14. Lazarus Kale	Silawa Construction- carpenter
15. Enock Pada	-do- -carpenter

3. MALAITA PROVINCE

a. Venue- Provincial Joinery Shop- Auki, Malaita

Date-April 29- to May 3, 1991

Name of Trainee/worker	Company & Position
1. Jeffrey G. Funafasia	Provincial Joinery Shop- Foreman
2. Silas Walai	-do- -Carpenter
3. Nelson Kwai	-do- -Carpenter
4. Mediel Fiuburua	-do- -Carpenter
5. James Tiana	-do- -Carpenter
6. Junior Maetaa	Farasita Joinery- owner/manager

7. Suli Maetaa	-do-	-Carpenter
8. Michael Mae	Private Contractor	/carpenter
9. David Peter Wao	Bina Furniture	-owner/manager
10. Rex Faofia	Farasita Joinery	-carpenter/joiner
11. Richard Felomea	Malou Furniture	-Foreman
12. Noah Ramo	-do-	Carpenter
13. J. Paul Sinasu	Private Contractor	Carpenter
14. Francis Wale	Private Contractor	Carpentry

b. Venue-Provincial Joinery Shop-MTWU Compound, Auki

Date-September 8-11, 1992

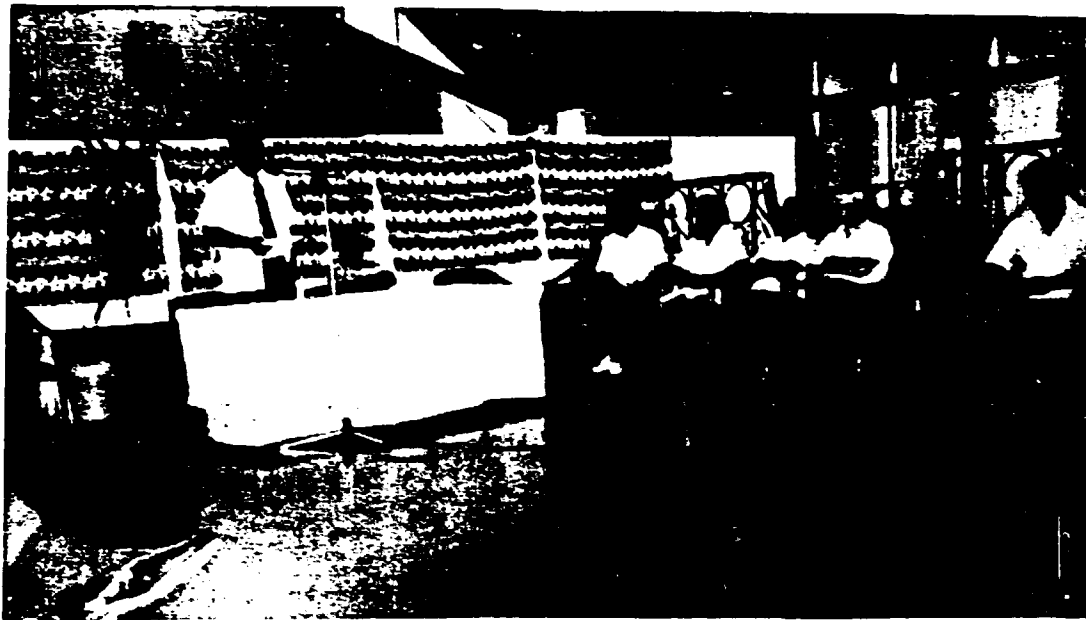
1. Joseph Dili	Gwaidalo Joinery	- owner/manager
2. Alick Gagi	Afutara Vocational School	-instructor
3. Anisi Maetaa	Farasita Joinery	- owner/manager
4. Jimmy Maetaa	-do-	Carpenter
5. John Apolas	SOLWATER Assn.	- foreman
6. Charles Fagasi	Faulkner Joinery	- carpenter
7. Andrew Vatee	Private/contractor	
8. Michael Waleurifo	Private Contractor	
9. Jasper Oita	Private Contractor	
10. Silas Walai	Provincial Joinery Shop	- Foreman
11. Jeffrey Funafasia	-do-	carpenter
12. Madiel Maeke	-do-	carpenter

4. MAKIRA/ULAWA PROVINCE

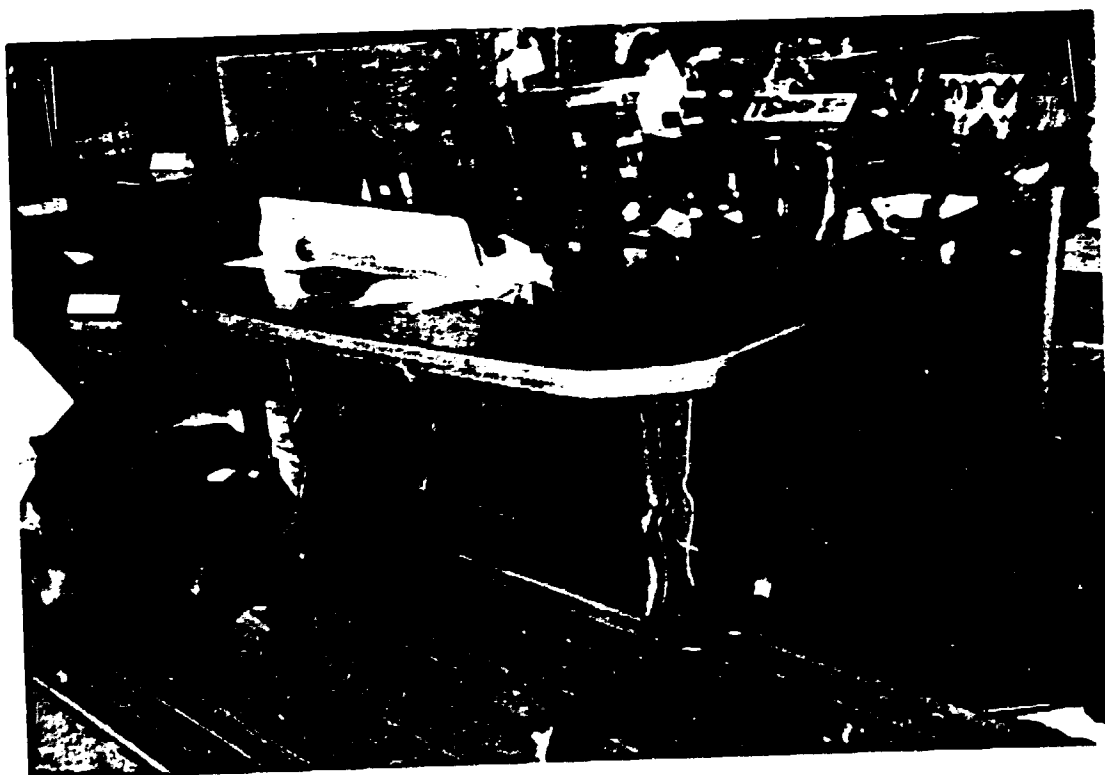
a. Venue- MTWU Provincial Joinery Shop

Date March 23-27 1992

Name of Trainees/workers	Company and Position
1. Patrick Mae	DUBA Joinery-Foreman
2. Everisto Kinika	DUBA Joinery-carpenter
3. Mathew Sau	Private Contractor-Tawanage
4. Bartholomew Meleti	Private Contractor- Sta. Cruz, Temuto
5. Peter Poromeo	Rongoijéne Furniture-manager
6. Joseph Waimea	Private Contractor-Pehuru, Kirakira
7. Patteson Holoie	MTWU Joinery Shop-carpenter
8. Muffat Mamudi	-do- -carpenter
9. Dominic Taro	Private Contractor-Mahinuki, West Bauro
10. Henry Drew	Pawa Secondary School- woodwork instructor.



Hon. Minister, Michael Maina, officially opening the Furniture Show at the Solomon Kitano Meadana Hotel in Honiara.



One of the displayed furniture products at the Show. Table purchased by NPF for its boardroom.

News published at the Solomon Star Newspaper
about the Furniture Show.

Maina speaks highly of the local furniture industry

Minister for Trade, Commerce and Primary Industries Michael Maina said it is encouraging to see the local furniture industry and the Ministry of Transport, Works and Utilities producing

furniture to meet the local demand through local manufacturing.

He said there are many opportunities in the industry and they are planning to provide more sophisticated

furniture for the local market.

Mr Maina said these in his speech to mark the opening of a three-day local wooden furniture show held at the Solomon Kitano Mendana Hotel recently.

The show was organised by the Trade Division of his ministry to promote the product and encourage the public to buy locally made furniture.

Mr Maina told the furniture makers and officials that there is export potential both for furniture and timber, provided they are of the right quality and produced on time.

Looking at the finished product, the Minister said this is a significant change and improvement to the creation of furniture in this country.

"I believe most of the furniture is of knock-down type. It is easy to build, easy to transport both by canoe or by truck and can be moved around in offices", he said.

Mr Maina said what is required now is proper training for furniture makers.

Solomon Islanders he said, are already gifted with skills but it's a matter of improving on that skill which is already available.

"If we are really to make an impact, it is essential that we have the necessary trade training programme", he said.



Hon Michael Maina MP

The furniture put out at the show included coffee tables, kitchen tables, chairs, beds, flower and study tables and may more.

The Minister also informed furniture makers about the government's intention to upgrade the Ranadi Industrial estate by providing the necessary infrastructure to allow for factory spaces so that entrepreneurs would be able to rent rather than fully committing their funds into building of factories.

Mr Maina said the government also intends to expand the industrial estate to Henderson Airport area.



Minister of Education and Human Resources Development, Hon Sam Alasia (left with the PS of the Ministry of Commerce and Primary Industries, Allen Arafoa and PS of Education, Mostyn Habu, admiring the tables and chairs put on show at the Solomon Kitano Mendana

Minister impressed with the furniture

Minister of Commerce and Primary Industries Michael Maina was impressed at a collection furniture put up for public show at the Solomon Kitano Mendana Hotel this week.

Commenting on the finished product when he officially opened the three-day show, he said "I was surprised at the excellent workmanship and I guess a lot of work had been done on them".

"What I noticed about them," he said, "was that they are easy to transport at sea, on roads or move them around in offices of houses."

Maina said what is needed now is a proper training for furniture makers "We don't need training for the skill because we have already have the natural skill," the minister said.

The furniture include coffee table, bed, study table, set of eating furniture, flower table, and many more.

They had been made by experienced furniture makers from various companies and the government.

The show was organised by the Trade Division "to encourage the public buy locally-made furniture" said one organizer.



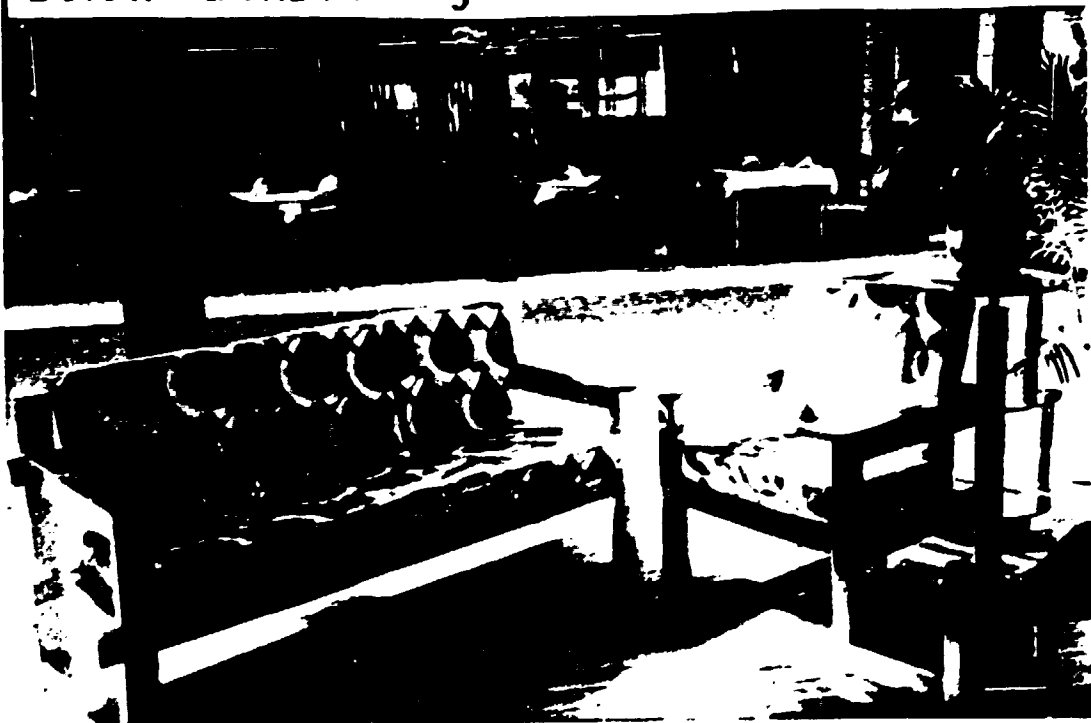
Minister of Education and Human Resources Development, Sam Alasia (left) admires a coffee table at the furniture show which attracted many people.

News published by Solomon TOKTOK Newspaper
on the FURNITURE SHOW.



Above;- Entrepreneurs and their products at the Furniture Show. At left is a folding/drop leaf table-on the right is a folding table with acrylic lacquer.

Below- a K.D. living room set



OPENING DAY PROGRAMME
Wood/Furniture Products Exhibition
(Woodex/Furnitex 1991)
Organized by Min. of Commerce and
Primary Industries and UNIDO Project

Opening Day - September 10, 1991
 7:40-8:30- Arrival of Guests/Visitors

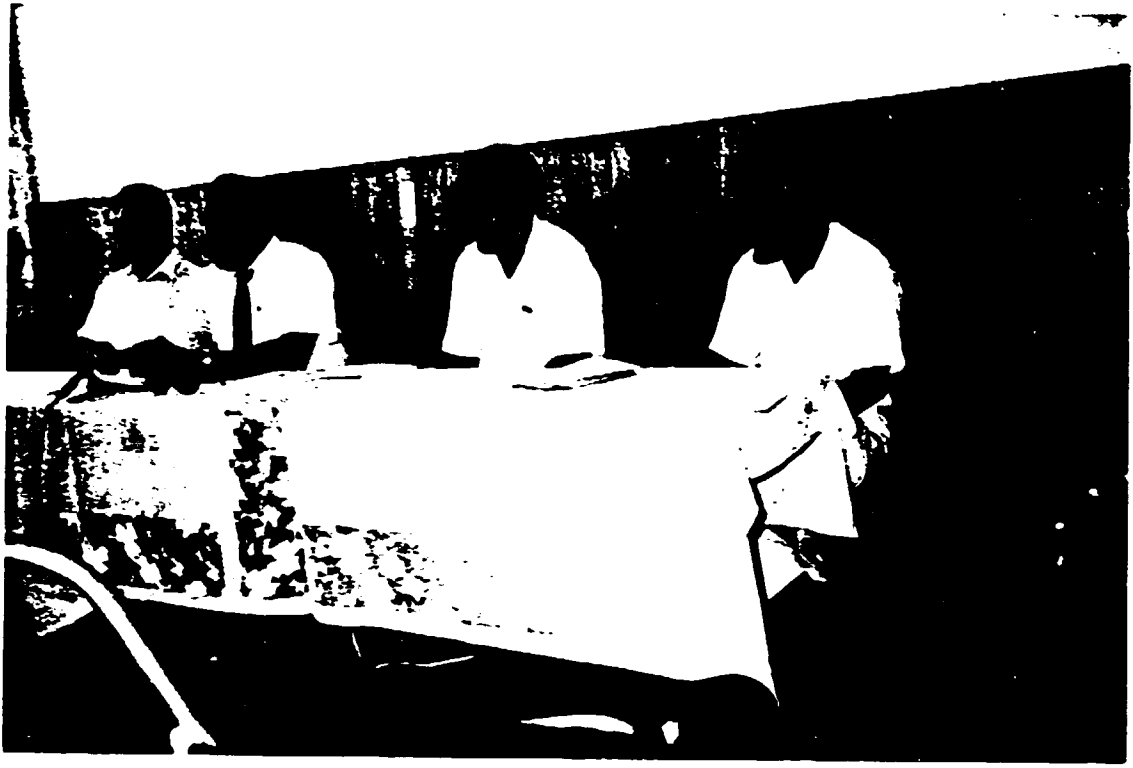
PART I-

1. Welcome Remarks by Mr. John Diau-SIJFIA Chairman
2. Presentation of Joinery/Furniture Companies/Training Centres/Joinery-Wood Carvers group participating in the Exhibition by Mr. Fred Fono, Director, Special Projects Unit, MCPI.
3. Inspirational Speech and to Officially Open the Exhibition by Hon. Minister Michael Maina-Minister, MCPI.
4. Awarding of Prizes to Winning Product Designs by the Permanent Secretary, MCPJ and the Donors of Prizes.
 Prize Donors are; a.) Kayuken Pacific Timbers
 b.) Solomon Islands Investment c.) LKP Hardwares
 d.) Pacific Timbers e.) Asian Paints f.) C&I Distributors g.) Embassy of Republic of China

PART II

Refreshments and Viewing of Products Displayed.

EMCEE - Fred Fono.



TOP- Hon. Minister M. Maina, delivering his speech at the official opening of the WOODEX/FURNITEX 1991 held at the courtyard of the Solomon Kitano Mendana Hotel in September 1991.

L-R.- Richard Kohata, Permanent Secretary, MCPI- Minister Maina, MCPI, Holoti Panapio, Undersecretary, PSC and John Diau, Chairman-SIJFIA.

Bottom- Awarding of prices to winning furniture designs by R. Kohata, P.S.-MCPI and Fred Fono, Director of Business, MCPI





Solomons TOKTOK

Independent - Outspoken - Effective

6 PAGES ISSUE NO.243 SEPTEMBER 13-18, 1991 HONIARA, SOLOMON ISLANDS PHS-ZD418/23326 G0c

SI may never export furniture



Mr Diau speaking at the Wood/Furniture products display

THE JOINERY/FURNITURE Industries Association says Solomon Islands will never go into export market if its members do not have kiln-dried timber.

The Association's President, John Diau said this at the Wood and Furniture Products Exhibition held in Honiara this week.

He said, "We request the Forestry Division to streamline their policies/regulations and encourage sawmillers to improve the quality of sawn timber and put up Kiln drying

facilities of sawn timber to meet the requirements of both the local and overseas markets."

"We will never be able to go into the export market if we do not have kiln-dried timber. Export markets require kiln-dried wood components."

Through UNIDO assistance, he said, members of the association now have the product designs for exports.

"And already we have the needed technical skills. And if we have kiln-dried timber, plus adequate financial assis-

tance and government support, we are ready to export our market overseas", Mr Diau said.

He said the components

of the products put out at the exhibition are only air dried, some have been air dried for about five to six months, but the moisture content is still very high, about 40 to 70 percent.

Mr Diau explained that plywood has to be used on table tops because the high

moisture content on the woods used. Table tops made of wet timber bend, joints open and destroy the finish after sometime, he said.

He then appealed for continued government support, and from such agencies as UNIDO/UNDP because

"we still have numerous problems in the industry. The Joinery/Furniture Industry in Solomon Islands is very young, in fact at an infant stage."

SI may soon export furniture products

SOLOMON ISLANDS may be able to export some of its furniture products in the future.

The Minister of Commerce and Primary Industries, Michael Diliama said this while opening a furniture exhibition in Honiara this week.

He said it is the aim of the Ministry of Commerce and Primary Industries to ensure furniture-making in Solomon Islands is improved so that

the products do not only attract home customers but also those from overseas.

Mr Diliama said during the past 18 months the Furniture Industry has received help from his ministry through the Business Development Division and the UNIDO project.

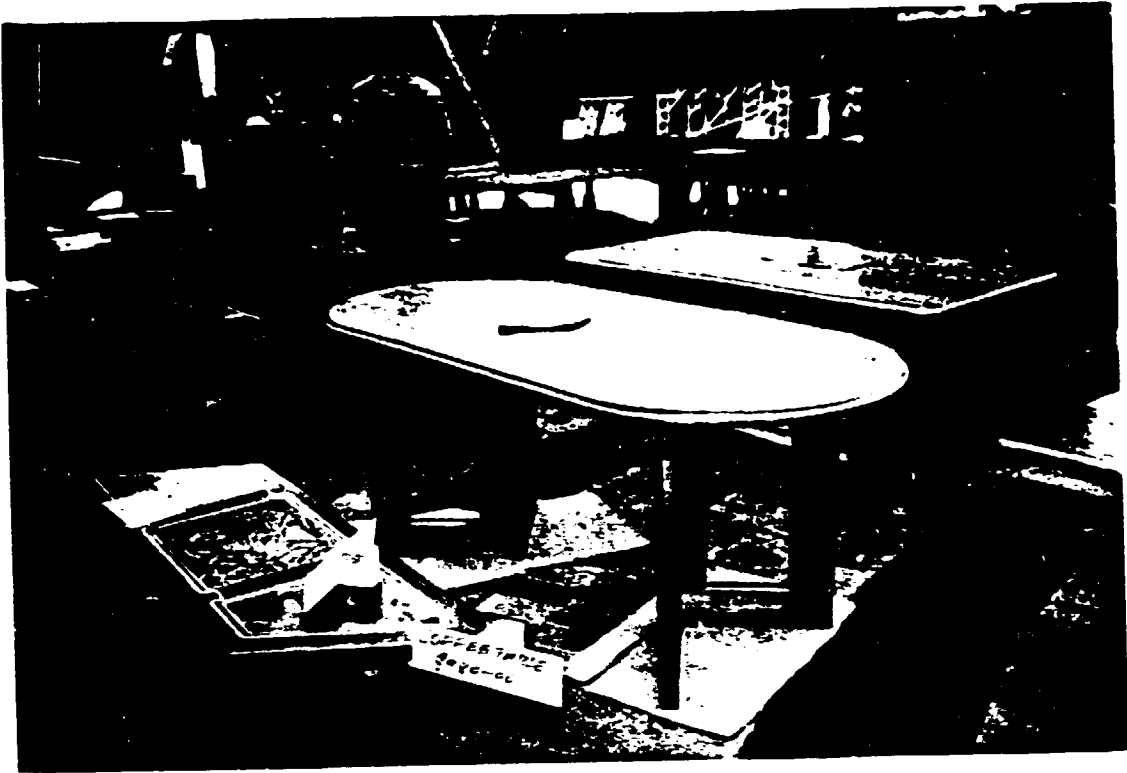
And the government has recruited a Furniture Expert to train furniture makers to specialise in furniture making and to introduce new

designs.

UNIDO is its part funds the Furniture Expert who has been providing technical, business training and advice, Mr Diliama said.

Premiers tour Fiji

PROVINCIAL PREMIERS are on a three-week fact-finding mission to Fiji to see how the tourism industry is being developed in the Republic.



**TOP and BOTTOM PHOTO
SOME OF THE FURNITURE PRODUCTS DISPLAYED AT THE
WOOD AND FURNITURE PRODUCTS EXHIBITION
(WOODEX/FURNITEX 1991)**

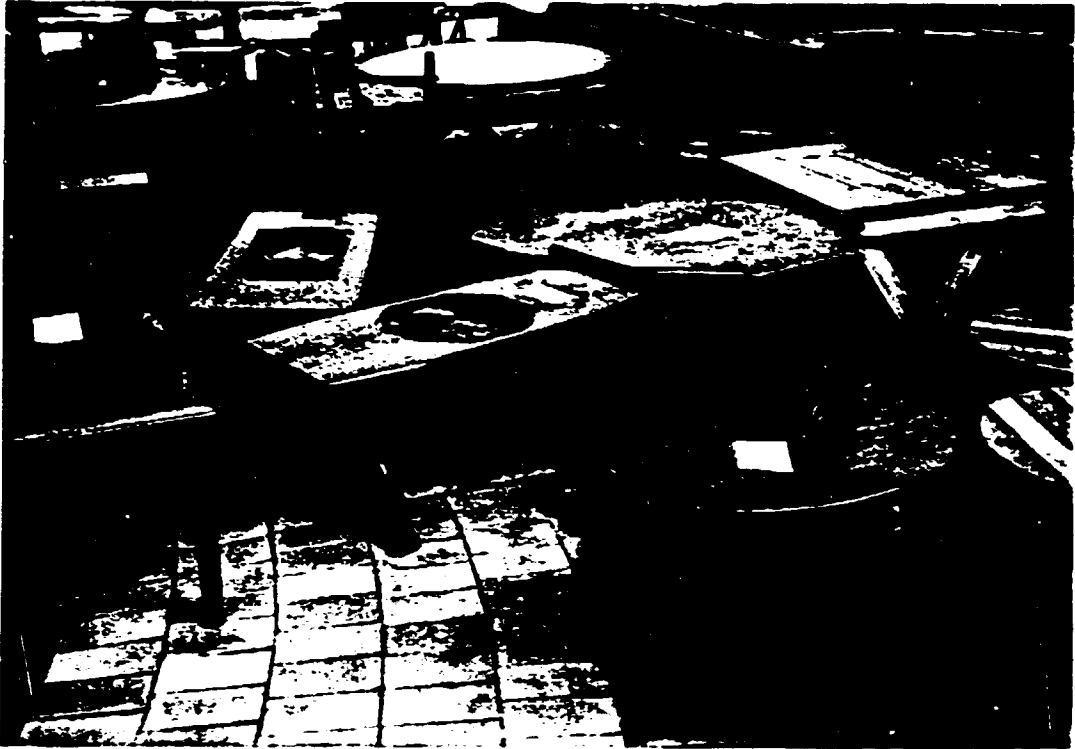
Above Photo

Dining Tables manufactured by ZEOZA FURNITURE SHOP

Photo Below

Furniture made by HTQ FURNITURE and MTWU JOINERY SHOP





FURNITURE DISPLAYED AT THE WOODDEX/FURNITEX 1991
Above Photo-FURNITURE MANUFACTURED AT HTQ FURNITURE

Below- FURNITURE MANUFACTURED AT TOME & SONS JOINERY

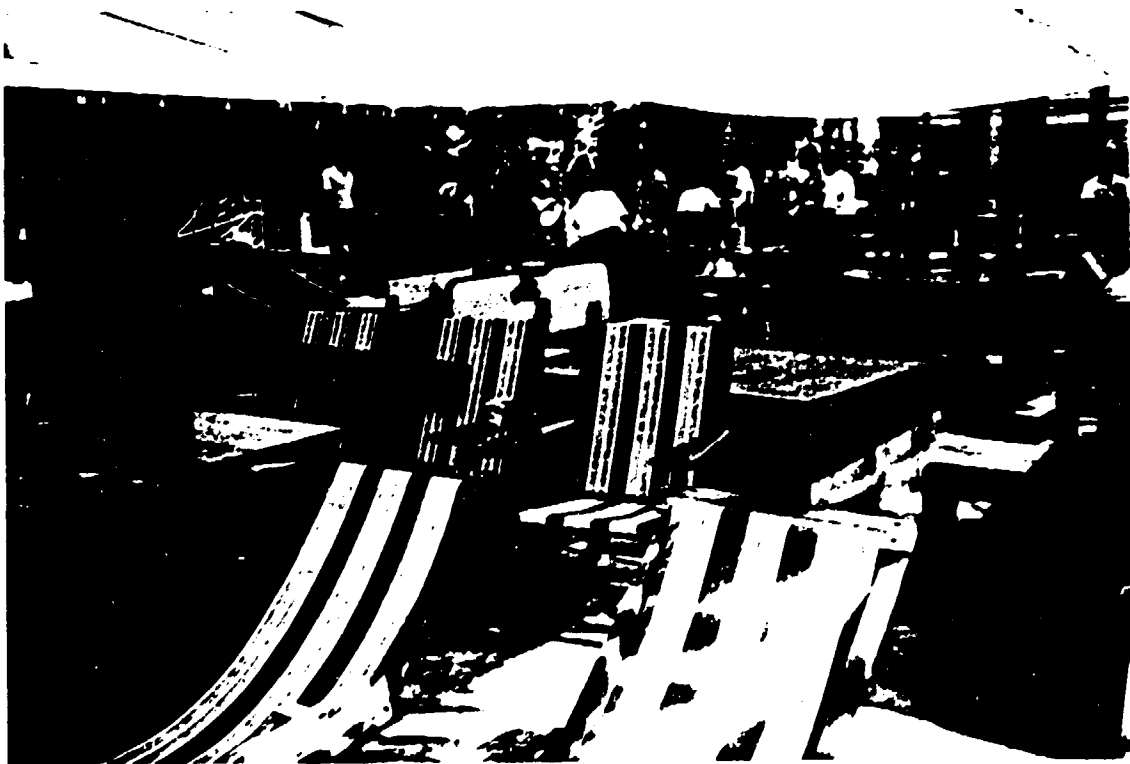




Above Photo-
KNOCK-DOWN AND FOLDING FURNITURE DISPLAYED AT THE SHOW.

Foreground- FURNITURE MADE BY ST. MARTIN RURAL TRAINING CENTRE,-JOINERY SHOP.

Below Photo-
FOLDING "Deck" CHAIRS MANUFACTURED BY ZEOZA FURNITURE.



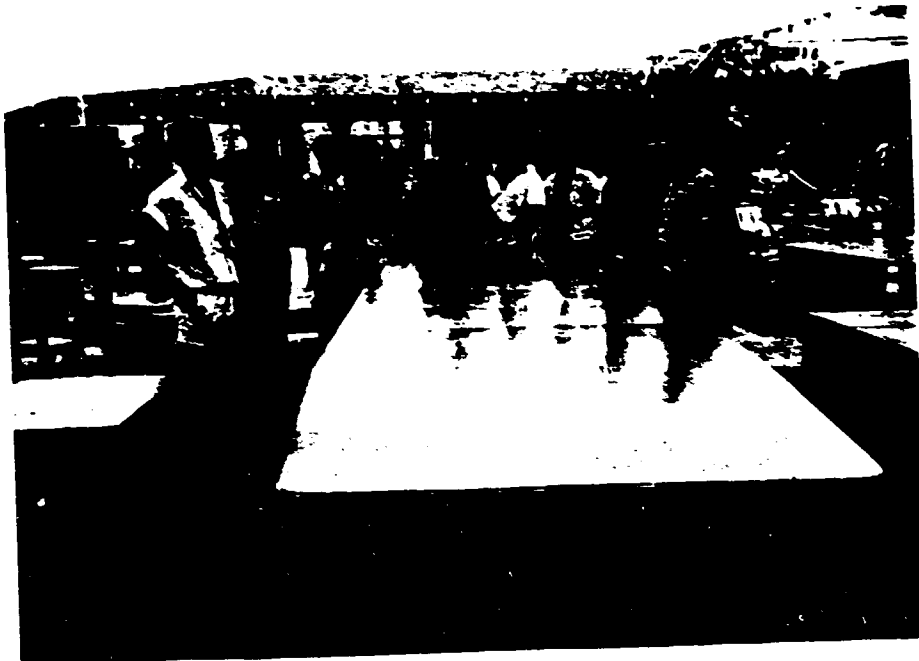


Photo Above
SOLOMON ISLANDS ENTREPRENEURS POSING FOR A PHOTO ON THE CLOSING DAY OF WOODDEX/FURNITEX 1991. The conference table shown here is made of solid wood Linggi (Pterocarpus). The table was bought by National Provident Fund (NPF) for its Boardroom.

Furniture making to be encourage

The government will continue to encourage local people to make good-quality furniture in the hope that in the future they will export them.

This was said by Minister for Commerce and Primary Industries Michael Maina when he officially opened a furniture exhibition at Solomon Kitano Mendana Hotel Tuesday this week.

The exhibition was a collection work of local people who had received training from an expert employed through the government.

Maina said a lot of improvement has been seen in the furniture industry in the last 18 months.

The industry has received assistance from the government and UNIDO.



Local furniture makers displaying their products at Solomon Kitano Mendana Hotel.

NEWS ITEM FROM SOLOMON STAR - ISSUE SEPTEMBER 20, 1991.

SALES RECORD**RECORD OF SALES- WOOD PRODUCTS AND FURNITURE PRODUCTS
EXHIBITION- (WOODEX/FURNITEX 1991)****Date of Exhibition- September 10-12, 1991****Venue- TERRACE/Courtyard of Solomon Kitano Mendana Hotel.**

Name of Enterprise	On the Spot Sales-SI\$	Orders Recieved	Product Type
1. P. T. Furniture	\$150	\$3,000	12 deck chairs 2 dining tables
2. ZEOZA Furniture	\$4,000	\$2,500	deck chairs for Valelua resort
		\$52,000	308 pcs.-single beds for MPJ. 7-single at \$165 7-double at \$199 7-Dining tables at \$410 for Telekom

Note- About \$6,000 sold by ZEOZA Furniture and pre-paid by customers were also displayed at the Exhibition. This amount not included in the total sales made during the Furniture Show.

3. T. S. Joinery	\$1365	\$1650	Set-office furniture
4. HTQ Furniture	770	1,880 1,960	18 single beds at \$160 each, 28 chairs at \$70 each
5. T. & T. Joinery	\$360	540	3 pcs. zigzag shelves
6. Tome & Sons Joinery-\$180		6,000	Sets of furniture for three houses of SIPA employees.
7. St. Martin Training Centre	\$1,350	5,400	4 Dining Sets (one table plus 8 chairs.)
8. Woodcarvers Group	\$2,600	-NIL-	
9. Starwood Furniture	\$380	-NIL-	
10. GPR Furniture	\$120	-NIL-	

11. SICHE-SID Joinery Shop- (Note- SICHE did not sell their items. Those products displayed were made by trainees and mainly for exhibition only.- Orders recieved from customers given to private workshops.

12. MTWU Joinery Shop- NO SALE- MTWU do not sell the items displayed. These are mainly prototypes for promotion to private woodworking enterprises and to the public.

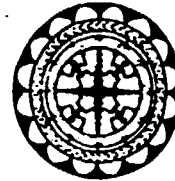
TOTAL ON THE SPOT SALES AT THE EXHIBITION-SI\$11,270

TOTAL VALUE OF ORDERS RECIEVED FROM CUSTOMERS-SI\$80,530

TOTAL SALES MADE IN THE EXHIBITION-SI\$91,800 _____

BUSINESS NEWS AND VIEWS

Bisnis Nius



FEDERATION
SOLOMON
ISLANDS
BUSINESSES

No. 13 October 1991

The success of Honiara's recent furniture exhibition has helped promote plans to hold a National Showcase Exhibition for all Solomon Islands' products next year

Selling formula for Forum week

AUGUST NEXT year looks like being the busiest month of business houses and producers lives. To tie in with the South Pacific Forum meeting and the 50th anniversary celebrations of World War Two's Guadalcanal campaign, plans to hold a National Showcase Exhibition have been announced.

The National Showcase Exhibition, modelled on Fiji trade fairs, has been given added credibility by the success of the recent Woodex/Furnitex show held at Kitano Mendama Hotel.

"It will be a showcase for any locally produced product," says Fred Fono, director of the Ministry of Trade and Commerce's Business Development Division.

"There may be some outside products too, put on show by people who are agents for equipment sold in Solomon Islands."

Fred Fono is expecting: "Major participation by the private sector, manufacturing division and business houses from the smallest through to the biggest companies, like Solomon Taiyo."

FSIB will be on the organising committee as will other interested groups says Fono. "I feel if we plan it well we will break into overseas markets," he adds.

Woodex/Furnitex '91 did not bring any direct export orders but the 13 exhibitors received many enquiries about their work. Three furniture makers, Stephen Veno (Zeoza Furniture); Jo Magi (HTG Furniture) and Hedley Toata (TS Joinery) are also hoping to pick up orders on an eight-day trip to Australia with UNDP/UNIDO's Vincent Palcong this month.

Important meetings are scheduled in Canberra and Sydney, including one with the senior trade commissioner, Bill McCabe.

The group will also attend a show of machinery designed for furniture makers. "This should assist them in finding modern equipment," says Fred Fono, who adds that money should be no problem: "Because they were flooded with orders at the Woodex/Furnitex exhibition sale."



Come and see our:

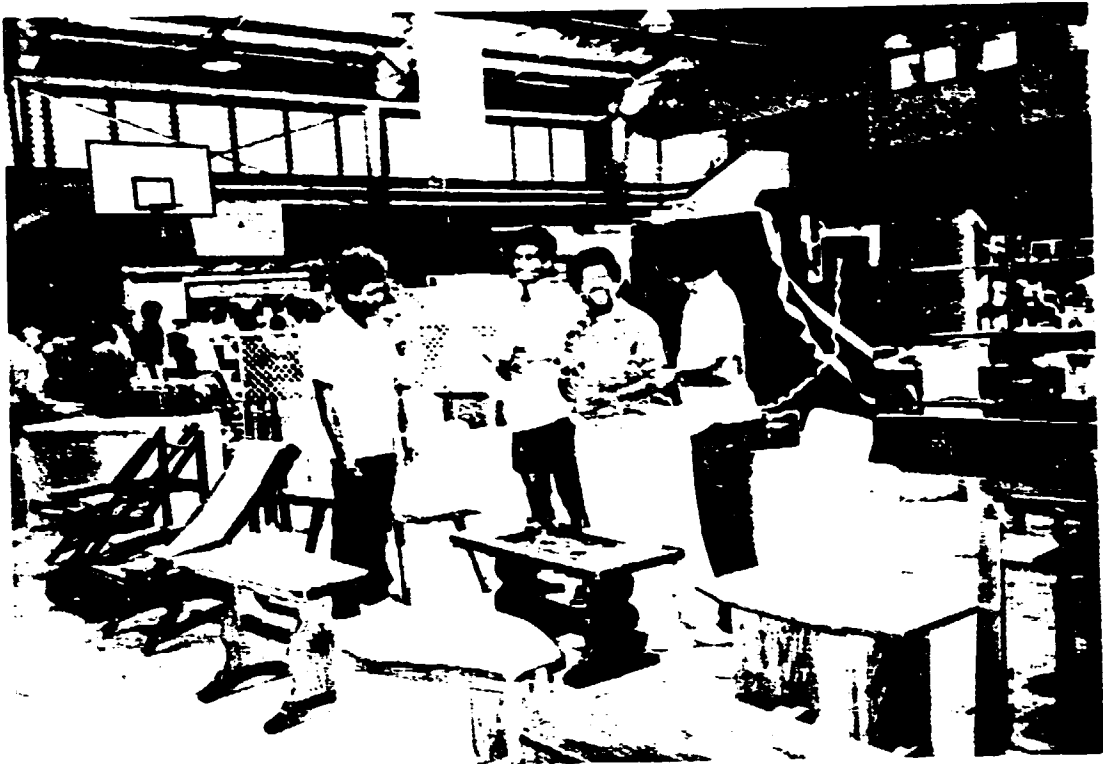
New home for Bisnis Nius

NEWS ITEM FROM BISNIS NIUS

ABOUT THE PLAN FOR A NATIONAL
SHOW CASE EXHIBITION (Trade Fair)

AS ENCOURAGED BY THE SUCCESS OF

WOODEX/FURNITEX 1991 IN HONIARA.



Above-

Entrepreneurs displaying their products at the National Trade Fair, held in Honiara in August 1992. L-R., Francis Sene-counterpart, Joe Magi-HTQ Furniture, John Diau-Chairman-SIJFIA and owner, Tome & Sons Joinery and Felix Tafysia-owner, SOLWOOD.

Below-

The Furniture Section of the National Trade Fair.





**SEMINAR/DISCUSSION ON THE
NEW TIMBER GRADING RULES**
 Venue-Coastwatchers Room
 Solomon Kitano Mendana Hotel
 Date- September 2, 1992

Seminar attended by executives
 from logging/sawmilling companies,
 builders, joinery/furniture makers
 vocational instructors and
 government officers.
 Photo at the right is Bill Eranenburg
 of the AIDAB funded Timber Control
 Project-MNR.



VISUAL GRADING FURNITURE TIMBERS.

3.1.0 GENERAL INTRODUCTION.

3.1.1 EXTENT.

The standard will provide a specification for wood machining imperfections, surface finishes and limitations for natural characteristics

3.1.2 APPLICATION.

The grading rules for machine finished products will contain grade specifications for:

- * the grading of sawn timber, intended final use: furniture products
- * the grading of dressed timber, intended final use: furniture products
- * moisture content, kiln dried and air dried to equilibrium moisture content
- * wood machining standards which will vary depending on the final product
- * the maximum allowable natural characteristics; the limitations will vary depending on the final product.

3.1.2 GRADES.

The grading rules are to identify three levels of grade:
first grade (prime grade)
second grade (select grade) and
third grade (cover grade).

Grade identification at mill location or grading location is essential in order to gain market acceptance and to support the maintenance of established markets.

3.1.3 MOISTURE CONTENT.

Where the Furniture Timber is sold as "Seasoned", the moisture content anywhere within any piece shall be not less than 10 percent and not more than 15 percent, the average moisture content shall be 12 percent.

If the seasoned condition can not be produced, the supplier shall notify the purchaser of the achieved moisture content.
Any purchaser of furniture timber may specify before purchase the required or acceptable moisture content.
The moisture content anywhere within a piece shall not vary by more than 2 percentage units from the stated or agreed value.

3.1.4 LYCTID SUSCEPTIBLE SAPWOOD.

All furniture timber shall be free of Lyctid susceptible sapwood unless that sapwood has been treated with an approved method of treatment and the purchaser has agreed in writing of the acceptability of treatment. Treatment may discolour the timber.

3.2.0 MEASUREMENT OF IMPERFECTIONS.

3.2.1 KNOTS.

The size shall be the width as measured between lines enclosing the imperfection and parallel to the arrises.

3.2.2 SLOPING GRAIN.

The slope of the grain on any surface shall be determined by any of the methods specified in A.S.1080. The slope of grain shall be measured over a length of 300 mm. Localized variations around knots shall be disregarded.

3.2.3 BOW AND SPRING.

Bow and spring shall be measured as the maximum perpendicular distance of any point on the face (bow) or edge (spring) from a straight line joining the arris at one end to the same arris at the other end.

3.2.4 TWIST.

Twist shall be measured by placing the piece of timber so that three of its corners are in contact with a level surface and measuring the perpendicular distance from the fourth corner to the level surface.

3.2.5 CUPPING.

Cupping shall be measured as the maximum perpendicular distance of any point on the surface of the piece from a straight line joining the arrisses of that surface and in the plane of that point.

3.3.0 GRADE LIMITATIONS AND GRADING.

3.3.1 BASIS.

Grading is based on the appearance of the utilized surface or surfaces in final application. Each piece shall be inspected on all surfaces which are identified for final utilization. The purchaser shall identify when ordering the grade requirements for each surface.

3.3.2 VARIATIONS IN ASSESSMENT.

Within any parcel, a maximum variation of 5% between grading of individual pieces by individual qualified graders shall be accepted, provided that no more than 5% of the pieces fall one grade below the designated grade.

Where the designated grade is the lowest described in the standard, then the maximum increase from the specified allowance of any imperfection in the disputed 5% shall not exceed 10 percent. If this occurs, the grading of the whole parcel shall be rejected.

3.3.3 SIZES.

All cross sectional sizes shall be expressed in mm.
Length shall be expressed in m. Length increments shall be .3 m, shortest length to be 0.9 m.
Producers shall identify the standard sizes for their products.
Purchasers shall be able to order non-standard sizes.

All tolerances shall be applied to the nominal sizes or the special ordered non-standard sizes.

3.3.4 DOCKING, RESAWING and RE-GRADING.

If timber, after grading, is resawn longitudinally, the original grading is nullified.

Docking-out of imperfections can result in the upgrading of the piece.

Re-grading for optimum recovery of any parcel of timber, which has been graded to a minimum grade, shall be allowed if performed by a qualified grader, utilizing these grading rules.

3.3.5 OVER LENGTH.

In order to reduce the effects of certain imperfections, furniture timber may be supplied with an over-length of 200 mm over the specified length. An over-length of 100 mm shall be applied to each end of the piece. The grading of such piece shall be restricted to the specified length only. The producer shall clearly identify the over-length of any piece.

3.3.6 TIME of GRADING.

If the grading or re-grading of unseasoned or partially seasoned timber takes place some time after production, a reasonable allowance shall be made for imperfections caused through moisture loss.

3.3.7 BRANDING.

All parcels of furniture timber shall be identified by labels or stickers, which identify:

- * the product contained in the parcel,
- * the condition or moisture content,
- * the grade and
- * the production or grading location by trade mark or name.

3.4.0 THE GRADE LIMITATIONS.

3.4.1 UNACCEPTABLE IMPERFECTIONS.

No furniture timber component shall contain:

- FRACTURES, a break of the fibre, across the grain.
- SPLITS, a break of the longitudinal wood fibre, extending from one surface to an other.
- SHAKES, a break of the wood fibre along a growth ring, extending in longitudinal direction, and extending from one surface to an other.
- HEART SHAKES, a break of the longitudinal wood fibre, extending in longitudinal direction, extending from one surface to an other.
- LOOSE GUM VEINS, a break of the wood fibre along a growth ring, extending in longitudinal direction, and extending from one surface to an other.
- GUM POCKETS, a break of the wood fibre along a growth ring, extending in longitudinal direction, and extending from one surface to an other.

3.4.2 PRODUCT SPECIFICATIONS.

The grade limitations for furniture timber product is specified per product and is provided in section 3.5.

Per product, the grade limitations are identified for:

- machining imperfections,
- surface finishes and
- natural characteristics.

3.4.3 ABBRIVIATIONS.

- W : width, face width in rough sawn, dressed or working width in profiled boards.
- T : thickness
- L : length of the board
- < : less than.

3.4.4 LIMITATIONS BOW AND SPRING.

The bow and spring limitations shall be in accordance with the identified column of table 3.1.

**TABLE 3.1
FURNITURE TIMBERS
MAXIMUM PERMISSIBLE BOW OR SPRING
IN MM.**

Length in m.	A	B	C	D	E
1.2	1	2	2	3	4
1.8	2	4	5	7	9
2.4	3	6	10	13	16
3.0	5	10	15	20	25
3.6	7	14	22	30	35
4.2	10	20	30	40	50
4.8	13	25	40	50	65
5.4	16	30	50	65	80
6.0	20	40	60	80	100
6.6	24	50	70	95	120
7.2	30	60	85	115	140

VISUAL GRADING FURNITURE TIMBERS.

CONCEPTS and PROPOSALS

EXTENT: wood machining imperfections, surface finishes and limitations for natural characteristics.

APPLICATION.

- the grading of **sawn timber**, intended final use: furniture products
- the grading of **dressed timber**, intended final use: furniture products
- **moisture content**, kiln dried and air dried to equilibrium moisture content
- **wood machining standards** which will vary depending on the final product
- the maximum allowable **natural characteristics**; the limitations will vary depending on the final product.

GRADES.

FIRST GRADE (prime grade)
SECOND GRADE (select grade) and
THIRD GRADE (cover grade).

MOISTURE CONTENT. "Seasoned": >10%, <15%, average 12%.

Achieved moisture content, required or acceptable moisture content.
Not to vary by more than 2 percentage units from the stated or agreed value.

LYCTID SUSCEPTIBLE SAPWOOD.

MEASUREMENT OF IMPERFECTIONS.

KNOTS.

SLOPING GRAIN.

BOW AND SPRING.

TWIST.

CUPPING.

GRADE LIMITATIONS AND GRADING.

VARIATIONS IN ASSESSMENT: 5%.

SIZES.

DOCKING, RESAWING and RE-GRADING.

OVER LENGTH.

TIME of GRADING.

BRANDING: All parcels of furniture timber shall be identified by labels or stickers, which identify:

- the product contained in the parcel,
- the condition or moisture content,
- the grade and
- the production or grading location by trade mark or name.

THE GRADE LIMITATIONS.

UNACCEPTABLE IMPERFECTIONS: FRACTURES, SPLITS, SHAKES, HEART SHAKES, LOOSE GUM VEINS, GUM POCKETS.

PRODUCT SPECIFICATIONS.

- MACHINING IMPERFECTIONS,
- SURFACE FINISHES AND
- NATURAL CHARACTERISTICS.

LIMITATIONS BOW AND SPRING.

**TABLE 3.1
FURNITURE TIMBERS
MAXIMUM PERMISSIBLE BOW OR SPRING
IN MM.**

Length in m.	A	B	C	D	E
1.2	1	2	2	3	4
1.8	2	4	5	7	9
2.4	3	6	10	13	16
3.0	5	10	15	20	25
3.6	7	14	22	30	35
4.2	10	20	30	40	50
4.8	13	25	40	50	65
5.4	16	30	50	65	80
6.0	20	40	60	80	100
6.6	24	50	70	95	120
7.2	30	60	85	115	140

NOTES.

ROUGH SAWN FURNITURE TIMBER.

MACHINING IMPERFECTIONS.

	FIRST GRADE	SECOND GRADE	THIRD GRADE
Width tolerance	+2 and -0 mm	+2 and -0 mm	+3 and -3 mm
Thickness tolerance	+2 and -0 mm	+2 and -0 mm	+3 and -3 mm

NATURAL CHARACTERISTICS.

	FIRST GRADE	SECOND GRADE	THIRD GRADE
Knots, tight	< 5% W or T/3 m	< 10% W or T/3 m	<50% W or T/3 m
Knots, unsound or loose.	not permitted	not permitted	<25% W or T/3 m
Holes, Borer holes	not permitted	<50 mm ²	<100 mm ²
Void	not permitted	<100 mm ²	<400 mm ² ,
Tight gum veins	not permitted	<1 mm deep	<3 mm deep
Loose gum veins	not permitted	<2 mm wide	<250 mm length,
Backsawn gum veins	not permitted	<1 mm wide	<3 mm wide
Gum pockets, Overgrowth of injury, Bark pockets	not permitted	<100 mm ² ,	<3 mm wide
Decay, Termite galleries and Insect galleries	not permitted	<3 mm deep	<3000 mm ² ,
Wane and Wane	not permitted	<10% W,	<5 mm deep
Heart	not permitted	<50 mm length	<50% W,
Sloping grain	<3 mm on W and T	not permitted	<100 mm length
Surface checks and (Heart) Shakes	not permitted	not permitted	<400 mm ² ,
End splits	30 in 300	40 in 300	<3 mm deep
Bow	not permitted	<3 mm on W and T	<6 mm on W and T
Spring	in overlength only	not permitted	not permitted
Twist	table 3.1 - A	40 in 300	50 in 300
Cupping	<1 mm/100 mm W	<1 mm wide	<3 mm wide
	/3 m	in overlength only	in overlength only
	<1 mm/100 mm W	table 3.1 - B	table 3.1 - C
		table 3.1 - B	table 3.1 - C
		<2 mm/100 mm W	<3 mm/100 mm W
		/3 m	/3 m
		<2 mm/100 mm W	<2 mm/100 mm W

NOTES.

DRESSED FURNITURE TIMBER (DAR).

MACHINING IMPERFECTIONS.

	FIRST GRADE	SECOND GRADE	THIRD GRADE
Width tolerance	+ 0.5 and - 0 mm	+ 0.5 and - 0 mm	+ 1 and - 0 mm
Thickness tolerance	+ 0.5 and - 0 mm	+ 0.5 and - 0 mm	+ 1 and - 0 mm

SURFACE FINISHES.

	FIRST GRADE	SECOND GRADE	THIRD GRADE
Skip (hit and miss)	not permitted	<0.5 mm, 25% of L	<1 mm, 50% of L
Kick out	not permitted	<0.5 mm, <100 mm length	<1 mm, <300 mm length
Machine ridges	not permitted	permitted if removable by light sanding	no limitation
Machine gouge, Pause marks, Torn & Chip marks	not permitted	<0.5 mm deep	<1 mm deep
Roller marks	not permitted	<0.5 mm deep	<1 mm deep
Glazed surface	not permitted	permitted if removable by light sanding	no limitation
Cutter marks	not permitted	permitted if removable by light sanding	no limitation
Torn corners	not permitted	if in overlength	no limitation

NATURAL CHARACTERISTICS.

	FIRST GRADE	SECOND GRADE	THIRD GRADE
Knots, tight	<5% W or T/3 m	<25% W or T/3 m	<50% W or T/3 m
Knots, unsound or loose.	not permitted	<10% W or T/3 m	<50% W or T/3 m
Holes, Borer holes	not permitted	<100 mm ²	<400 mm ²
Voids	not permitted	<100 mm ² , <0.5 mm deep	<400 mm ² , <1 mm deep
Tight gum veins	not permitted	<100 mm length, <1 mm wide	<250 mm length <2 mm wide
Loose gum veins	not permitted	<1 mm wide	<3 mm wide
Backsawn gum veins	not permitted	<100 mm ² , <1 mm deep	<3000 mm ² , <3 mm deep
Gum pockets, Overgrowth of injury, Bark pockets	not permitted	<100 mm ² , <1 mm deep	<50% W, <100 mm length
Decay, Termite galleries and Insect galleries	not permitted	not permitted	<400 mm ² , <1 mm deep
Wane and Wane	not permitted	not permitted	<1 mm W or T
Heart	not permitted	not permitted	not permitted
Sloping grain	30 in 300	40 in 300	50 in 300
Surface checks and (Heart) Shakes	not permitted	<0.5 mm wide	<2 mm wide
End splits	in overlength only	in overlength only	in overlength only
Bow	table 3.1 - A	table 3.1 - B	table 3.1 - C
Spring	table 3.1 - A	table 3.1 - B	table 3.1 - C
Twist	<1 mm/100 mm W	<2 mm/100 mm W	<3 mm/100 mm W
	/3 m	/3 m	/3 m
Cupping	<1 mm/100 mm W	<2 mm/100 mm W	<2 mm/100 mm W

NOTES.

Timber processing kiln

By Francis Pituvaka

Furniture makers will now be able to get quality dry timber from the Kiln Dry which was officially opened at Ranadi industrial site Wednesday this week.

This facility, owned by Hyundai Timber Company Ltd, was constructed inside

five months from November 1991 to March this year. It can dry a total of 500 cubic metres inside one month.

Speaking during its official opening the director of the Hyundai timber company, Young Lee, said: "The facility will encourage the development in both fields of local construction and joinery

with the assurance of their confidence in the quality."

He said the use of the Dry Kiln will be quicker than the use of air dry method and will encourage the production of timber.

The minister of Commerce and Primary Industries, Michael Maina, said the new facility marks another history

in the timber industry.

He said the facility will enable Solomon Islands to produce good high quality timber for export.

"The need to add value to timber will see a better price which will benefit not only the resource owners but also the company who involves in that industry," Maina said.

He said he welcomes processing of timber which the government encourages in the country.

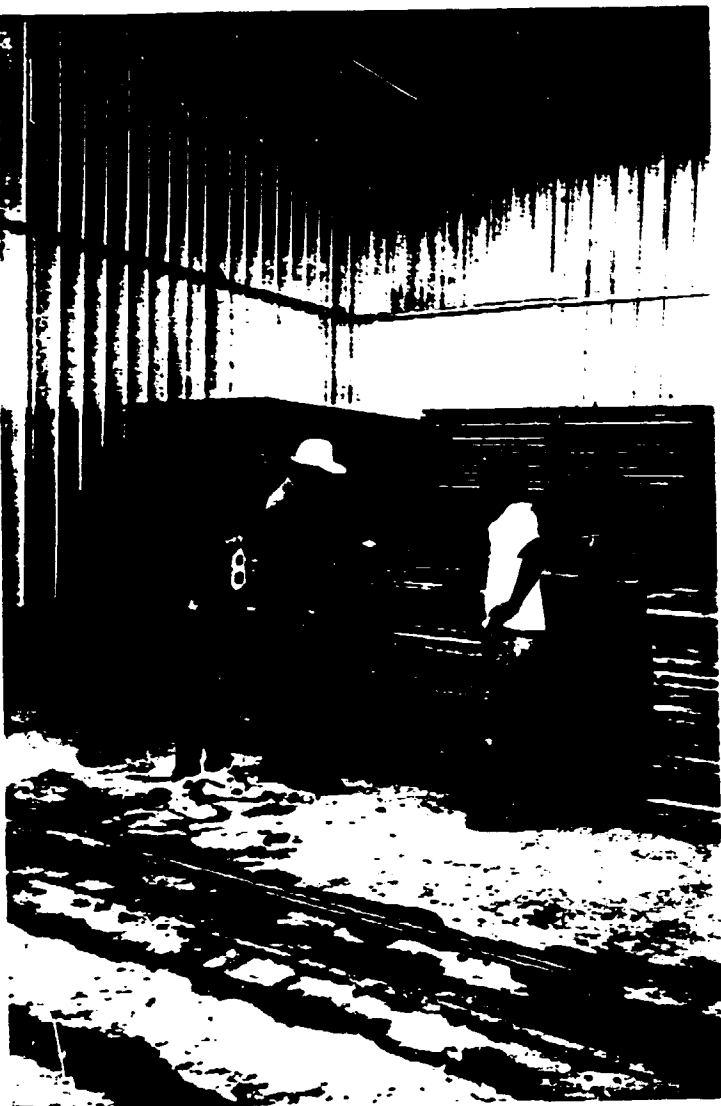
He further explained that investment incentives are for both local and foreign investors.

Maina encourages other logging companies to also move into timber processing.

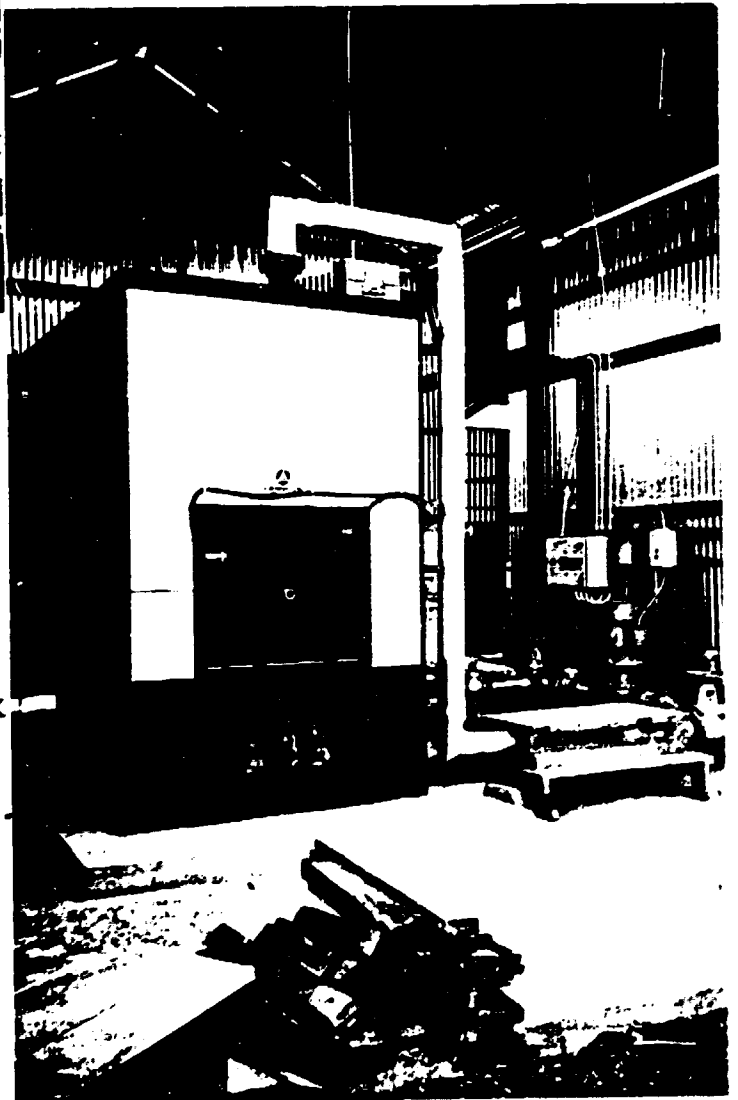


Top- News on the official opening of the Timber Seasoning Facility published by SOLOMON STAR newspaper-issue 20 March 1992

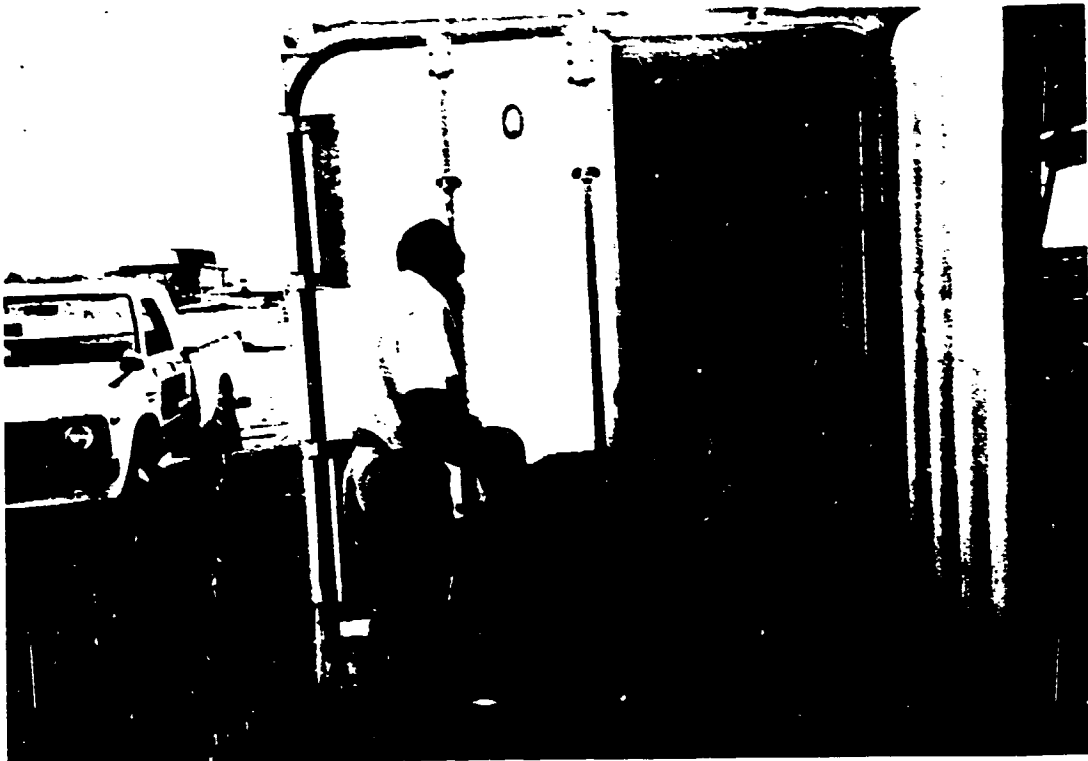
Left- Photo of the Timber Kiln Plant showing one Chamber and the Boiler shed.



Left photo-
Testing the moisture
content of timbers piled
inside the kiln chamber.



Right photo-
The wood fired (off-cuts &
saw dust fired) boiler use
to heat the Kiln chambers.



Above Photo-

Unloading seasoned sawn timber from the Timber Kiln Drier (Dehumidifier) owned and operated by C & I Distributors. Seasoning plant located at Ranadi Industrial Estate.

Below- Loading sawn timber at the Hyundai owned new Timber Seasoning Facility, also located at Ranadi Ind. Estate.



FELLOWSHIP FOR LOCAL COUNTERPART FRANCIS SENE

Nature of Training Required- SAW DOCTORING with concentration on Maintenance/Serviceing of Carbide tipped (TCT)Cutting Tools- (for Saw Blades, Spindle moulder/Router Cutters and Planers.)

Mr. Francis Sene is the local counterpart of Furniture Specialist Vincent Palcong in the UNIDO Project SOI/90/007. He is working alongside Mr. Palcong in providing industrial extension services to the woodworking industry in the Solomon Islands.

Mr. Sene is currently a Labour Officer in charge of the Carpentry and Joinery Trades of the National Trade, Testing and Training (NTTT) of the Ministry of Commerce and Primary Industries (MCPI)

He is working with the Furniture Specialist to learn and assimilate the techniques of delivering Industrial Extension Services to the industry covering technical/technological aspects, i.e. machinery selection/operation and maintenance, cutting tool maintenance, product development, product costing, shop layout, on the job-training of workers etc.. He also conduct skill training in woodworking trades to un-skilled , semi-skilled and skilled workers, including testing and certifying skill level requirements of workers for the industry.

There is a large quantity of old/second hand woodworking machines in the Solomon Islands. The industry also imports all its machinery needs, mainly from Australia and Japan. Some of these imported machines are also European made equipment.

These machinery are supplied with Special type Cutting Tools, like Carbide Tipped and Stellite Blades. The local dealers also do not provide after sales service and special machines to service these cutting tools.

Maintenance of Tungsten (TCT) Carbide tipped blades and stellite blades require highly skilled maintenance personnel.

The SICHE-School for Industrial Development purchased a Carbide Tipped (TCT) Saw Sharpener in early 1991. The UNIDO Furniture Specialist conducted training in operating the machine and in servicing TCT Saw Blades for SICHE-SID personnel and also workers from existing woodworking enterprises in Honiara.

The SICHE-SID is now providing maintenance services for TCT saw blades for existing enterprises in Honiara and in the provinces, including those TCT blades used by the Vocational Training Centres, boatbuilders and small building construction companies at a reasonable servicing fee.

However, the existing TCT Sharpener at the SICHE is only able to sharpen saw blades with a maximum diameter of 18 inches. There is a need to service larger diameter saw blades, including those TCT blades for moulders, routers and stellite blades for band saws.

The SICHE -SID indicated they are prepared to allocate funds to purchase a UNIVERSAL TCT Sharpener, to meet the requirement in servicing all types of TCT blades (for saws, moulders, routers) and possibly stellite blades for band saws. A private company may also be encouraged to put up the facility and charge the other companies for services rendered.

It is not possible to train a local Solomon Islander in the maintenance of TCT and Stellite Cutting Tools in the Solomon Islands due to non-availability of the needed equipment/machines for this purpose. Special equipment are needed to carry on such a training course.

It is proposed that Mr. Francis Sene,, being a counterpart of UNIDO personnel working for the woodworking industry will undergo a six (6) weeks training overseas. The main area of training will be in the Maintenance of Tungsten Carbide (TCT) Blades and Stellite Blades.

ESTIMATED COST OF TRAINING

It is estimated that the total cost of training is US\$8,000. This will cover cost for return air fare, accommodation per diem and training fee, in AUSTRALIA.

INDUSTRIAL TRAINING FOR WOODWORKING TRADES
(Solomon Islands)

Background:

Industrial training activities for the benefit of the entrepreneurs and workers of woodworking businesses in the Solomon Islands started in June 1990. This was a Skill-Upgrading Course in Wood Finishing Techniques conducted by a Joinery/Furniture Specialist attached to a UNIDO Project SOI/88/002 at the Carpentry/Joinery workshop of the School for Industrial Development- at the SICHE in Honiara.

This training course started a close coordination of training activities between the woodworking industry sector, the SICHE-School for Industrial Development and the Industrial Development Unit of the Ministry of Commerce and Primary Industries(MCPI).

This course was followed later by other similar Skill-Upgrading courses covering Machinery Operation and Cutting Tool Maintenance at the SICHE-SID workshop. It also formally established a linkage between the industry and the SICHE.

The programme expanded when Skill Upgrading Courses were arranged and conducted at the training centres of the National Trade, Testing and Training Centres in Honiara and in Western Province. Also, similar courses were conducted at the workshop premises of the MTWU Provincial workshops in Auki, Malaita Province, and in Kirakira, Makira/Ulawa Province.

All of these industrial training courses were organized and conducted by a UNIDO Joinery/Furniture Expert attached to SOI/88/002 and then to SOI/90/007.

Participants in these courses are entrepreneurs, supervisors, foremen and workers of existing Joinery/Furniture Businesses. Vocational Instructors from vocational training centres and some workers of building construction companies also attended these training course.

The Ministry of Commerce and Primary Industries played a major role in developing and conducting these technical courses, through a UNIDO Project SOI/88/002 and then SOI/90/007 by organizing the programme, providing Technical Personnel to conduct the courses and providing funds for training materials and per diem of trainees/participants.

1. NEED TO STRENGTHEN THE PROGRAMME OF INDUSTRIAL TRAINING FOR THE BENEFIT OF THE WOODWORKING INDUSTRY

There is an immediate need to strengthen the programme of industrial training to ensure that this very important activity will continue after the departure of the UNIDO Personnel who initiated, promoted and developed the programme.

UNDP/UNIDO project have specific life span. It is envisioned that industrial training in the form of "Short Courses" designed to upgrade the skills of workers in the industry will be successfully carried out after the closure of UNIDO Project SOI/90/007.

The School for Industrial Development(SID) is adequately equipped with the training facilities to carry out industrial training courses. It also have technical staff, qualified enough to conduct some of the training/subject areas that meet the skill requirements of the industry.

The SICHE- School for Industrial Development should play a major role in industrial training activities for the industry.

A technical staff member of the MCPI (Mr. Francis Sene) who is currently the local counterpart of a UNIDO Technical Personnel will provide support in organizing and conducting Skill-Upgrading Courses for industry workers. He will also identify the skill requirements in the industry and liase with the training institutions in the conduct of training programmes.

2. SKILL REQUIREMENTS OF THE JOINERY/FURNITURE INDUSTRY.

Due to a change in government policy with regards to the timber industry, it is expected that in the next few years, there will be a significant increase in the volume of logs processed into sawn timber. Most of these sawn timber will be exported, however, there will be a large quantity of sawn timber available for the local market that needs to be processed into finished products, e.g., joinery and furniture products.

The existing Joinery/Furniture industries are now capable of meeting the requirements of the local market in terms of product quality at a competitive price to that of imported items. But the size of the local market is very small. There is

therefore a need to identify and develop enterprises with potentials to go into export oriented operations.

A growing industry sector needs skilled manpower. The SID-SICHE should play a very important role in meeting the skill requirements of the industry. Short Duration Courses can be conducted to train people in the following categories:

a. Production Supervisors/Foremen.

These are needed to carry out an efficient operation of factory floor manufacturing activities. Specifically, the industry needs experienced foremen in machinery operation, assembly section foremen and in finishing section.

b. Skilled workers in machinery maintenance and in cutting tool maintenance.

The industry imports mostly, or rather all its machinery and equipment needs. In the absence of local dealers that can provide reliable service and spare parts, the breakdown of machines and equipment still remain a big problem. Skilled maintenance personnel are needed to keep these machineries in good working condition and to prolong the good performance and life of the equipment.

The woodworking industry in the Solomon Islands has a large quantity of old machinery (sometimes already considered obsolete in other countries) and most of these have already exceeded their life span. Also, there is an increasing importation of second hand machinery for use in the wood-working industry. This situation indicates an urgent need for qualified maintenance workers in the industry.

3. NEED TO REVIEW/REVISE THE COURSE SYLLABUS-(Carpentry and Joinery) at SID-SICHE.

The course content of the present syllabus in carpentry and joinery at SID-SICHE is designed specifically for skill training towards the Building Trades. There is less emphasis on skill training required for the woodworking trades.

There is a need to review the course syllabus, to include increase (more) in training hours for woodworking specialist skills, i.e. a.) wood finishing techniques b.) machinery operation and maintenance, including use of machining jigs, c.) furniture designing and construction and d.) product cost estimation.

The size of the woodworking industry in the Solomons is very small. If a woodworking trade course is offered at SID, as a separate course from the Building trade courses, the industry may not be able to absorb/provide employment for graduates of the woodworking courses .

The woodworking and building trade courses can be offered as one (1) course for a four year duration. The trainees will undergo training both in building trades and in wood-working trades during first year and second year duration. The third and fourth year term will deal on specialization course wherein the trainee may decide when entering the third year level on which course he/she decides to have specialization.

To be effective in meeting the requirements of the industry, the course syllabus must be reviewed once in every two or three years.

4. LINKAGES BETWEEN INDUSTRY AND SICHE IN INDUSTRIAL TRAINING ACTIVITIES.

The MCPI, through a Joinery/Furniture Specialist of a UNIDO Project, initiated, promoted and organized the linkage of training activities between the woodworking industry and the SICHE, including other training institutions, like the NTTT Centres and MTWU workshops. These training activities should be continued and strengthened for the benefit of the private sector enterprises.

The SICHE already have the personnel and training facilities to carry on industrial training programmes for the workers of the woodworking industry.

Currently the UNIDO Project attached at MCPI provides technical personnel and funds for training materials for this purpose.

It is expected that the private sector will partly meet the cost of industrial training activities through the payment of course fees. During the next 12-18 months, should slowly increase training fees to prepare for the final phase out of UNDP/ UNIDO funding after completion of UNIDO Project SOI/90/007. SICHE on the other hand will provide the personnel and training facilities. The MCPI (through NTTT) will provide support in liaising with the industry, organizing the course participants and also to provide technical personnel as needed.

-70-
INDUSTRIAL TRAINING 1993
ESTIMATED BUDGET REQUIREMENTS FOR
INDUSTRIAL TRAINING IN 1993- WOODWORKING INDUSTRY

1. Nature of Training - Wood Finishing Techniques (Two sets of Courses.)

Venue- one course in Honiara

-one course in a selected provincial centre.

Number of Participants- maximum of 15 persons per course or total of 30 persons.

Duration of Training- 35 training hours per course (5 days)

Estimated Cost of training in SI Dollars.

a. Training materials- SI\$ 1,000 per course or total cost $\$1,000 \times 2 = \underline{\$2000}$

**b. DSA for trainees at SI\$ 15 per day
 $= 15 \times 15 \times 5 \text{ days} = \underline{\text{SI\$ } 1,125} \times 2 = \underline{\text{SI\$ } 2,250}$**

c. Miscellaneous - SI\$200 per course $\times 2 = \underline{\$400}$

TOTAL COST OF TRAINING= $\$2,000 + 2,250 + 400 = \underline{\$4,650}$

2. Nature of Training- Machinery Operation and Maintenance- including use of machining jigs. (two sets of courses)

Venue- one course in Honiara

- one course in selected provincial centre

Number of trainees- max. of 12 per course or total of 24 persons.

Duration of Training- 35 training hours- per course (5days)

Estimated Cost of Training

a. Training Materials= \$700 per course or total of $\$700 \times 2 = \underline{\$1400}$

b. Rental for Venue/Facilities= $\$350$ per course or total $350 \times 2 = \underline{\$700}$

c. Miscellaneous cost- \$200 per course or $200 \times 2 = \underline{\$400}$

TOTAL Cost- $\$1400 + 700 + 400 = \underline{\$2500}$

ESTIMATED TOTAL COST FOR FOUR SETS OF TRAINING COURSES IN 1993- $\text{SI\$ } 4,650 + \text{SI\$ } 2,500 = \text{SI\$ } 7,150.$

(Seven Thousand One Hundred Fifty Solomon Dollars only.)

NOTE- It is expected that SID-SICHE and NTTT -(MCPI) will provide Trainers/instructors FREE OF CHARGE.

Success from an \$800 Start

T.S. Joinery is typical of most businesses owned by indigenous Solomon Islanders.

They start with a little bit of cash from the family's meagre savings and with their self-developed skills, they invest the money and take a plunge into a business venture. They start small, have a lot of problems initially but once that is passed, they settle down to a steady operation.

Starting your own business is not necessarily a big money venture if you have some skills and the drive to succeed as Johnson Hoonimae found out in talking to one of the Solomon Islands successful new small businesses, T.S. Joinery - another feature in the "Start Your Own Business" Series.

had worked for another joinery shop and acquired the skills they would need to branch out on their own.

"My father helped us with \$500 and I put in \$300 plus my skills and that of my brothers," said Hedley.

From humble beginnings in 1989 in a tin shed, T.S. Joinery is now estimated to be

In June 1990 it moved to its very own factory at Ranadi and by now TS Joinery was concentrating on orders from the College as well as the government which enabled it to secure a loan from a commercial bank to purchase a number of major pieces of equipment including a thickness planer, a radial arm saw, a moulder and some benchsaws.

TS Joinery has a policy of supporting other local resource owners in the country and orders all its timber from local landowners and not from a timber yard. The tim-

"I believe that as a furniture manufacturer I must always be suggesting new designs to my customers."

And that policy so far has been very successful. TS Joinery released two new designs for an office table and a drawer during the recent National Trade Show and immediately had orders.

TS Joinery also believes in giving excellent after-sales service to its clients and Hedley sees good reason for doing this.

"We only accept our own products for repairs because through this we are able to find out the deficiencies in our products and continue to improve on them all the time."

TS Joinery has no complaints about the assistance it has received from the government. Hedley was recently sent on two management courses, the first in Papua New Guinea and the other in Vanuatu.

The Government has also given the company a three year tax holiday which is soon to expire and more recently a government funded consultant from Philippines was attached to the company to concentrate on improving the finishing skills of the 10 employees at the TS Joinery.

There are a lot of jobs for TS Joinery but space is holding them back. Hedley reveals that the company will start next month to extend its factory to provide more space for stock.

He is also about to enlarge his workforce with four new jobs and has plans to add another two to his staff, including an accountant.

He hopes to negotiate a good deal with anybody who has a kiln drier.

So next time you sit down on an office chair, or sleep on a wooden bed or eat at a table, take a moment to find out who has built all that furniture. It

"We find out our deficiencies through after-sales repairs"

could be from TS Joinery, the family furniture manufacturing



TS Joinery has recently extended into brick-making at its Ranadi factory.

the point where it can start looking at exporting its products.

Hedley is proud of the fact that Solomon Islands has some of the best timber in the world, but his only problem right now is kilndrying facilities. The whole country can be proud of.

From humble beginnings in a tin shed, TS Joinery is now worth \$400,000

T.S. Joinery, which manufactures a wide range of furniture from household and office to screen printing

worth around \$400,000. But this has not been achieved without its problems. In the early



Hedley Toata (l), Manager of TS Joinery, watches one of his workers put the finishing touches to a table leg using a woodworking lathe.

frames, started operations in a little shed near the former JBM area at Ranadi, in Honiara.

The idea to start came from Hedley Toata, the eldest of four brothers who now owns the business with its own factory at Ranadi Industrial Estate and as well as timber products, the business also now makes bricks.

The four brothers

days there were problems with the finishing of the furniture. The company did not have the right machinery so for six months T.S. Joinery struggled on to establish itself with whatever it had.

The struggle was over when the company landed a major contract with the Solomon Islands College of Higher Education worth \$15,000.

ber is dried in the sun for several months.

"I have already placed my timber orders for next year's operations so that the timber will be ready by the time January comes round," said Hedley.

One of the most important things that Hedley believes puts TS Joinery ahead of other furniture makers in Honiara is their designs.



Above- CONFERENCE TABLE MADE OF SOLID WOOD MANUFACTURED BY HTQ FURNITURE SHOP. TABLE BOUGHT BY KUMAGAI GUMI CONSTRUCTION COMPANY FOR ITS BOARDROOM.

Below- OFFICE TABLES MANUFACTURED BY T. S. JOINERY. TEN OFFICE TABLES OF THESE DESIGNS BOUGHT BY HARVEST PACIFIC FOR ITS NEW OFFICES AT RANADI AREA.





Above-SPRAY FINISHING (Lacquer) OF A SERVING TROLLEY AT T & T JOINERY-Gen. Maintenance Shop- PRODUCTS SHOWN AT THE BACKGROUND IS A MODEL FOR A FOLDING TABLE AND A FOLDING DISPLAY SHELF.

Below- PROTOTYPE OF A DROP LEAF-FOLDING TABLE MADE AT THE MTWU JOINERY SHOP IN HONIARA.





**Above- COFFEE (Centre Tables) TABLES MADE OF SOLID WOOD
MANUFACTURED BY ZEOZA FURNITURE SHOP AT
RANADI, HONIARA. TABLES WERE BOUGHT BY FORUM
FISHERIES AGENCY FOR ITS STAFF HOUSES.**

**Beiw- A DINING TABLE MADE OF SOLID WOOD, MANUFACTURED
BY ZEOZA FURNITURE SHOP.**





Above-SPRAY FINISHING (Lacquer) FOR A SOLID WOOD COFFEE TABLE AT R. TONI FURNITURE SHOP. PRODUCT WAS DISPLAYED AT THE NATIONAL TRADE FAIR.

Below- SPRAY FINISHING FOR OFFICE CABINETS AT T S JOINERY SHOP. FOUR SETS OF MODULAR CABINETS OF THIS DESIGN BOUGHT by Solomon Breweries (SOLBREW) NEW OFFICES.

