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DEVELOPMENT OF SECONDARY WOOD PROCESSING INDUSTRIES

DP/GUY/86/005

THE REPUBLIC OF GUYANA

Technical report: UNIDO/UNDP Seminar on Furniture and Joinery  
Industries, held in Georgetown from 4 to 15 May 1987\*

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

Based on the work of Desmond P. Cody  
Industrial Engineer and team leader

Backstopping officer: A. V. Bassili, Industrial Rehabilitation and Management Branch

United Nations Industrial Development Organization  
Vienna

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1. Introduction

In 1985, Guyana is estimated to have exported a total of 17.64 million ft<sup>3</sup> of timber and timber products valued at G\$ 18,200,185. The value comprised G\$ 17,649,155 sawn timber and G\$551,030 other wooden products, mainly furniture.

As at 1 January 1987, there are more than 100 furniture/joinery manufacturers in Guyana of which 20 are engaged in some degree of exports. Generally, however, the proportion exported is small representing not more than 10% of total sales for the largest exporter. Most of the manufacturers are medium sized and small - sized family establishments. They possess the basic skills of furniture and joinery manufacturing, but there is an urgent need for them to modernise and upgrade their production especially for export.

Factors which have contributed to this situation in the industry are its relative ignorance of and isolation from up-to-date technological developments, a lack of detailed knowledge of, or expertise in, furniture design and quality standards, a continuing low level of investment brought about by the continuing current poor economic climate, untrained and inexperienced management, grave difficulties in obtaining essential raw materials, low productivity and little knowledge of foreign markets or their requirements.

A survey of the industry was conducted by Desmond Cody, Industrial Engineer and UNIDO Consultant, in 1985 to examine the problems facing the development of the furniture and joinery industries towards higher productivity through improved design, production and management capabilities.

Following the survey, the Consultant, in collaboration with Clayton Hall, Head of the Forest Industries Development Unit, Guyana Forestry Commission designed the programme for this seminar relating to the special needs of the furniture and joinery industries.

## 2. Objectives

The main objectives of the seminar were:

- A. To provide the participants with an insight into the latest design and manufacturing trends and the efficient and modern techniques of furniture and joinery production and marketing.
- B. To offer the participants an opportunity to exchange their experiences as well as ideas with the Consultants and among themselves on the furniture and joinery industries.
- C. To assist the participants individually, where necessary, with an ad hoc consultancy service on marketing, design and technical problems concerning their operation.

## 3. Programme

The programme of the seminar is given in Annex 1. It consisted of 29½ hours (50 percent) of lectures, 15½ hours (26 percent) of demonstrations in the Development Unit of the Guyana Forestry Commission, 3½ hours (6 percent) on background information opening and closing ceremonies and administrative matters, 3½ hours (6 percent) of panel discussions and 40 man hours of consultancy which included discussions, demonstrations and visits by individual consultants to the factories and workshops of requesting participants.

The lectures, in the main, were relevant to the needs of the participants and up to the required standard. Each was fully documented and, where appropriate, illustrated with charts, diagrams, sketches and detailed drawings. Individual lecturers made liberal use of visual aids to illustrate their topics and these included overhead projector and epidiascope, sample equipment (e.g. jigs, cutters etc.) and sample components prepared by Messrs. O'Driscoll and Blackburn respectively, did not, unfortunately, arrive with their personal baggage but it was possible to prepare some substitute materials in the Guyana Forestry Commission workshops prior to the demonstrations concerned.

The equipment referred to did eventually arrive and will be of future use to the Guyana Forestry Commission workshop and the industry.

#### 4. Participants

The seminar was intended for sole proprietors, partners, production managers, foremen and supervisors of furniture and joinery factories and for all those who wished to acquire up-to-date knowledge of modern furniture and joinery production and its marketing techniques with particular reference to exports.

There were thirty-five participants, some of whom were of a high technical and managerial level. Most, however, were not and should have benefitted considerably from the proceedings. They were, at any rate, keen to get as much information as possible out of the lectures, discussions, and consultancy service. They had no difficulty in understanding the lecturers nor in expressing themselves. Average attendance was 90 percent. The list of participants is given in Annex II.

#### 5. Documentation

In addition to the documentation prepared by the lecturers in respect to particular aspects of each topic, the following UNIDO publications were available for reference purposes:

##### Title

- Furniture and Joinery Industries for Developing Countries
- Technical Criteria for the Selection of Woodworking Machines
- Manual on Documentation and Information Systems for Furniture and Joinery Plants in Developing Countries
- Value Analysis in the Furniture Industry
- Manual on Upholstery Technology
- Manual on the Production of Rattan Furniture
- Low-Cost Automation for the Furniture and Joinery Industries
- Manual on jigs for the Furniture Industry
- Information Sources on Woodworking Machinery

- Information Sources on the Furniture and Joinery Industry

6. Seminar Library

Relevant books, catalogues, detailed drawings and sketches were brought mainly by the consultants and made available to the participants.

Photocopies of articles of special interest were also made available on request.

7. Consultancy and Seminar Assignments

The non-residential nature of the seminar and the limited time at the disposal of the participants outside that for lectures and demonstrations made the carrying-out of group assignments impractical. Instead, each participant was invited to assess his own factory's current level of management and manufacturing performance in the light of the seminar topics and to prepare in consultation with the relevant consultant proposals for its improvement. In each instance, it was to be specific and relate to a particular aspect of marketing, design, production technology and management. Particular emphasis was laid on basic production technology, an area in which, in the opinion of the consultants, there appeared to be much need for improvement.

The aspects dealt with included the following:

- (1) Machine identification, adaptation for particular types of processing and preparation of lists of spares and accessories currently missing, as well as sources of supply.
- (2) Operation, in particular, of spindle moulder and router.
- (3) Design of jigs suitable for surface planing, ripping, bandsawing, spindle moulding and routing.
- (4) Machine set-up, cutter grinding and sharpening and use of tungsten carbide tipped (TCT) cutters and saw blades.

- (5) Design of locally made dust exhaust and compressed air-line systems.
- (6) Low-cost mechanization applied to machining and assembling procedures.
- (7) Product design in respect to items produced mainly from solid wood. These included dining-room chairs, tables, upholstery and some storage units.
- (8) Design problems relating to dimensional, ergonomic and aesthetic considerations.
- (9) Re-design of models currently in production including planters chair, bed-ends, lounge chairs, occasional furniture and two rattan chairs.
- (10) Production technology relating to economic use of materials, structures, preparation for surface finishing and upholstery.
- (11) Selection of suitable Guyanese timber species suitable for furniture and joinery production.
- (12) Timber conditioning and use especially of Solar Kiln.
- (13) Layout of one new factory and modifications to layouts of others.
- (14) Design of individual work stations for machining and assembly procedures.
- (15) Marketing of timber, timber components and complete items of furniture and joinery to the U.S.A. Specific types of importation and distribution and materials and structural specifications.

Matters dealt with during the panel discussions included industrial training needs and possibilities for designers, production managers and technicians; selection and procurement of suitable timber species for furniture and joinery production; co-operative export activities; re-establishment of Furniture Manufacturers Association and follow-up activities to the seminar.



8. Administrative Matters

The Development Unit of the Guyana Forestry Commission, who were the local sponsors and organizers of the seminar carried out their duties efficiently. All lecture notes and other seminar materials were available on time and two full time secretaries were provided to type any additional material required.

9. Press Coverage

The Guyana press gave ample coverage to the seminar. Copies of press clippings are included in Annex III.

10. Evaluation

UNIDO's forms for the evaluation of the seminar (entitled "Evaluation of In-Plant Group Training Programmes") were completed by the participants before the end of the seminar. The replies were collated and details of this are given in Annex IV. It is evident that the seminar content responded substantially to the needs of the participants and should be instrumental in the future organization and development of their business.

The consultancy aspect of the programme was appreciated, the more so because of the willingness of the Consultants to discuss in considerable detail every aspect of the marketing and production activities of the enterprises visited and to answer fully any questions put to them.

The design clinics and practical demonstrations concerned with wood-cutting machining also proved to be very popular and the collaboration and assistance of the Development Unit of the Guyana Forestry Commission staff in preparing materials and equipment for the demonstrations contributed in no small measure to their effectiveness.

11. Assessment of the Programme

All lectures were of the expected standard and depth. However, the presentations of Mr. A. Edwards deserve special mention as they clearly reflected his considerable experience as a lecturer on Design as well as his in-depth knowledge of his subject.

The remaining lecturers' real worth was apparent from their evident day-to-day involvement with the industry at factory level and this enabled them to illustrate various aspects of their lectures with case studies taken directly from their experience.

All administrative arrangements were satisfactory.

12. Future International Assistance

Should future international assistance be contemplated for the Guyana Furniture and Joinery Industries, the Consultants are unanimous in making the following recommendations:

- (i) Establishment of a pilot scheme of export oriented industrial development for a maximum of five Guyanese companies having the immediate potential for such activities;
- (ii) Included in the proposed technical assistance package should be expertise in product design and production technology relating specifically to machining and assembly techniques and timber conditioning.
- (iii) Part of the programme should be devoted to a study tour by technical representatives of each of the participating enterprises to factories in Europe (preferably in Italy and United Kingdom) where they can be exposed to the latest technological trends in solid wood furniture and joinery processing and can have first hand knowledge of production techniques and equipment in these countries.

- (iv) Assistance should also be provided in obtaining badly needed spares and accessories for their woodworking machines as well as other materials essential for export development.
  
- (v) Assistance should also be sought from the International Trade Centre (ITC) UNCTAD/GATT to develop the furniture marketing arm of the Guyana Forestry Commission so that it, in turn, can effectively promote Guyana-made furniture especially in the United States market.

ANNEX I

PROGRAMME OF THE SEMINAR

Monday, 4th May 1987

8.30 am - 9.30 am

Registration of Participants

9.30 am - 11.30 am

Opening Addresses  
Guyana Forestry Commission

Cde. C. Philadelphia  
P.S. Ministry of Forestry

Cde. B. Udit  
Commissioner of Forests (AG.)

Ms. C. Davis  
UNDP Resident Representative

Mr. D. Cody  
UNIDO Consultant

Cde. Dharamdeo Sawh, M.P.  
Minister of Forestry

Cde. Clayton Hall  
Director of Seminar,  
Guyana Forestry Commission

1.00 pm - 1.30 pm

Scope of Seminar and Programme.  
Mr. D. Cody

1.30 pm - 3.00 pm

Marketing of Furniture, General  
Principles  
Mr. D. Cody

3.15 pm - 5.00 pm

Export Marketing of Furniture and  
Other Wood Products  
Mr. A. Blackburn

Tuesday, 5 May 1987

- 8.30 am - 10.00 am                   General Principles of Furniture Design.  
Mr. A. Edwards
- 10.15 am - 12.00 am                   Furniture Design for Production.  
Mr. A. Edwards
- 1.30 pm - 3.00 pm                    Product Development  
Production technology relating to materials used in furniture and joinery production.  
Mr. D. Cody
- 3.15 pm - 5.00 pm                    Product Development  
Prototyping and preparation for series production.  
Mr. A. Edwards  
Mr. D. Cody

Wednesday, 6 May 1987

- 8.30 am - 10.00 am                   Woodcutting Machining Technology.  
Machine Selection and Utilization  
Mr. S. O'Driscoll
- 10.15 am - 12.00 am                   Technology Relating to Sawing, Shaping, Moulding, Jointing and Sanding of Wood.  
Mr. S. O'Driscoll
- 1.30 pm - 3.00 pm                    Export Marketing of Furniture and Other Wood Products to the United States.  
General Principles and Procedures.  
Mr. A. Blackburn
- 3.15 pm - 5.00 pm                    Products, Specifications and Potential Customers best suited to Guyana Manufacturers.  
Mr. A. Blackburn

Thursday, 7 May 1987

8.30 am - 10.00 am

Woodcutting Machining Technology  
Machine Set-up and Maintenance.  
Mr. S. O'Driscoll

10.15 am - 12.00 am

Cutter Design; Cutter Grinding,  
Saw Doctoring and Use of Pneumatics  
Electrics and Hydraulics.  
Mr. S. O'Driscoll

1.30 pm - 3.00 pm

Product Design  
Design Clinic No. 1  
Mr. A. Edwards

3.15 pm - 5.00 pm

Continuation of Design Clinic  
Mr. A. Edwards

Friday, 8 May 1987

8.30 am - 10.00 am

Production Technology  
Wood processing including machine  
adaptation. Design and use of jigs  
and Other Production Aids.  
Mr. S. O'Driscoll

10.15 am - 12.00 am

Tolerance Determination and Quality  
Control.  
Mr. S. O'Driscoll

1.30 pm - 5.00 pm

Assignment Work with Consultants.

Monday, 11 May 1987

8.30 am - 10.00 am

Product Design  
Design Clinic No. 2  
Mr. A. Edwards

10.15 am - 12.00 am

Continuation of Design Clinic  
Mr. A. Edwards

1.30 pm - 3.00 pm

Woodworking Factory Planning.  
General Principles and factors to  
be taken into consideration  
Mr. D. Cody

3.15 pm - 5.00 pm

Layout of Furniture Plant  
including plant selection,  
location and design of individual  
work stations  
Mr. D. Cody

Tuesday, 12 May 1987

8.30 am - 10.00 am

Production Control and Productivity  
Planning and Programming  
Documentation  
Mr. D. Cody

10.15 am - 12.00 am

Performance monitoring  
Mr. D. Cody

1.30 pm - 3.00 pm

Timber Selection and Conditioning  
Guyanese Timber Species Suitable  
for Furniture & Joinery Production  
Mr. C. Hall

Wednesday, 13 May 1987

8.30 am - 10.00 am

Management of a Woodworking Plant  
Production and Supervisory Management.  
Mr. D. Cody

10.15 am - 12.00 am

Management Functions  
Including Financial Control  
Personnel Selection and Training  
Productivity achievement  
Mr. D. Cody

1.30 pm - 3.00 pm

Panel Discussion.  
Role of Government and other Agencies  
in assisting in the Development of  
the Furniture and Joinery Industries

Follow-up Action to Seminar.

3.15 pm - 5.00 pm

Closing Ceremony  
Presentation of Diplomas.

ANNEX II

LIST OF PARTICIPANTS

<u>NAME</u>	<u>FUNCTION</u>	<u>ADDRESS</u>
1. Mr. Eustace Ageda	Draughtman	Guyana Forestry Commission
2. Mr. Prakash Balra,	Asst. Sales Manager	Toolsie Pereaud Limited
3. Mr. Vibert Benjamin	Acting Charge Hand	Guyana National Engineering Corporation
4. Mr. Rustum Bulkhan	Director	Precision Woodworking Limited
5. Mr. Neville Chan	Manager (Cooperage Department)	Demerara Distillers Limited
6. Mr. Edward Chand	Sample Maker & Joiner	NCE Screen Printers Limited
7. Mr. Wendell Charles	Joiner (Department of Research & Planning)	Guyana Police Force
8. Mr. George Cole	Supervisor, Timber Products Facility	Guyana National Engineering Corporation
9. Mr. Colin Craigwell	Production Clerk	Guyana Forestry Commission
10. Mr. Ramsunder Gobin	Factory Manager	Ramsunder Gobin Woodworking Establishment
11. Mr. Patrick Greene	Joiner (Department of Research, Planning & Construction)	Guyana Police Force
12. Miss Patricia Griffith	Charge Hand	NCE Screen Printers Limited
13. Mr. Peter Griffith	Supervisor of the Joinery Unit	Guyana Forestry Commission
14. Mr. Anthony Higgins	Joiner	Guyana Forestry Commission
15. Mr. Mark Harris	Designer-Joiner	Woodwork Establishment



<u>NAME</u>	<u>FUNCTION</u>	<u>ADDRESS</u>
16. Miss Phillipa Hazel	Production Manager	NCE Screen Printers Limited
17. Mr. Jagerneath	Joiner (Cooperage Dept.)	Demerara Distillers Limited
18. Mr. Jalill Khan	Managing Director	Aziz Bacchus & Co. Limited
19. Mr. Stanley Lachmansingh	Manager	Industrial Domestic & Electrical Appliances Limited
20. Mr. Edward Lewis	Manager	Lewis & Sons Enterprises
21. Mr. John Lewis	Group Deputy Works Manager	Industrial Domestic & Electrical Appliances Limited
22. Mr. Evan Mingo	Supervisor	NCE Screen Printers Limited
23. Mr. Edward Persaud	Maintenance Supervisor	NCE Screen Printers Limited
24. Mr. Royston Peters	Joiner	Guyana Forestry Commission
25. Mr. Taijwant Prashed	Supervisor (Woodworking Department)	A.H. & L Kissoon Limited
26. Mr. Negamdeo Ramadar	Supervisor (Tools & Maintenance(Machine)	A.H. & L Kissoon Limited
27. Mr. Devenand Ramnaraine	Production Manager	Liana Manufacturing Co. Ltd
28. Mr. Guildford Rodney	Carpenter/Joiner	Construction Management Combine Limited
29. Mr. C.S. Shivnarine	Senior Assistant Manager (Wood Products Dept.)	Industrial Domestic & Electrical Appliances Limited
30. Mr. David Singh	Joiner	Fries Furniture Establishment
31. Mr. Khes Ram Singh	Factory Manager	Shiva Woodworking Establishment
32. Mr. Mohabiz Singh	Manager	Tropical Woods
33. Mr. Derek Subramanyis	Cabinet Maker	Construction Management Combine Limited

<u>NAME</u>	<u>FUNCTION</u>	<u>ADDRESS</u>
34. Mr. Mortimer Tieschmaker	Carpenter Supervisor	Institute of Applied Science & Technology
35. Mr. Orrin Davis	Production Manager	Walvis & Sons Woodworking Establishment
36. Mr. Kheeraj Surujbelli	Supervisor	A.H. & L. Kisson Limited
37. Mr. Peter Gittens	Manager	NCE Screen Printers Limited

## Two-week seminar set for May 4

# Intensive 3-yr programme to develop furniture, joinery industries

An intensive three-year programme aimed at developing the furniture and joinery industries in Guyana, is being undertaken by the Government of Guyana and the United Nations Development Programme, UNDP. As a result it is hoped that the quality of manufactured wooden products for local and export markets would be enhanced, thus helping to boost the country's economy over the next few years.

The programme will begin on May 4 when a two-week seminar will be declared open by Forestry Minister Cde. Dharamdeo Sawh.

The seminar, FURN-TECH - 87, is being sponsored by the Forest Industries Development Unit (FIDU) of the Guyana Forestry Commission and will be for persons involved in the furniture and joinery industries.

Its immediate objective is to familiarise mainly private sector entrepreneurs with recent developments in the furniture and joinery industries, to enable them to enter Caribbean, and later, Organisation for Economic Co-operation and Development (OECD) markets. And its stated developmental objectives are to support the policies and efforts of the Government of Guyana in the development of the country's furniture and joinery industries, to benefit from Guyana's rich natural forest resources and to supply both the domestic and export markets with high quality components and items of furniture and

joinery.

Thirty-five participants will be selected from the Public and Private sectors to be trained in a number of areas including up-to-date production technology, surface finishing and tool and machine maintenance.

Most of the two-week programme will be conducted by a team of consultants/lecturers from overseas. Heading the team will be External Co-ordinator Desmond Cody, a consultant in furniture and wood industries who spent most of last year in Guyana conducting a survey on technical assistance for furniture industries.

A senior official of the Ministry of Forestry said that the Ministry is encouraging furniture and joinery manufacturers to grasp the opportunity to improve their skills and added that he felt they would, in this way, make

significant contributions to the country's economy as they improve the quality of their products.

Furniture and joinery establishments are being invited to submit the names of candidates for the seminar and interested persons can contact the office of the Commissioner of Forests, Guyana Forestry Commission, Kingston.

The official also noted that the Guyana Forestry Commission has already received responses from a number of public and private manufacturers including A.H&L Kisson, Precision Woodworking Establishment, Guyana National Engineering Corporation and Guyana Liquor Corporation. Other establishments, he added, would do well to send in the names of their candidates as soon as possible.

The May 4-15 seminar is the first of the

project's two phases for 1987. The other will see the establishment of saw-doctoring and tool-maintenance facilities at the FIDU Complex, which will be for the benefit of the forestry industry as a whole.

Other phases include specialised training in furniture designing (over-seas), tool selection and maintenance and the establishment of a common services facility at the FIDU in areas of wood preservation and seasoning. This will complement the furniture industry with the production of first quality wooden components.

An employee of Guyana Wood Products Limited, Louis Bascom, has already been selected to undergo a one-month training course next month in Yugoslavia, in the production management of wood processing industries.

IN Guyana there are some 1 000 species of hardwoods in our forests which could be harvested commercially. Additionally, there are approximately 1 000 varieties of woods among those species, which if exploited, could be used for building purposes and for making furniture and various decorative items.

However, according to Cde. Balkaran Udik, Commissioner of Forests (ag), only 180 species of our hardwoods are currently being extracted for commercial purposes by local loggers and sawmills. This leaves the greater part of our forestry resources untapped.

Speaking on Monday at the opening of a two-week seminar on furniture and joinery industries at the Guyana Forestry Commission, Cde. Udik said that the time had come for greater use to be made of all of the country's indigenous woods.

The seminar, which brings together furniture manufacturers from all over the country who are attending the seminar, were urged to acquaint themselves with all local woods and to apply appropriate technology when using all the species of Guyana's

# Greater use must be made of Guyana's indigenous woods

woods to make products of quality for the local and overseas markets.

Cde. Udik noted that other industries and commercial activities could emerge if the furniture manufacturing industry is organized and run efficiently. Saw dust and shavings could be used to make a form of plywood and ceiling material that is in great demand here and

further afield, he said.

Research, especially in the area of wood preservation, must be carried out, and local entrepreneurs must encourage and support this activity for the development of the industry, Cde. Udik stressed.

The seminar has been organised by the Guyana Forestry Commission with support from the United

Nations Industrial Development Organisation (UNIDO) and United Nations Development Programme (UNDP). During the course of the next two weeks, four UNDP/ UNIDO specialist consultants will teach local furniture manufacturers modern production technology, design improvement, quality control and marketing strategies.

## Furniture manufacturers prepare for the export market

Guyana Chronicle, Wednesday 1987-04-29

GUYANESE furniture manufacturers will be introduced to new technology in the furniture industry during a seminar early next month.

The seminar, to be held from May 4 to 15 at the Forest Industries Development Unit, Kingston, is aimed at helping manufacturers to penetrate the export market.

Furniture manufacturers and joiners from both the private and the public sectors are expected to participate.

Among resource persons for the seminar will be Mr. Sean Odliscoll, consultant in operation and maintenance of wood working machinery; Mr. Arthur Edwards, consultant in Furniture designing; and Mr. David Blackburn, consultant in Furniture Marketing.

These officials are based at

the United Nations Industrial Development Organisation (UNIDO) in Vienna, Austria.

UNIDO provides advisory service on policy and

programmes on: industrialisation of developing countries in a wide range of areas including technology transfer.

# Furniture makers prepare to more than triple export earnings this year

Guyana Chronicle, Tuesday, 1987-05-05

THE local furniture industry is moving to capture a greater share of the overseas market this year, as the industry gears itself to produce larger quantities of furniture of a better quality, using more species of the country's indigenous woods.

Speaking yesterday at the opening of a two-week seminar on furniture and joinery industries at the Guyana Forestry Commission, Kingston, Minister of Forestry Cde Dharamdeo Sawh said that export earnings from furniture for 1986 was some \$551 000 (US). But sales so far for this year amount to some \$400 000 (US), with another \$1½ m on order.

The seminar has been organised by the Guyana Forestry Commission with support from the United Nations Development Programme (UNDP) and United Nations Industrial Development Organisation (UNIDO). Four UNDP/UNIDO specialist consultants are conducting the seminar. In attendance are furniture manufacturers from around the country.

The four specialist consultants are Mr Desmond Cody, team leader; Mr Aas Blackburn, International Marketing Specialist; Mr Sean O'Driscoll, Technical Production Consultant and Mr Arthur Edwards, Design Consultant.

They are expected to train participants in modern production technology, design improvement, quality control and marketing strategies.

Minister Sawh, in his address, said that the Government recognised the vital role the furniture industry can play in the economic recovery of the nation. Furniture manufacturers, he said must become more organised so as to be able to make

representation to Government and other agencies as a cohesive unit.

Over the years, the production of furniture, especially for overseas markets, has not been adequate. Guyana has the resources, personnel and entrepreneurs to win a fair share of that market, Cde Sawh said. But he noted that manufacturers must strive for the highest quality, while keeping the cost of production down.

And UNDP Resident Representative in Guyana, Miss Cecile Davis, said that

the UNDP continues to work in close partnership with Government on several developmental projects. This seminar is just an aspect of one such project which aims at assisting Government to maintain proper management and utilisation of the country's forestry resources.

Mr Desmond Cody said that consultants will strive to assist in the export orientation of the furniture and joinery industries. They hope to expose the industry to the latest state-of-the-art as far as furniture making is concerned.

## Workshop on Furniture Industry

A TWO-WEEK workshop to bring business-men up-to-date with developments in the furniture industry, while helping them to enter Caribbean and other markets, is being arranged by the Forest Industries Development Unit.

The unit, part of the Guyana Forestry Commission, has organised the workshop from May 4-15, in collaboration with the United Nations Industrial Development Organisation (UNIDO).

Each participant will have to pay a registration fee of \$1 000, as well as present a short paper on his/her organisation's plans.

Interested persons can contact the Forestry Commission, Water Street, Kingston, not later than April 10.



UNDP Resident Representative in Guyana, Desmond Cody, Mr. Aas Blackburn, Mr. Sean O'Driscoll and Mr. Arthur Edwards, Miss Cecile Davis with (from right) Mr.

ANNEX IV

UNDP/UNIDO FURNITURE AND JOINERY INDUSTRIES SEMINAR

EVALUATION - GROUP TRAINING PROGRAMMES

Name of participants:

Programme: Seminar on Furniture and Joinery  
Industries, Georgetown, Guyana

I. PROGRAMME CONTENT AND ORGANIZATION:

1. What is your opinion of the total duration of the course:

Too long  Just right  Too short

If not "just right", what, in your opinion, would be the most suitable duration for the course?

2 weeks  4 weeks  6 weeks  8 weeks  9 weeks

Please comment:

Different topics not sufficiently explored.

Course too short to cover every aspect.

All the important aspects covered adequately.

Course too comprehensive for such a short period.

Notes should be issued prior to each lecture.

Just not enough time.

More time required for revision.

More time would have allowed emphasis on the Guyana situation.

2. State your opinion about the daily schedule:

Too heavy  4      Just right  28      Too light  1

Comments:

Programme well planned and executed (20)

More time needed for interfacing in group discussions. (3)

Too much crammed into programme and time available for Study information or Revision (2)

3. Would you suggest any changes in the general nature of the training programme? Yes

Comments:

More practical demonstration sessions and plant visits (12)

Need for case study sessions (10)

Programme should be of a longer duration probably 3 weeks (5)

Sometime should be spent on the more practical problems that face the industry in the country (3)

4. Do you feel that the training corresponded to your professional needs? Yes (34)

Please comment:

Guyana needs more training programmes like this one in-order to raise standards in every area of production from: Technological, Managerial and skills development (12)

Except in the area of surface finishing which did not materialise during the training programme. This is very important to ensure proper presentation overseas (1)

5. What do you think of the general level of the training?

Much too high

Too high 1

Adequate 33

Too low

Much too low

Comments:

Lecturers made their presentations simple and straight forward; everyone was able to understand, communication was made easy, and the methods of instructions were laudable. (33)

Disappointed that there were no lectures on upholstery and surface finishing. (25)

6. Which subjects of the programme did you find most valuable? (please state reason, for example new subject, my speciality, relevant to my work, new information etc.)

<u>Subject</u>	<u>Reason</u>
1. Raw timber supply	New information (3) Relevant to my work (3) My speciality (1)
2. Marketing in United States	New information (6) New subject (1) Relevant to my work (2)
3. Organization for production	New information (2) My speciality (2) Relevant to my work (5)



<u>Subject</u>	<u>Reason</u>
4. Furniture design	New Information (3) New subject (1) Relevant to my work (3)
5. Tool maintenance	New information (3) Relevant to my work (4)
6. Jig and fixture design	New information (4) Relevant to my work (3)
7. Machine selection and utilization	New information (4) New subject (1) Relevant to my work (3)
8. Management training	New information (1) My speciality (1) Relevant to my work (5)
9. Surface finishing	
10. Product development	New information (2) Relevant to my work (2)
11. Upholstered furniture	
12. Quality control	New information (2) Relevant to my work (3)

7. Were there in your opinion any relevant subjects that were not adequately covered in the programme

Yes

No

If yes, what did you miss?

Surface finishing

Upholstery

9. Which changes would you have preferred in the methods of instructions?

	<u>no changes</u>	<u>more</u>	<u>less</u>
a) lectures	<input type="checkbox" value="33"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) group work	<input type="checkbox" value="7"/>	<input type="checkbox" value="25"/>	<input type="checkbox"/>
c) demonstrations	<input type="checkbox" value="7"/>	<input type="checkbox" value="25"/>	<input type="checkbox"/>

**Comments:**

More practical sessions in:

- a. Machining of wood
- b. Surface finishing
- c. Upholstery

9. Which subjects of the programme did you find least valuable?  
State why (for example, too elementary, inadequate instruction,  
irrelevant to my work, etc.)

<u>Subject</u>	<u>Reason</u>
Raw material supply	
Panel discussions	Inadequate instruction (2)
Design of jigs	More work needed to be done
Selection of machines	
Production economics	
Demonstration of jigs	Little work was done in this area (22)
Factory planning	
Plant layout	
Furniture technology	
Production development	Irrelevant to my work (2)
Use of other material	Irrelevant to my work (2)
Factory management	
Production supervision	
Kiln drying	Irrelevant to my work (1)
Technical product design	
Finishing equipment	Irrelevant to my work (1)
Finishing material	Irrelevant to my work (1)
Finishing techniques	Irrelevant to my work (1)

<u>Subject</u>	<u>Reason</u>
Design clinics	
Talks with consultants	
Quality control	
Marketing	Irrelevant to my work (1)
Wood as a raw material	

Were there in your opinion any relevant subjects that were not adequately covered in the programme?

Yes	<u>10</u>
No	<u>22</u>

If yes, what did you miss?

Covered all subjects, but not detailed enough (3)

A little bit more of everything (15)

Design of jigs (22)

Demonstration of jigs (22)

Surface finishing (to greater depth) (10)

Wood as a raw material (lecturers need to be more knowledgeable of local species) (1)

Marketing (more general information than to USA only) (15)

10. How did you find the general standard of the lecturer with respect of:

	<u>i) command of English</u>	<u>ii) method of instruction</u>
Very good	26	23
Rather good	6	6
Fair	0	3
Poor	0	9
Very good	0	0

Please comment:

All lectures well received (29)

Lectures well presented (30)

Complement all lecturers on the admirable use of visual aids (17)

11. Did you have sufficient time for professional exchange of views with:

	<u>i) the programme staff</u>	<u>ii) fellow-participants</u>
YES	24	23
No	8	9

12. How much did you benefit from these exchanges of views with:

	<u>i)the programme staff</u>	<u>ii)fellow-participants</u>
Not a great deal	<input type="text" value="1"/>	<input type="text" value="7"/>
Much	<input type="text" value="28"/>	<input type="text" value="11"/>
Somewhat	<input type="text" value="2"/>	<input type="text" value="9"/>
Little	<input type="text"/>	<input type="text" value="4"/>
Not at all	<input type="text"/>	<input type="text"/>

Please comment

Some participants were reluctant to discuss their operations (1)

There should have been more individual attention by lecturers to participants (1)

II. RELEVANCE AND APPLICABILITY:

13. Did you find the contents of the programme relevant to conditions in your company?

To a very great extent	<input type="text" value="9"/>
To a great extent	<input type="text" value="11"/>
To a sufficient extent	<input type="text" value="9"/>
To a small extent	<input type="text" value="4"/>

Please state why:

Subjects discussed were relevant to my country (3)

We have fewer machines and equipment in our factories (2)

14. Do you feel that by participating in this training programme you have benefitted professionally?

To a very great extent

To a great extent

To a sufficient extent

To a small extent,

To a very small extent

Please state why:

I gained new ideas (5)

Widened my horizons (2)

Very involved in entire programme (3)

15. Do you think you will have an opportunity to apply your newly acquired knowledge and experience in your present job?

To a very great extent

To a great extent

To a sufficient extent

To a small extent

To a very small extent

**What difficulties, if any, would you expect to meet?**

Economic conditions and a shortage of foreign exchange in some way inhibit production and development (2)

**16. Will you be in a position to transfer your acquired knowledge to others in your factory?**

To a very great extent	10
To a great extent	10
To a sufficient extent	11
To a very small extent	2

**17. How will this transfer be done?**

On the job training and exchange of information (4)

By example (2)

**What difficulties, if any, would you expect to meet?**

Adequate machine tool (2)

Poor maintenance (2)

Unskilled workers (1)

No difficulties foreseen (12)



**What additional activities would you have appreciated?**

Special project activities (2)

Participants making a product (1)

Each participant making some piece of furniture or craft (3)

**18. Please give any comments you choose aspects not adequately  
Covered by this questionnaire;**

Coffee breaks and Social activities well organised (22)

Venue and facilities need improvement (12)

Gained a lot of knowledge and new ideas (5)