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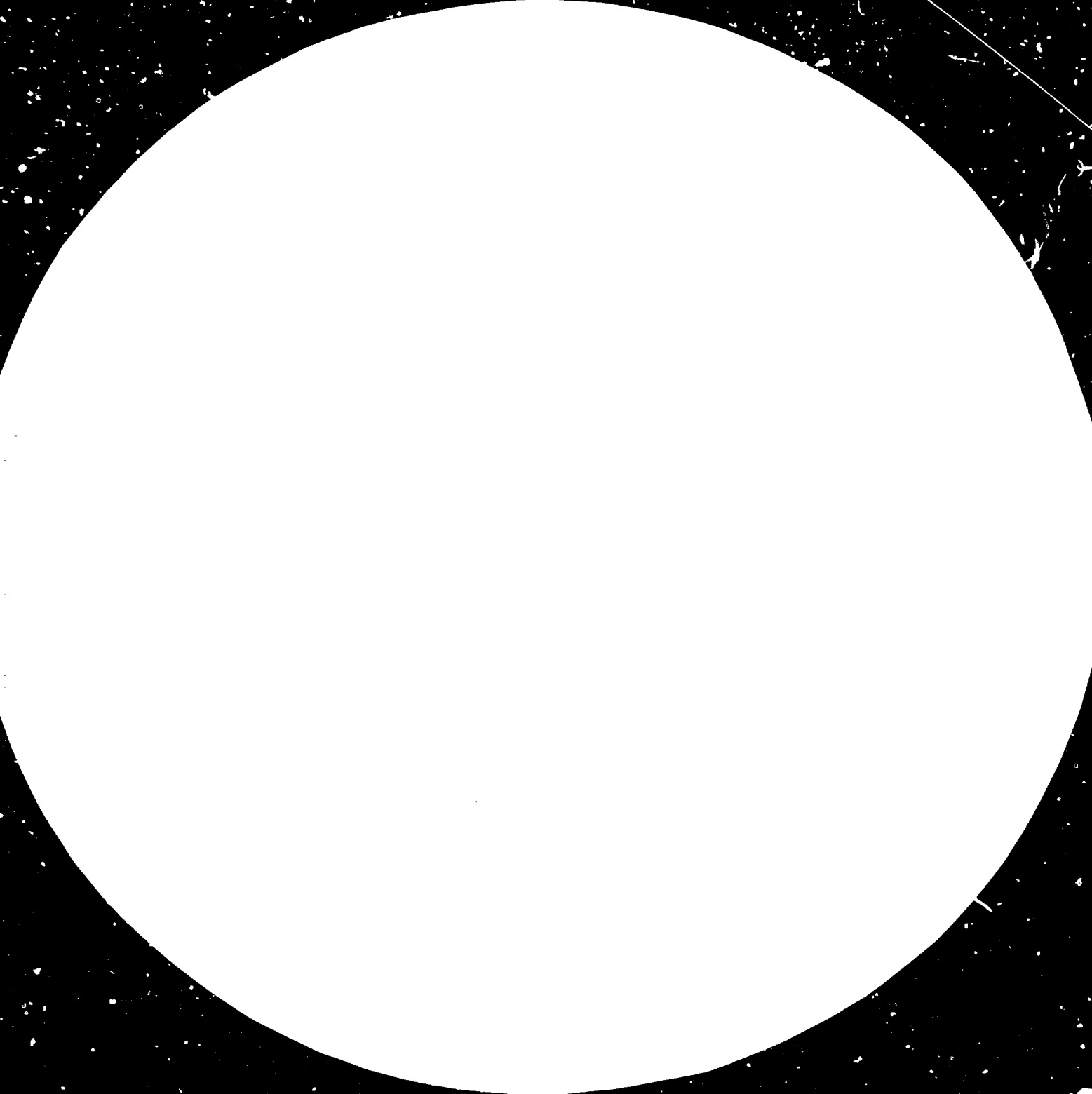
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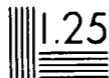
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UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

REPORT ON THE
WOOD PROCESSING INDUSTRIES AND CONSULTANCY SERVICE **
US/INT/78/153 AND TF/INT/79/003

COURSE I.: SELECTION OF ANCILLARY MATERIAL FOR SECONDARY
WOOD PROCESSING INDUSTRIES, COLOGNE, 17 - 20 MAY 1979

COURSE II.: ECONOMIC CRITERIA FOR THE SELECTION OF WOODWORKING
MACHINERY AND PLANT SYSTEMS, HANNOVER, 21 - 30 MAY 1979

by

00016

Heinz Eldag
Industrial Development Officer
Agro Industries Section
Industrial Operations Division

* Reissued for technical reasons

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1. Purpose of the mission

A staff member of the Agro-Industries Section, Industrial Operations Division, Mr. Heinz Eldag, went to Cologne and Hannover to conduct the entire Seminar on Wood Processing Industries.

First Course: Selection of Ancillary Material for Secondary Wood Processing Industries.

Second Course: Economic Criteria for the Selection of Woodworking Machinery and Plant Systems.

He also conducted the Consultation Services held from 16 to 30 May 1979.

2. Attendance

UNIDO received 106 nominations (Annex I) through UNDP offices. UNIDO, in co-operation with the German Machine Manufacturers Association (VDMA), Section Woodworking Machinery, selected thirty candidates (Annex II) of which twenty-six attended. Ten observers from Honduras, India, Indonesia, the Philippines and Poland came at their own expense and attended also the courses.

3. Participants

3.1 Participating candidates

It was a homogenous group, most of the participants were of high technical level contributing in the discussions. They tried to receive as much information as possible through the lectures, the consultants, and/or technicians during visits to the tooling institute, industry, furniture showrooms, and demonstrations at the fair-grounds. All of the participants spoke English, one of the Cuban participants could understand English well but had difficulties in discussions which were assisted by his Cuban colleague.

The Peruvian participant was mentally deranged which caused many problems with the prison, transfer to the insane house and the communication with the family in Peru.

In selecting the participants the author had evaluated the Peruvian candidate subject to receipt of a satisfactory medical and language certificates. The Resident Representative first received a cable stating that the candidate was accepted, which erroneously omitted stating "subject to receipt language and medical certificates". He did not receive the instructions to issue the ticket in time so that he arranged the issuance of the return ticket without submission of a medical certificate. All expenses incurred have been repaid to UNIDO and UNDP when the author went on mission to Peru.

Twenty-one participants arrived in time, three participants came one day late, and two participants arrived two days in advance.

Taken as a group, the participants of this Seminar were as mature as eager to learn as much as possible and were glad that they could exchange experience of those from Latin America, Central American countries as well as from Indonesia, Malaysia, and the Philippines, and Africa.

3.2 Participating observers

The observers from Honduras was recommended through the German Embassy. Three Indian observers were informed through the Cologne Fair Organization and two fellows corresponded with UNIDO in advance. The Philippine observers were introduced through one of our consultants. The Polish observer was invited in advance because he was to be the Director for a similar seminar in Poland.

Two of the observers from India participated in the first course only. All the others attended both courses full time. Consulting firms who had information booths in the fair-grounds contacted the Seminar staff several times with their clients from developing countries requesting UNIDO to allow them to listen to specific lectures. Thus, during the second course twelve observers not registered individually came to attend some specific lectures.

4. Assignment work

At the beginning of the Seminar the participants were requested to indicate their interest in different fields of the assignment work programme (Annex III) which covered eleven different subjects. The participants and to sign for a minimum of three different subjects. Within the assignment group one participant had to report twenty minutes assisted by the group members. According to the schedule prepared, they presented their findings and were criticized by consultants, and UNIDO staff. In case of insufficient or incomplete information they were advised to complete their material for a second presentation of their work.

Some participants who were interested in special fields were allowed to work on:

- Forest management operation in relation to wood processing:
- Some problems in sawn timber and veneer drying operations:
- Some problems in cement particle board manufacturing.

The level of presenting the assignment work was very different but due to the group assembly those with a lower field experience could increase their knowledge through team work.

Participants were very keen to collect material from exhibitors and to evaluate the material in some cases with the assistance of the Consultants from the Consultancy Service in the International Service Centre. The evening activity for the assignment work was limited because of the one hour bus travel one way to the conference facilities and the hotel.

5. Documentation

5.1 Documentation presented by UNIDO

The participants were given the revised and printed text of thirty lectures of about 730 pages (each an average of twenty-four pages in length) - (Annex VI). Because of late information not all participants could prepare the requested country paper. Twelve country papers were submitted at the beginning of the Seminar on the following countries: Bangladesh, China, Cuba, Ghana, Greece, Indonesia,

Kenya, Malaysia, Malta, Papua New Guinea, Surinam, Tanzania.

The paper presented by the Indonesian fellow is titled: 'Utilization of Tropical Hardwood in Wood Processing Industries in Indonesia.

This document consisting of 29 pages text and 25 pages Annex gives a very clear idea on the present situation of tropical hardwood utilization. The candidate who is an employee of the Directorate General of Forestry, Ministry of Agriculture actively participated in all lectures through discussions.

In the UNIDO Seminar office, the following documents were displayed:

- UNIDO's guides to sources of information
(UNIDO/LIB/SER.D/4 Rev.1, D/4, 6, 9, and 18):
- A study on production of wooden houses (ID/61):
- Reports of UNIDO meetings, viz.:
 - i. Workshop on wood processing for developing countries (ID/130):
 - ii. Workshop on adhesives used in the wood processing industry (ID/WG. 248/17);
- UNIDO documents list (ID/SER.G./160).

5.2 Documentation presented by German authorities

5.2.1 Documentation available for each participant

- Sicherer Umgang mit Holzbearbeitungsmaschinen^{*} issued by Holzberufsgenossenschaft, Technischer Aufsichtsdienst:
- Support for lay-out for small and medium sized firms (German/English)**
- Support for lay-out carpentry and timber engineering (German)**
- Deutsche Holzbearbeitungsmaschinen (German Woodworking machines) (multi lingual directory) issued by the German Association (VDMA), each of which manufactures machinery.

5.2.2 Documentation available for information (in German only)

- German Standards (DIN-Normen) of the field wood processing, woodworking machinery and toolings:
- REFA - Information Brochures on work study and time measurement related to wood processing;
- AWF - Quality control regulations on wooden products and related materials.

* Safe operation on wood working machines.

** Issued by Landesgewerbeamt Baden - Württemberg

5.3 Technical journals and literature lists

The following publishing companies gave journals to each participant for information:

- Timber Trade Journal, London;
- Holz- Zentralblatt, Stuttgart;
- Holz- und Kunststoffverarbeitung (Woodworking and plastic working, Stuttgart);
- Der Deutsche Schreiner, Stuttgart;
- List of magazines, books and directories for forest products, building and allied industries, Benn Limited, England;
- List of books related to forestry, wood processing and wood-working machinery, displayed at the book stall of the DRW - Verlag, in the fair grounds.

5.4 Official catalogues of the exhibitions

- INTERZUM - Catalogue, Cologne Fair;
- LIGNA - Catalogue, Hannover Fair.

5.5 FAO documentation for information

The FAO representatives made available the following literature at the Consultancy Service booth:

- Employment in forestry;
- Forestry development in Bhutan - Handbook of cable crane logging;
- Maintain forest - roads and harvesting;
- Planning forest roads and harvesting systems;
- Assessment of logging costs from forest inventories in the tropics;
- Harvesting man-made forests in developing countries;
- Seminar on storage, transport and shipping of wood;
- List of FAO - portfolio on small scale forest industries for developing countries (Annex V).

6. Administrative matters

The project proposal has been submitted by the Agro-Industries Section on 18 April 1978. The PAD was issued for the project US/INT/78/153 (US\$ 80,000) on 8 January 1979. Due to the request for extension of the project to include three days within the INTERZUM Fair before the course at LIGNA Fair in Hannover, the extension project proposal was submitted to the programming committee by Agro-Industries Section on 30 August 1978 and was approved on 3 November 1978. The PAD for this project TF/INT/79/003 (US\$ 7,080) was issued on 17 May 1979.

The first course started on the 17 May 1979 which causes some problems in organizing the Seminar at places like Cologne and Hannover where hotels are booked eight to twelve months in advance through the Fair Authorities in Cologne and through the "Amt für Verkehrsförderung" in Hannover. In Hannover UNIDO was offered a hotel in the rural area (thirty km outside of the city). UNIDO could not confirm the booking before the PAD was issued.

The Cologne Fair arranged bus service without charging UNIDO between the hotel and the conference facilities and half the way to Hannover at the end of the first course. Because of the hotel cancellation in Hannover, we had to accept the hotel in a distance of 102 Km for the participants which caused problems in running the second course in Hannover. More than one hour travel in the morning and in the evening shortened the possibilities for digesting the lecture subjects between participants in the evening and preparing the assignment work.

The UNIDO staff had to stay close to the Fair grounds in preparing the day-to-day work at the conference centre, the consultancy service programme and the inter-communication with the fair authorities, the German Counterpart (The Section of "Woodworking machinery manufacturers of the German Machine Manufacturers Association VDMA).

Payments

The staff member received for direct payments a cheque No. 518 dd 11 May 1979 for US\$ 30.636,- on the Chemical Bank, UNIDF account, which was deposited in UNIDO's account with the Deutsche Bank to cover costs directly related with the two courses.

The equivalent amount in Deutsche Mark was paid through the Landeszentralbank in Cologne. Because the cheque drawn to the Chemical Bank, N.Y. was not known to the Landezentralbank, the payment was delayed by three days which normally would have taken longer but since the staff member personally interferred with the Landezentralbank in Dusseldorf, the payment followed on the third day after presenting the cheque. Another problem which arises was that the full amount was paid in cash since the Landeszentralbank could not issue traveller cheques, otherwise the money had to be passed on to a bank such as the Deutsche Bank or Dresdner Bank in order to receive traveler cheques. So as not to loose money through another transfer from one bank to another bank, the cash payment had to be accepted.

A similar situation occurred when the consultants received their cheques drawn on the Chemical Bank N.Y. The staff member paid to the consultants DM 3.228,30 through his private account as the banks in Cologne did not accept these cheques.

On 16 May the Training Section informed us that the Chinese participant is on his way to Frankfurt not having a ticket to Cologne and Hannover. The Training Section agreed to book a connecting flight through Lufthansa, Cologne so that there was no other travel delay. Again this was paid through the staff member's American Express card account as no money was foreseen for such cases in the amount issued for payments in Hannover. When the Peruvian participant became ill, the UNIDO staff received bills for medicine etc. which had to be paid directly. Bills for ambulance and the stay

in the hospital were sent to UNIDO after the Seminar had finished. All invoices were given to the Peruvian participant during the staff member's mission in Peru in November 1979 and the equivalent paid in Soles so that all accounts were paid in December 1979.

UNIDO paid a per diem of US\$ 68 (DM 125,-) deducted by US\$ 32 (DM 60) to pay for hotel accommodation. In Cologne and some days in Hannover, lunch was organized for the group. The hotels were located 35 kilometers and 102 kilometers from the conference facilities which resulted in the additional payment of US\$ 2,433 for the bus service.

Hotel accommodations in Gummersbach and Bad Oeyenhausen

During the exhibition time it is not easy to place groups in hotels close to the fair grounds. The Cologne fair organized the accommodation in Gummersbach which is 35 km from the Cologne fair. Bus service was provided by the fair authorities at no cost. The accommodation in Bad Oeyenhausen was organized through the Amt für Verkehrsförderung. This authority has some hotels in the area of Hannover where they have arrangements for group accommodations. They offered UNIDO double rooms for DM 120,- (DM 60,- per person) and single rooms for DM 68,-. When the group arrived, we were informed that the participants have to move for two days into other rooms. The transfer was arranged by the hotel personnel but the rooms were not adequate for these two days and no money was returned to them for use of lower category rooms. The participants claimed that they had to pay more than the price affixed in the rooms.

During fairs, exhibitions or festival weeks, hotels can increase their room rates by ten per cent.

Double room list price	DM 90 + 10 %	=	DM 99,-
Breakfast (2 x 8,50)			DM 17,-
Service (2 x 2)			<u>DM 4,-</u>
Total:			<u>===== DM 120,- =====</u>

So the rate is justified but not the shifting to rooms of lower standard (without bath or shower or telephone). According to the hotel management the lower rated rooms were compensated at the end of the stay when every participant had a single room at a higher rate. (This did not affect those participants already in rooms at higher rate). Nevertheless the staff member tried to clarify the claims but did not receive the original accounts for the individual rooms so that a crosschecking of the statements made by the participants could not be compared with the original hotel bills. With the assistance of the UNIDO legal liaison office, clarification was requested from the hotel which was not given. The legal officer than advised to pay the amount stated on the hotel bill "Depotschein" which was signed by the author to avoid a legal contest.

Project schedule

According to the project schedule (Annex VI) prepared in co-ordination with the Training Section the letters of invitation should be sent out on 10 October 1978 but were actually sent on 11 January 1979 which caused a delay in receiving the nominations at the longest date of 1 March. A reminder cable to fifteen different countries followed on 23 March 1979. Final evaluation of candidates could not start before 10 April. The presentation of pre-selected candidates to the German Counterpart followed on 23 April 1979.

The mailing of award letters had one month delay so that twenty-six fellows out of thirty could receive their visa in time for the correct arrival in Cologne at the beginning of the first course.

Submission of documents

The target date for submission of the lecture documents was 30 August 1978. Most of the manuscripts came in at the end of January up to beginning of February. Final editing could not be done before all documents were submitted because of cross references to other documentation, thus editing started at beginning of April.

Besides editing the translations had to be corrected as to the technical nature of the papers. Because of late printing the lecture papers could not be shipped in time to participants selected, consequently the lecturers had to present the lectures more in a detailed way than anticipated so that less time was available for discussions. However, this did not adversely affect the course.

7. Press coverage

According to pre-information through the fair authorities short notes were given through different technical magazines about the Seminar. Interviews during lecture times by correspondants were avoided not to be interrupted during working hours.

8. Evaluation of the Seminar

Programme of the Seminar

The programme of the two course Seminar is given in Annex VII. The first course started on 17 May 1979 in Cologne at the Conference Centre of the Cologne Fair grounds and finished with the travel to Velbert and Remscheid at the tooling research institute on 20 May. The second course started in Hannover on 21 May and finished on 30 June 1979.

Out of thirtyfour lectures, twenty-nine were presented by those experts who prepared the documents. Lecture documents were presented additionally. Four panel discussions were proposed, one discussion was held in connection with the group work and one was discussed with those participants showing special interest in vocational education and training. Eight film and slide shows were related to lecture subjects and one was presented by FAO showing the traditional way of pulp and paper manufacturing. Three companies manufacturing semi-finished wooden products and hardware organized special demonstrations at the fair grounds in Cologne, five machine and tooling demonstrations were organized at the fair grounds in Hannover.

Special permission was given for demonstrations in Hannover after the closing time, to inform participants about appropriate technologies in different fields of machining wood. Most of the demonstrations were related to the eleven subjects of assignment work.

Seminar subject analysis

Subject	Working time spent		Total hours	Percentage of total time
	INTERZUM Cologne	LIGNA Hannover		
Information, General Introduction	3,5	2,75	6,25	8
Lectures	5,0	16,75	21,75	29
Discussions and group work	-	3,00	3,00	4
Film/slide shows	-	5,00	5,00	7
Machine and equipment demonstrations	1,75	2,25	4,00	5
Industry, fair visits, etc.	7,50	7,25	14,75	20
Sightseeing, museum visit, country-side trip	-	11,50	11,50	15
Presentation of assignment work	-	9,00	9,00	12
Total:	17,75	57,50	75,25	100

Average working hours per day: 6 hours.

The lectures, visits and discussion were evaluated by the participants as follows:

Very interesting subjects	7
Of moderate interest	15
Of minor interest,	15

Subject which the participants found very interesting were:

- a) - Strategy for the export promotion and commercialization of wooden products from developing countries;
- b) - Modern upholstery material and appropriate upholstery equipment;
- c) - Relation of production control and quality control for furniture and joinery products;
- d) - From forest concession to log break-down, evaluation of wood utilization;
- e) - Evaluation of low grade lumber and secondary species for the production of wooden components for log houses, appropriate for developing countries;
- f) - Evaluation of production facilities for joinery products;
- g) - Preliminary considerations in planning case good manufacturing industries;
- h) - Visit of the tooling research institute.

The table in Annex VII analyses the relation between lectures, films, discussions, demonstrations and assignment work. The subject referred to under "g" above was the lecture which was the highlight of the second course. The lecturer who is a college professor and consultant to the wood industry knew how to activate the interest of the participants, through the "lecture-discussion" exchange and evaluation of various possibilities for different production facilities causing certain consequence in operation sequences. This lecture linked with the panel discussion on small scale industries and the basic knowledge about plant layouts and appropriate machine selection resulted in good assignment work.

The lectures were of appropriate standards. They presented the subjects in English. Most of them could easily guide the discussions at the end of the lecture. It must be realized that the discussions were highly technical/economical but were managed by the lecturers on an appropriate level. The films were obtained by the industry and FAO at the fair grounds and shown to participants to complement the lecturers (Annex VII).

Visit to furniture show rooms of a linked furniture manufacturing group to introduce participants to up-to-date furniture ranges for living rooms, bed rooms, kitchens, upholstery furniture, contemporary furniture and furnishing accessories.

Visit to a chip-cement panel production introducing the manifold application of this product for prefab housing.

The visits to hardware exhibitors, quality control exhibition for furniture and joinery products, manufacturers and sales companies for semi-finished products rendered possible to see the variety offered through an exhibition demonstrating ancillary materials for wood processing industries.

Visit to the tooling research institute in Remscheid, FRG, and the hardware research institute Velbert introduced participants to applied research in the fields of:

- i. Tooling material testing
- ii. Tooling research for woodworking machinery
- iii. Testing of noise emission on building site circular saw benches.

Testing of new developed lock and hardware for joinery products:

- Flush doors and windows
- Most of the participants received for the first time an insight to applied research on toolings and hardware testing of finished products and learned about the necessity of these activities required through safety regulations, standards, insurance requirements, etc.

The participants were selected according to the two exhibitions for wood processing industries.

Employment in:	Forestry	Primary wood proc. ind.	Secondary wood proc. ind.	Govt. ^{1/} Dept.	Research and training inst.
Number of participants	1	5	9	8	3

^{1/} Some of the Government departments supervise several industries through field engineers in direct contact with their factories.

Out of twenty-six participants, ten (38 %) were not interested in the INTERZUM Fair because their specialized field is more directed to forestry, primary wood processing and research. Six (23 %) of the participants only decided on assignment work related to ancillary material for wood processing industries.

During the course the author asked the participants about their impressions on this course especially in connection with the course in connection with the two exhibitions participants expressed their opinions due to their positions in the industry as follows:

- It is necessary to keep close contacts to UNIDO Headquarters in future to receive information about workshops, seminars and similar activities;
- It is necessary to attend specialized exhibitions continuously to be informed about developments;
- Whenever possible participants will assist in nominating experts for courses carried out by UNIDO;
- Seminars in connection with specialized fairs are of best solution in: transfer of technology, observing developments, experience exchange between participants of developing countries, lower and higher professional level of participants can be balanced during assignment work.
- If possible UNIDO should arrange seminars and workshops in appropriate places in developing countries.

The exhibitions in Cologne and Hannover gave the opportunity to compare at INTERZUM: semi-finished wooden products, hardware for furniture and joinery products, upholstery materials, machinery and tools for upholstery, quality control in furniture and joinery. At the LIGNA Fair were featured: forestry equipment, sawmill machinery, veneer and plywood machinery, particle board machinery, basic machines for secondary wood processing, specialized machines, comparison of machines from competing manufacturers, mechanization of machines, application range of machines, toolings, safety devices for woodworking machines.

It still seems that the gap between developing and developed countries in primary and secondary wood processing is on the average very large. Therefore, lecturers should ease their work really on "intermediate technology" in wood working and should also include examples appropriate for developing countries. Some lecture subjects could include alternative solutions on a lower, intermediate and higher industrial level covering the needs derived from using tropical wood species.

Some participants claimed not having time to study the exhibitions in detail. It might be worthwhile in future to give an ad hoc advice on some particularly relevant exhibits and equipment which will be demonstrated in operation for further discussions on the exhibit spot.

The many comments given by participants are included in the questionnaire evaluation Annex IX.

The programme of sight seeing included the itinerary through the "Bergisches Land" from Gummersbach (near Cologne) to Velbert -- visit of a lock museum, Remscheid, visit of a tooling research institute further on to Bad Oeyenhausen, and a sightseeing tour to Hannover and its urban area.

9. Consultancy service at the fair grounds

The first consultancy service programme was requested and solely financed by the Hannover Fair Authorities in 1977. At the LIGNA 1979 it was a joint UNIDO/FAO activity, a booth staffed with (Annex X) four international consultants recruited by UNIDO (Annex XI, 1 to XI, 4) one staff member of UNIDO and two staff members from FAO. This time the booth was located in the International Information Centre adjacent to German and European Associations dealing with woodworking machinery, equipment and toolings.

The activities were not only related to visitors but mainly to Seminar participants assisting in their assignment work.

Subjects discussed at the Consultancy Service Booth

Consulting firms gave information on their on-going projects in developing countries and were interested to know about UNIDO projects in these countries. Experts in the field of wood processing industries requested UNIDO documentation.

Machine manufacturers presented their documentation of standard machine lines appropriate for developing countries. Field experts informed themselves about short-term technical assistance in developing countries. Managers from wood processing industries of developing countries sought advice for appropriate machining technologies.

The FAO representative reported that the FAO logging publications displayed, were of great interest and quite a few entrepreneurs, many from developing countries, requested copies which were subsequently sent to them. Some were interested in specific machines such as trucks with pole type trailers, winch lorries, extraction equipment or farm tractor attachments for logging purposes, etc. During the fair a few logging manufacturers were contacted and a few information on logging techniques obtained.

Compared to 1979, the consultants were contacted more often in 1977. Probably the change of location was the reason that some visitors from developing countries did not find the UNIDO Information Booth. In both cases at the INTERZUM and LIGNA Fairs, the UNIDO Information Consultancy Service should be referred to when foreigners from developing countries register.

10. Final meetings with the fair and association representatives in Hannover Fair grounds, 28 to 29 May 1979

The representatives were:

Hannover Fair Authorities

Mr. G. Voment

Mr. L. Merkelbach

Mr. Rosenbaum

VDMA - German Machine Manufacturers Association. Section Woodworking Machinery

Dr. H. Theis

UNIDO

Mr. H. Eldag

Mr. Shirakawa

Mr. A. V. Bassili

FAO

Mr. Wahl

Leignitechnik

Mr. E. Jutsuk

Mr. H. Fickler

Subjects for discussion were:

- To hold a meeting on investment promotion for wood processing industry.

Mr. Shirakawa, Senior Industrial Development Officer, Investment Co-operative Programme Section introduced to a meeting UNIDO conducted in Montreal. Due to the agenda Mr. Shirakawa prepared (ANNEX XII) the details were explained to which extent an investment promotion meeting in connexion with the LIGNA 1981 could be convened.

- To repeat a Consultancy Service within the International Information Centre at the Fair grounds. The UNIDO staff member recommended to give more information to visitors from developing countries about this service at the foreigner register counter.
- To repeat a course on economic criteria in selecting wood working machines and plant systems for wood processing industries.
- To hold a conference on "Alternative energy sources for developing countries" including: savings in energy demand in wood processing industries and power generation from logging waste, industrial residues, etc.

Note: In June 1979, the Board of Directors of the German Association of Woodworking Machinery Manufacturers decided to convene with:

- The combined Consultancy Service/UNIDO Seminar on wood processing industries.

The Seminar should include some lecture subjects on energy generation based on wood waste material.

The LIGNA Fair will refer to special exhibits for power generation based on wood residues, bio-mass material etc. so that the seminar staff can co-ordinate the lecture subjects with demonstrations in the fair grounds.

11. Seminar budget

The Seminar budget includes UNIDF-contribution of

US\$ 80,000	US/INT/78/153, PAD Nos.: 79-0036, 79-0959 (amendment)
US\$ 7,080	TF/INT/79/003 PAD No.: 79-1011
US\$ 5,263	LIGNA
US\$ 1,791	INTERZUM
<u>US\$ 94,134</u>	Total

Details of budget (Annex XIII).

Final statement of account as of 30 June 1980 (Annex XIV.).

In addition to the cash contributions of the two fairs, the contribution in kind for conference services in Cologne amounted to US\$ 4,560 and in Hannover to US\$ 4,900. For administrative services, the German Association (VDMA/GZF) contributed US\$ 12,600 in kind.

Both donor groups paid directly the travel and per diem (13 days) for the UNIDO secretary, two days in Cologne and three days per diem in Hannover for Mr. A. V. Bassili, SIDO, Agro-Industries Section, IOD, three days per diem in Hannover for Mr. Shirakawa, SIDO, Investment Co-operative Programme Section. Furthermore, an emergency car, long distance telephone calls, training material (blue prints) etc. were contributions in kind of the counterparts in Cologne and Hannover. The consultants in the International Centre could also make use of the interpreter pool.

12. Acknowledgement

The author wishes to express his gratitude to the German counterparts: Dr. Theis, Secretary of VDMA - Sub-section Woodworking Machinery Manufacturers; Mr. G. Voment, Director of the Messe AG, Hannover, and Mr. W. Lange, Director of the Messe- und Ausstellungen GmbH, Cologne.

For all preliminary agreements in organizing the Seminar and the Consultancy Services Programme many thanks to all who assisted us during the Seminar days and the great pains they went through to assure its success.

Mr. Rosenbaum, Conference Service, Hannover Messe AG, Mrs. Stockhammer, Co-ordinating Officer for the Seminar in Hannover, Mr. Schierhorn, Conference Section, Cologne and also to his secretary in Cologne.

Lecturers, exhibitors, Institute directors, Plant managers, furniture show room staff - who opened their doors to participants, answered numerous questions and provided excellent hospitality - who are too numerous to be listed thanks for considerable time and effort they contributed to assure the Seminar's success.

ANNEX I

SEMINAR ON WOOD PROCESSING, FRG, 16 - 30 May 1979

<u>Countries Invited</u> Nominee and position	<u>Nom. submitted</u>		Recommend.	<u>Candidates</u>		Attended
	w. Nom. forms	By cable only		Rec. w. Reserv.	Not Rec.	
ALGERIA	No answer.					
ARGENTINA	No nomination through Government.					
BANGLADESH A. F. M. Nurul Islam (Group Man. Wood Proc. Group of Industries)	x		x		x	
BELIZE Oscar Percy Rosado (Principal Forest Off. Ministry of Trade)	x			x		
BOLIVIA Ivo Vranjican	No answer					
BRAZIL F. Herminio de Souza Pinto (Industrial Manager - Family business)	x			x		
BURMA	No answer					

Countries Invited

Nominee and position	Nom. submitted		Recommend.	Candidates		Attended
	w. Nom. forms	by cable only		Rec. w. Reserv.	Not Rec.	
CAMEROON						
No nomination through Government						
CHILE						
Rainer von Malapert* (Technical manager for wood ind.)		x				
Gaston Court del Pedregal		x				
Enrique Klingenberg K.*		x				
CHINA						
Chen Pinh-an (Tech. Director - Research Institute)	x			x		x
Chen Giubin (VP. Nanjing Forestry Prod.)	x				x	
Chen Guishen (Dept. Chief of Academy)					x	
Wang Pei-yuan (For. Academy)	x				x	
COLOMBIA						
Alfonso Arboleda (Manag. Muebles Armo Ltd.)	x				x	
Arcelio Reyes (Prod. Manag. Furn. Fac. Modulineas)	x				x	

<u>Countries invited</u>	<u>Nom. submitted</u>		Recommend.	<u>Candidates</u>		
	w. Nom. forms	by cable only		Rec. w. Reserv.	Not Rec.	Attended
<u>COSTA RICA</u>						
Daniel Solis Chaves** (Delegate)	x			x		x
Rodrigo Mora Lopez** (Govt. Organization Indust. Engineer)	x			x		
Danial Parrita		x				
<u>CUBA</u>						
Mariano Vico Garcia (Ministry of Light Ind.)	x		x			x
Antonio Agustin Vazques Alvarez (Min. of Light Ind.)	x		x			x
Efrain Marcos Ormas Lopez (Min. of Light Ind.)	x			x		
<u>CYPRUS</u>						
Nieos Pantelakis (Prod. Manag. of Chipboard and Veneering Plant)	x		x			x
<u>DEM. YEMEN</u>						
	No answer					
<u>ECUADOR</u>						
	No nomination through Government					

<u>Countries invited</u>	<u>Nom. submitted</u>		<u>Candidates</u>				
	Nominee and position	w. Nom. forms	By cable only	Recommend.	Rec. w. Reserv.	Not Rec.	Attended
EGYPT							
	Salem Abd El Nabi Salem (Chief of Decoration Dept.)	x				x	
	Mohamed Hamad Lotfy (Shoubra Elkhima plant fur. prod.)	x				x	
	Ali Ahmed El Sayed (Chief Prod. Dept.)	x				x	
EL SALVADOR							
	Oscar Rosado (Forest.Off.)	No answer				x	
ETHIOPIA							
		No answer					
GABON							
		No answer					
GHANA							
	Lawrence Isaac Andoh (Manag. Dir. ISCAN Woods)	x		x			x
	James Alexander Clarke (Manag. Dir. Furn. and Joinery Kumasi)	x		x			x
	Gariba Awudu (GMTB)	x				x	
	J. D. Akpalu *		x				
	Joseph Pius Peprah *		x				
GREECE							
	Iannis Palpaxidis (Res.+ Qual.Contr.Dept.)	x		x			x
	George Rousadinoss Forest Spec.		x				
GUATEMALA							
		No answer					
GUYANA							
		No answer					

<u>Countries invited</u>	<u>Nom. submitted</u>		<u>Candidates</u>				
	Nominee and position	w. Nom. forms	by cable only	Recommend.	Rec. w. Reserv.	Not Rec.	Attended
HAITI			x				
HONDURAS							
Leyra Pena			x				
Leonel Guillen		Observer	x				
INDIA							
Shri Shallesh Kumar Awasthi ** (Comm. Manag. M.P. State Forest)					x		
Akang Ao * (Market. Off. Govt. of Nagaland)					x		
Chanda Bacha (For. Conserv.)			x				
Pradeep Jain		Observer	x				
INDONESIA							
Hoegroho Nitisoepoerbo (Govt. Official)	x			x			x
Dja'al Kamal *	x						
Sumartono Muljono *	x						
Osman Tamzil *	x						
Hermanto Tirtoprodjo *	x						
Ir. Tandiono							
PX Bambang Soenarjono Moeljono *		Observer	x				
IRAQ							
Khalid Sharid Mahmoud (Tech. Adv.)	x				x		
IRAN		No answer					
IVORY COAST		No answer					

<u>Countries invited</u>	<u>Nom. submitted</u>		<u>Candidates</u>				
	Nominee and position	w. Nom. forms	By cable only	Recommend.	Rec. w. Reserv.	Not Rec.	Attended
JAMAICA							
Guy Anthony Symes (Forest Management)	x			x			
Jennings Mc. Connel Gordon (Project Off. Invest Co.)	x			x			x
Robert Harcourt (CAST)	x					x	
Robert Joseph Cohen (Designer, Nat. Inst. of Crafts, Ltd.)	x					x	
Derrick Lourt Boddon	x					x	
JORDAN							
Salameh Oklen Asakriya (Superv. of voc. and Finan. Admin. Furn. Co.)	x			x			x
Hajib Adel Qubein			x				
KENYA							
Augustine Nyamu (Industrial Instructor)	x			x			x
James Githinji Gacheru	x					x	
KOREA							
Sang Jae Lim* (Director Indust. Co.)			x			x	
In Bai Kim* (Quality Lumber Engineer)			x			x	

<u>Countries invited</u>	<u>Nom. submitted</u>		<u>Candidates</u>				
	Nominee and position	w. Nom. forms	By cable only	Recommend.	Rec. w. Reserv.	Not Rec.	Attended
LAOS							
Thongleua Southavilay (Forest Production)	x				x		
Thavone (Forest Exploitation)	x				x		
Bouthong Xaisida (Exploitation Engineer)	x					x	
LIBYA							
Amohmoud Abud Langid Sharif (Technical Director)			x			x	
LIBERIA							
James Wiah Doe *			x				
Boakai A. Kawah *			x				
MALAWI							
Mutero Wilbert Chihuri (Gen. Man. Indust. Org. of Press Furn. and Join.)	x				x		
Lloyd Stephan Mjuweni (Ministry of Agriculture)	x				x		x
David Wright (Factory Man. Press Furn and Joinery Ltd.)	x					x	
Ferriano Chihala (Ministry of Agriculture)	x					x	

<u>Countries invited</u>	<u>Nom. submitted</u>		<u>Candidates</u>				
	Nominee and position	w. Nom. forms	By cable only	Recommend.	Rec. w. Reserv.	Not Rec.	Attended
MALAYSIA							
Chan I-Pai *	x						
Koh Tee Ooi *	x						
Lew Wing-Hing *	x						
Soo Weng Fee (Malaysian Ind. Dev. Authorities)	x			x			x
Thim Wong (Ind. Dev. Authority)	x			x			x
MALTA							
Joseph Zammit (Works Manager)	x			x			x
Laurence Vella (General Manager)	x			x			x
MAURITIUS							
	No answer						
MEXICO							
			x				
MOROCCO							
	No answer						
MOZAMBIQUE							
	No answer						
NICARAGUA							
	No answer						
NIGERIA							
	No answer						

<u>Countries invited</u>	<u>Nom. submitted</u>		<u>Candidates</u>				
	Nominee and position	w. Nom. forms	By cable only	Recommend.	Rec. w. Reserv.	Not Rec.	Attended
PAKISTAN							
Akbar A. Abdullah (Marketing Adv. - Woodby Pro.)			x				
PANAMA							
Rodrigo Ernesto Jaen Sanchez (Ministry of Agriculture)	x					x	
PAPUA NEW GUINEA							
John Pacak (Forest Officer Research and Training)			x	x			x
Andrew Yaio	x						
E.F. Fitzgerald	x						
Varo Lau Lama	x						
PARAGUAY							
Cesar Antonio Berni (Woods Engineer)	x				x		
Dr. Fernando Cabezudo Subiracho (Min. of Industry)	x	**			x		
PERU							
Fernando Amprimo Laing* (Prod. Man. Prefab. Wood House)	x			x			x
Gerd Arens Ostendorf (Managing Dir. Wood House Fac.)	x			x			
Hugo Fernando Vilchez* (Lumber Engineer)	x						

<u>Countries invited</u>	<u>Nom. submitted</u>		<u>Candidates</u>				
	Nominee and position	w. Nom. forms	By cable only	Recommend.	Rec. w. Reserv.	Not Rec.	Attended
PHILIPPINES							
Juanito P. Balmaceda (Investment Analyst)	x			x			x
Israel F. Maducdoc** (Finance Manager)	x				x		x
Santiago*E. Livanag*							
L. Borja *			x				
R. Navarro			x				
SEYCHELLES							
SENEGAL							
	No answer						
SIERRA LEONE							
W. D. Lewally*	x						
D.C.R. Cudjoe*			x				
SOMALIA							
Musa Haji Jamae			x			x	
SRI LANKA							
No nomination through Government							
SUDAN							
Omer Mohamed Elhassan Ageiri	x					x	
SURINAM							
Guert Cornelius Pect (Owns Furn. Factory)	x			x			x
Dilweg Cornelis Alexander			x				

<u>Countries invited</u>	<u>Nom. submitted</u>		<u>Candidates</u>				
	Nominee and position	w. Nom. forms	By cable only	Recommend.	Rec. w. Reserv.	Not Rec.	Attended
SYRIA		No answer					
<hr/>							
TANZANIA							
Jeremias Musabila Bulemela (General Manager)	x			x			x
Gosbert Edward Rweyemamu (General Manager)	x			x			x
<hr/>							
THAILAND							
Hiyom Chompocharti ** (Wood Preservation)	x				x		- 32 -
<hr/>							
TOGO							
Yacass Sewa			x				
<hr/>							
TRINIDAD AND TOBAGO							
Ian Young Lau * (General Manager)			x				
C. Alexander Dilveg *			x				
<hr/>							
TUNISIA							
Mohamed Dahman			x				
<hr/>							
TURKEY							
Baykan Süberker (Forestry Industry Expert)	x					x	
Hasri Calis (Assist. Dir. for planning and project dept. Orüs)	x						x

<u>Countries invited</u>	<u>Nom. submitted</u>		<u>Candidates</u>				
	Nominee and position	w. Nom. forms	By cable only	Recommend.	ec. w. Reserv.	Not Rec.	Attended
UGANDA							
Michael Edington	x			x			
Sizomu-Kagolo (Saw Milling Expert)	x						
Sulayimani Sembajja (Min. of Agricult.)	x			x			
URUGUAY							
	No answer						
VENEZUELA							
	No answer						
VIETNAM							
	No answer						
YUGOSLAVIA							
Slobodan Jovanovic (Product Dev. Manager)	x			x			x
GAMBIA							
Jones Simbotwe Akapelwa** (Forest Conservator)	x				x		
Miles Aliel Banda (Sawmill Forester)	x				x		
Samuel Chikosola* (Production Manager)					x		

* Indicates received after deadline of nomination forms (After 1 May 1979)

** Nominees recommended as stand-by.

ANNEX II

Seminar on Wood Processing Industries
Cologne and Hannover, FRG, 16 - 30 May 1979

LIST OF PARTICIPANTS, OBSERVERS, CONSULTANTS, AND LECTURERS

<u>Country</u>	<u>Function</u>	<u>Mailing Address</u>
1. <u>UNDP Nominees</u>		
<u>BANGLADESH</u>		
A.F.M. NURUL ISLAM	Group Manager Wood Processing Group of industries	Bangladesh Forest Industries Developm. Corporation Mirer Danga Daulatpur, Khulna
<u>CHINA</u>		
Ping-an CHEN	Deputy Director	Research Institute of Wood Industries Academy of Forestry Sciences Peking
<u>COSTA RICA</u>		
Daniel SOLIS	Delegate Wood Processing Group of Industries	Aserraderos Unid s P.O.B. 85 Alajuela
<u>CUBA</u>		
Mariano VICO GARCIA	Chief of Furniture Design Section	Ministry of light Industry Empredrado y Aguiar Havana
Antonio A. VAZQUEZ ALVAREZ	Home Furniture Enterprise Director	Ministry of Light Industry Empedrado y Aguiar

<u>COUNTRY</u>	<u>FUNCTION</u>	<u>MAILING ADDRESS</u>
<u>CYPRUS</u>		
Nicos PANTELAKIS	Production Manager	Cyprus Forest Industries P.O.B. 4043, Nicosia
<u>GHANA</u>		
James A. CLARKE	Managing Director	Kumasi Furniture and Joinery Co.Ltd. B.P. 300 Kumasi
Lawrence I. ANDOH	Managing Director	Iscan Woods Entp. University Box 192 Kumasi
<u>GREECE</u>		
Ioannis KALPAXIDIS	Technical Adviser	Balkan Exports S.A. N. Anchialos Thessaloniki
<u>INDONESIA</u>		
Nugroho NITISOEPOERBO	Government Official Directorate General of Forestry	16, Jalan Salemba Raya Jakarta- Pusat
<u>JAMAICA</u>		
Jennings Mc.Connell GORDON	Project Officer	Jamaica National Investm.Co. 10th Floor, Kingston Mall 12 Ocean Bldg.Kingston
<u>JORDAN</u>		
Salama O. ASAKRIEH	Secretary of Furniture Company	Bakhit Furniture Company, P.B. 1960 Amman
<u>KENYA</u>		
Augustine NYAMU	Industrial Instructor	Ministry of Commerce Industry, P.O.Box 280 Nakuru
<u>MALAYSIA</u>		
Thim WONG	Engineer	Malaysian Industrial Development Authority P.O.Box 618 Kuala Lumpur
Weng Feng SOO	Evaluation Officer	Ministry of Trade and Commerce, MIDA P.O.Box 618 Kuala Lumpur

<u>COUNTRY</u>	<u>FUNCTION</u>	<u>MAILING ADDRESS</u>
<u>MALAWI</u>		
Lloyd S. MJUWENI	Senior Mill Manager	Forestry Dept. Blantyre Sawmill Box 376 Blantyre
<u>MALTA</u>		
Laurence F. VELLA	General Manager	Wood Ware Ltd. Vietay St.Qormi
Joseph G. ZAMMIT	Works Manager	Joinwell Ltd. Mill Street Qormi
<u>PAPUA NEW GUINEA</u>		
John PACAK	Forest Officer Research and Training	D.P.I Office of Forests P.O.Box 1358 Boroko Port Moresby
<u>PERU</u>		
Fernando L. AMPRIMO LAING	Production Manager Gysam Factory	Nicolas Duenos 450 Lima
<u>PHILIPPINES</u>		
Israel F. MADUCDOC	Finance Manager	Philippine Lumber Mfg.Co. 396 H.Lopez Blvd. Tondo Metro Manila
Juanito P. BALMACEDA	Investment Analyst	Board of Investments Buendia Ave. Ext. Makati, Metro Manila
<u>SURINAME</u>		
Geurt C. PEET	Owner Furniture Factory	P.O.Box 1182 Paramaribo
<u>TANZANIA</u>		
Jeremias M. BULEMELA	General Manager	Tanzania Wood Industry Corp.

<u>NAME</u>	<u>FUNCTION</u>	<u>MAILING ADDRESS</u>
Gosbert E. RWEYEMAMU	General Manager	Sikh Saw Mill Ltd. P.O.Box 5081 Tanga

YUGOSLAVIA

Slobodan JOVANOVIC	Product Development Manager	VRBAS 78000 Banja Luka
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2. Observers

HONDURAS

German L. GUILLEN B.	Forestry and Logging Manager	Corporacion Forestal Industrial de Olancho S.A P.O.B. 16B Tegucigalpa, D.C.
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INDIA

Qazi S. AHMAD	Productivity Manage- ment + Business Consultant	10 Sea Breeze 27 A.G.Khan Road Bombay 40018
Pradep JAIN	Managing Director	Sandeep Industrial Corporation Ludhiana
Mrs. Amarjit K. SAWHNEY	Proprietor	Supan Plaza New Delhi
Mrs.Narinoerjit K. SAWHNEY	Partner of above	10 Sea Breeze 27 A.G.Khan Road Bombay 40018
Balbir TALWAR	Managing Director	Alanicrit Handicrafts Ltd. 208 Okhla Industrial Estate

<u>NAME</u>	<u>FUNCTION</u>	<u>MAYLING ADDRESS</u>
<u>PHILIPPINES</u>		
Gonzalo B. RELOVA	Director	Chamber of Furniture Industry P.O.Box 48 Makati 3117
Norviendo RAMOS	Manager Woods Division	Dolores Timber Inc. Montepino Bldg. Legaspi Village Metro Manila
<u>POLAND</u>		
Marian KALEMBA	Senior Adviser	Furniture Research and Development Centre 1/5 Jelenogorska Str. Poznan
Jerzy KUTYLA	Engineer	Designing and Consulting Bureau for Woodworking Industries
3. <u>Consultants (Recruited through UNIDO)</u>		
<u>IRELAND</u>		
Desmond P. Cody	Consultant to the Wood and Furniture Ind.	Bunny Conella Leopardstown Rd. Foxrock, Co. Dublin
<u>FINLAND</u>		
Pekka J. Paavola	Consultant Director Lahti Institute of Tech.	Vanhatie 45 B 48 15240 Lahti 24
<u>FRG</u>		
Karl H. Kehr	Consultant Forest and Woodworking Ind.	D-3101 Hambuehren 3 OT Oldan Sandweg 11
<u>PHILIPPINES</u>		
Horatio P. Brion	Consultant	Exbertise Industrial Corporation 2nd Floor, Consolidated Mines Inc. Bldg. Ayalllan Avenue Makati, Metro, Manila

MAILING ADDRESS

4. LECTURERS

<u>NAME</u>	<u>FUNCTION</u>	
P. E. Bader	Engineer Marketing Director	Wagner P.O. Box 2907 D-7990 Friedrichshafen 2
H. Dressler	Engineer M.Sc. Wood Technology	Gebrüder Lödige Maschinen GmbH P.O. Box 2050, D-4790 Paderborn 1
H. R. Eberhardt	Engineer (grad) Project Consultant	Unternehmensberater G. Schuler D-7293 Pfalzgrafenweiler
H. G. Frank	Engineer	Maschinenfabrik Gubisch KG. D-2390 Flensburg, Liebigstr. 5
I. Grebe	Dip. Ing. Director Division of Wood, Paper and Cardboard	BABCOCK-BSH D-6430 Bad Hersfeld 1 August Gottliebstr. 5
H. G. Grimmer	Engineer Field Advisor	Wemhöner Pressen P.O. Box 806 D-4900 Herford, Lehmkuhlenweg 30
A. Hartl	Export-Sales Manager	LEUCO Ledermann GmbH u. Co. Stadionstr. 2-2a P.O. Box 1340 D-7240 Horb am Neckar
G. Heilborn	Consultant Wood Proc. Industries	Heilborn GmbH P.O. Box 213 8200 Rosenheim
K. H. Kemminer	Dipl.Kfm.	Fachverband Schloss- u. Beschlag Industrie e.V. Sternbergstr. 3 D-5620 Welbert 1
K. H. Koch	Marketing Consultant	D-7081 Essingen (Wuertt) Schulstr. 25
M. Koch F. Lasturka	Section Chief-Control Systems Project Leader, Special Machines	FESTO - Didactic D-7300 Esslingen 1 Berkheim, P.O. Box 6040
E. Koschke	Dipl. Kfm.	D-8200 Oberwöhr Kirchenstr. 8
H. Lankop	Engineer Project Department	Canali Maschinenfabrik KG Werner von Siemenstr. 10-12 D-6720 Speyer/Rhein
L. R. Latourneau	Chief, Forest Logging and Transport Branch	FAO, Forest Industries Division Via delle Terme di Caracalla 00100 Rome, Italy
A. Opel	Engineer (grad.) Sales Manager	Robert Hildebrand Maschinen- Anlagen GmbH P.O.Box 303-305, D-744 Nürtingen
K. Post	Engineer (grad.) Project Consultant	Unternehmensberater G. Schuler D-7293 Pfalzgrafenweiler
H. Reuter	Wood Ind. Consultant Prof. Manufacturing Tech. in Wood Processing	D-8200 Rosenheim Meranerstr. 4
G. Sander	President of Spärröhren-Sander	SPÄRREX-GmbH D-9418 Uslar 2 Volpriehausen

<u>NAME</u>	<u>FUNCTION</u>	<u>MAILING ADDRESS</u>
H. Schanz	Engineer (grad) Consultant	Unternehmensberater G. Schuler D-7293 Pfalzgrafenweiler
S. Schmid	Export-Manager	Robert Hildebrand Maschinen-Anlagen GmbH P.O. Box 303-305 D-744 Würtingen
G. Schrenk	Export Manager	Eisenwerk Theodor Loos GmbH D-8820 Gunzenhausen P. O. Box 80
P. Schuldt	Expert in Toy Production	D-7700 Singen Erzbergerstr. 11
E. Seifert	Director of Research Institute	Institut für Fenstertechnik e.V. D-8200 Rosenheim Aisingerwies
O. Stier	Engineer Expert in Tool Maintenance	Vollmer Werke P.O. Box 820 D-7950 Biberach/Riss 1
R. Trede	M.Sc. Eng. Wood Technology	Atlanta Consult GmbH Hagedornstr. 20 Hamburg
C. H. Vermaas	Export Sales Manager	BISON Werke Industriestr. 19-25 D-3257 Springe 1

Selected lecturers

15 Industry experts

2 Special experts, International or National Organisation

6 Consultants of Engineering Companies

3 Professors in Technical High Schools or Research Institutes

1 Field Expert (Free lance consultant)

27 Lecturers in total

ANNEX III

Assignment Subjects

1. Selection of hardware for joinery and/or furniture products. Hardware has to be selected in view of availability of the home market or when imported hardware has to be selected in view of possibilities for jig setting or mechanized setting.
2. Selection of upholstery material for upholstered chair seats and backs or for upholstered seating furniture (easy chairs) including appropriate toolings and equipment. Upholstered material has to be chosen on the basis of traditional materials and/or from foam materials. Equipment has to be chosen in view of jig and template operation (labour intensive). Compare electric and pneumatic operated nailing guns.
3. Selection of machinery for a small scale workshop manufacturing joinery products on a contract basis select machinery for a production of 100 flush doors per day with additional capacity for individual furniture manufacturing (12 labourers). Machines to be selected according to lay out and machinery list included in the brochure for small scale industries.
4. Selecting of toolings for one of the given small scale plants appropriate to the machines listed. Select toolings according to given safety standards to be used for manual machine operations and for mechanized production.
5. Preparation of sequence operations for a cabinet, chair or other product made of solid wood and paneled furniture doors according to the sample. Use the stock list for a cabinet or a chair as the basis for sequence operation schedule for the machines listed in the layout of a small scale production plant. Batch of chairs 50 per day, batch of cabinet units 60 per day.
6. Selection of chip and dust exhaust equipment appropriate for a small scale plant layout with 12 standard woodworking machines with a possibility of a future extension of 6 additional machines.

7. Selection of surface finishing equipment for spray coating. Compare airless and airpressure spraying system appropriate to conditions of tropical climates. Chose exhaust equipment for lacquer coating department and lacquer drying equipment.
8. Selection of pneumatics to mechanise basic machines. Select pneumatic elements for clamping and feeding devices under consideration of speeding production and safety aspects.
9. Selection of power operated manual tools with template control for lock mortizing and hinge recessing for flush doors or furniture doors. Chose equipment where jigs and templates can easily made from compreg-wood or similar dense wood species.
10. Selection of machines for the production of semi-finished products for the furniture industry. The production includes: turnings, knob furniture, push-pull grips, drawer slide rails, shelf supports, flush pulls and rails, furniture roller shutters, hinges, clothe hanger rods, edge lippings. Give a range of furniture components which should be machined on specialized equipment. Calculate estimated capacity for each selected machine.
11. Selection of safety devices for standard wood working machines. Elaborate which safety devices have to be delivered as standard accessories with the machine and which safety devices are optional for different machining operations.

ANNEX IV

SEMINAR ON WOODPROCESSING INDUSTRIES, COLOGNE, HANNOVER 16-30 MAY 1979

LECTURERS AND LECTURE SUBJECTS

Lecturer and company	Number and title of document	ID/WG.	No. of pages
L. R. Letourneau (FAO)	296/ Rev.1 Basic Principles in Selecting Logging Equipment		39
M. Koch and F. Lastuvka (presented by Julian) Messrs. FESTO	296/2 Calculation of Pneumatic Systems for Furniture and Joinery Industries		66
H. Siller Messrs. CONTEC	296/3 Evaluation of Low Grade Lumber and Secondary Species for the Production and Wooden Components for Log Houses, Log Cabins and Log Silos Appropriate for Developing Countries		33
G. Sander Messrs. Spänex	296/4/Rev. 1 Economic Evaluation of Chip and Dust Exhaust Equipment		29
D. P. Cody UNIDO Consultant	296/5 Fittings and Hardware of Furniture and Joinery Products for Mechanized Setting		7
C.E. Vermass Messrs BISON, Bähre and Greten	296/6/Rev. 1 Evaluation on Utilization of Fibres from Annual Plants for the Manufacture of Resin - Or Cement Bonded Particle Board		12
H. G. Grimmer Messrs. H. Wenhöner	296/7/Rev. 1 Prerequisites for the Economic Evaluation of Flush Door Panel to Frame Operations		15
H. Dressier Messrs. Lödige	296/8/Rev. 1 Chip/Glue Blending Equipment for Quality Improvement and Cost Reduction in Chipboard Prod.		39
R. Trede Messrs ATLANTA - Consultant	269/9 Factors Influencing Logging Costs in West Africa		29
G. P. Heilborn Consultant	296/10/Rev. 1 Considerations on Wood Residue Utilization Possibilities within an Integrated Timber Complex		32
H. Lankop Messrs. Canali	296/11/Rev. 1 Mechanized Sawmilling Appropriate for Developing Countries		17
H. Schanz Messrs. Gerhard Schuber Consultant	296/12/Rev. 1 Comparisons of Capacity, Investment and Maintenance Costs for Manually Operated Standard Machines, Mechanized Machines and Automatic Machine Systems.		18

ANNEX IV (contd.)

Lecturer and company	Number and title of document	ID/WG.	No of pages
I. Grebe Messrs. BABOCK -BSH	296/13/Rev. 1 Appropriate Plywood and Veneer Production Panels for Developing Countries		60
H. Reuter Consultant	296/14/Rev. 1 Preliminary Considerations in Planning Case Good Manufacturing Industries		17
P. Schuldt Consultant	296/15/Rev. 1 Production of Educational Toys Appropriate for Developing Countries		19
E. Seifert Research Institute for Joinery Products	296/16 Quality Control of Wooden Products		9
G. Schrenk Messrs. Eisenwerk T. Loos	296/17 Economic Utilization of Wood Waste and its Value for Power Generation in Wood Processing Industries		20
P. E. Bader Messrs. Wagner	296/18 Flexibility of Universal Spray Coating Systems		23
U. A. Hartl	296/19 Economic Edge Machining Operations with New Tooling Systems		28
A. Opel Messrs. Hildebrand	296/20 Economic Evaluation of Heating Systems for Timber Kiln Driers in Comparison with Open Air Drying (Seasoning)		19
S. Schmid Messrs. Hildebrand	296/21 Economic Evaluation of Control Systems for Kiln Drying Equipment for Sawn Lumber		6
H. R. Eberhardt Messrs. Gerhard Schuler Consultants	296/22 Planning of Integrated Wood Processing Industries		35
K. P. Post Messrs. Gerhard Schuler Consultant	296/23/Rev. 1 Evaluation of a Plant for the Manufacture of Semi-finished Products		16
O. Stier Messrs. Vollmer Werke	296/24/Rev. 1 Reinforcement of Sawteeth on Toolings for Woodworking		21
H. G. Frank Messrs. Gubisch KG	296/25/Rev. 1 Evaluation of Production Facilities for Joinery Products		15

ANNEX IV (contd.)

<u>Lecturer and company</u>	<u>Number of title of document ID/WG.</u>	<u>No of pages</u>
UNIDO Secretariat Represented by H. Eldag	296/26/Rev. 1 Export Products from Developing Countries for Industrialized Countries	26
E. Koschke Consultant	296/27/Rev. 1 Basic Methodologies on Calculating the Profitability of Investments as Final Judgement	41
List of participants	296/28	5
K. H. Koch Consultant	296/29 Strategy for the Export Promotion and Commercialization of Woode Products from Developing Countries	17
D. P. Cody UNIDO Consultant	296/30 Modern Upholstery Materials and Equipment	21
K. Kehr UNIDO Consultant	296/31 Evaluation of Wood Residues as an Energy Source for Forest Industries	26

ANNEX V

LIST OF ADDRESSES OF AUTHORS OF THE FAC PORTFOLIO OF SMALL SCALE FOREST INDUSTRIES

1. Particle board plant
Fahrd Institut Ltd.
Bellariastrasse 7, CH-8002 Zürich, Switzerland
2. Cement bonded particle board plant (revised version)
EISCH-Werke, Böhre und Greten GmbH & Co. KG.,
D-3257 Springe, F.R. Germany
3. Particle board plant - address as in item 2.
4. Wet process fibreboard plant
DEFIBRATOR Fibreboard AB
Sandhamngatan 81, Stockholm, Sweden
5. Plywood plant
Doffin&Consult GmbH
Schönwasser Str. 129, D-415 Krefeld, F.R. Germany
6. Multi-purpose panel mill
G. Siempelkamp GmbH & Co. Maschinenfabrik
P.O. Box 2580, D-415 Krefeld, F.R. Germany
7. Fibreboard plant (batch forming system)
"Übersee-Industrie-Beratung (Overseas Industrial Consulting) GmbH
Salmansdorfer Strasse 23, A-1190 Vienna, Austria
8. Particle board plant (one layer - expandable to three layers)
S.A. VERKOR
Koningin Astridlaan, B-8520 Lauwe, Belgium
9. Dual waferboard and particle board plant
"WÜRTEX Maschinenbau Hofmann GmbH & Co.,
Postfach 46, D-7336 Uhingen, F.R. Germany
10. Decorative veneer plant (under preparation)
The Gurdit Institute Private Ltd.
Attikola, Dharwar, India and
Gem Wire Products Co-operative Society Ltd.
Attikola, Dharwar, India
11. Multi-purpose energy plants for small-scale forest industries (under preparation)
Spilling Consult AG
Sonnenweg 4, CH-5610 Wohlen, Switzerland
12. Blockboard plant (under preparation)
FAMA Maschinenbau AG
P.O. Box 465, Via Macello 63, I-39100, Bolzano, Italy
13. Particle board plant for panels with oriented particles (under preparation)
Carl Schenck AG
Postfach 4018, Landwehrstrasse 55, D-6100 Darmstadt, F.R. Germany

14. Waferboard plant (under preparation)
Multiply Development Corporation Ltd.
Suite 904 - 837 West Hastings Street, Vancouver
British Columbia, Canada, V6C 1B6
15. Plywood and blockboard plant (under preparation)
F.lli Pagnoni S.p.A., Via Sempione 31, 20052 Monza and
Colombo & Cremona, Via Confalonieri 57, 20058, Villa santa, Italy
16. Sawmill with a circular headrig (under preparation)
J. & A. Jensen og Dahl (JAJOD) A/S
Lilletorget 1, N-2601 Lillehammer, Norway
17. Sawmill with a chipping headrig (under preparation)
Kockums Industri AB, Fack, S-826 01 Söderhamn 1, Sweden
18. Sawmill with a framesaw (under preparation)
Sänger & Massierer KG, Postfach 1409
2878 Wildeshansen, F.R. Germany
19. Sawmill with a bandsaw headrig (under preparation)
Danckaert-International SA
Rue des Vétérinaires 55. B-1070 Brussels, Belgium
20. Small-scale integrated timber complex
Heilborn GmbH, Postfach 213, 8200 Rosenheim, F.R. Germany
21. Particle board plant for thin panels (under preparation)
TEIPAN S.p.A., Viale Elvezia 14
20052 Monza, Italy

NOTE: Case studies listed under Nos. 1 to 9 are completed and could be obtained by writing directly to the addresses indicated in the list or to FAO, Forestry Department, Rome, (if still in stock at the time of your request). Case studies listed under 10 to 21 are under preparation but by your advance request you may be put on the list for early distribution.

A N N E X VI

PROJECT SCHEDULES - SEMINAR ON WOOD PROCESSING INDUSTRIES - US/INT/78/153 AND TF/79/003

Subject	As foreseen in project proposal	As actually implemented	Proposal for a Seminar in 1981
Submission of project proposal for Course 1 Course 2 (extension)	10 April 1978 30 August 1979	2 November 1978	July 1980
Approval of the project by UNIDO's programming Committee Course 1 Course 2	May 1978 3 November 1978	3 November)	August 1980)
Visit of the secretary of VDMA woodworking machinery group to finalize arrangements and agree as to which countries to be invited	End June 1978	September 1978	September 1978
Booking of hotel, transport and secretary arrangements by LIGNA	Notice from Hannover	January 1979	September 1980
Letters of invitation to governments	10 October 1978	11 January 1979	October 1980
Notification of SIDFA's and former participants of Seminars	-	27 February 1979	November 1980
Press-release to technical press and to fair journal by UNIDO-VDMA-Hannover Fair	30 July 1978	Notice from Fair September 1978	Fair-Journal Sept. 1980 Tech. Press March 1981
Invitation of recruitment action for consultancy service programme	30 November 1978	March 1979	November 1980
Submission of new lectures in English for approval	30 August 1978	Jan./Feb. 1979	November 1980
Closing date for participant nominations	30 February 1978	March 1979	January 1981
Reminder for nominations	23 March 1978		25 February 1981
Finalization of recruitment of consultants (UNIDO)	30 January 1979	March 1979	March 1981
Final selection of participants from the list of nominations in collaboration with VDMA	1 March 1979	10 April 1979 23 April 1979	1 March 1981
Travel of UNIDO staff member to Hannover to finalize arrangements	-		15 March if necessary
Notification of candidates who have been selected	30 March 1979	Beginning May 1979	15 March 1981
Pouching of course material to selected candidates	-	Not done	End March 1981

A N N E X VI (contd.)

Subject	As foreseen in project proposal	As actually implemented	Proposal for a Seminar in 1981
Documents shipped to LIGNA by UNIDO Airfreight Conference material to Hannover	10 April 1979	16 May 1979 (by staff member's car)	
Shipment of course material (by surface) to candidates who have not been selected	-	Not done	End April 1981
Convening of Seminar and Consultancy Service related to wood processing industries	16-30 May 1979	16-30 May 1979	May/June 1981
Seminar courses, office and consultancy service organization Course I	15 May 1979	15 May 1979	Two days before arrival of participants June 1980
Course II	20 May 1979	20 May 1979	August 1980
Submission of report	30 September 1979	1 June 1980	August 1980
Mailing of documents and information which could not be provided by the Consultancy Service	-	..	August/September 1981
Issuance of country papers	-	Not done because incomplete	August 1981

Saturday, 19 May 1979

Morning:

Demonstration	11. Semi-finished products for wood processing industries	Exhibit of Messrs. Brüggmann, Fair grounds
Visit	12. Fairgrounds	INTERZUM

Afternoon: Continuation of visit.

Sunday, 20 May 1979

Morning:

Travel	Bus tour to Velbert	
Visit	13. Lock and hardware museum	
Visit	14. Lock and hardware research institute	K. Kemminer
Travel	Bus tour to Remscheid	

LUNCH

Afternoon:

Visit	15. Tooling research institute Welcome addresses: President of the Institute Research Director	Mr. W. Arntz Mr. Huber
Travel	Bus tour to Bad Oeynhausen	

LIGNA - SECOND COURSE: ECONOMIC CRITERIA FOR THE SELECTION OF WOODWORKING
MACHINERY AND PLANT SYSTEMS, HANNOVER, FRG

MONDAY, 21 MAY TO TUESDAY, 29 MAY 1979

Monday, 21 May 1979

- Morning: Opening addresses
Messe AG Hannover L. Merkelbach
President of the Woodworking Machinery Ind. H. Friz
- Lecture 1. The development of the woodworking ma-
chinery industry since 1920 and its
influence to industrialized woodworking
- Assoc. Info. Statistical comparisons Dr. Theis
- Information LIGNA 1979 Highlights of technical de-
velopments H. Eldag
- Lecture 2. Interlink of German standards, recommen-
dations and regulations for the wood-
working machinery, toolings and wood
processing industry H. Eldag^{1/}
- Film 3. Safety in woodworking Holzberufsge-
nossenschaft
- Discussion 4. Based on the film and the content of the
brochure "Safe Operation of Woodworking
Machines"

LUNCH

Afternoon:

- Lecture 5. Planning of integrated wood processing
industries H. Eberhardt
Preparation of assignment work
- Panel disucssion 6. From forest concession to log breakdwon
evaluation of wood utilization G. Heilborn

Tuesday, 22 May 1979

Morning:

- Film 7. Tree felling Messrs. Stihl
- Film 8. Logging operations FAO
- Lecture 9. Basic principles in selecting logging
equipment R. Heinrich
- Lecture 10. Factors influencing logging costs in
West Africa R. Trede
- Film 11. Pulp and paper production FAO

^{1/} Introduction to standards and regulations whenever appropriate
to lecture subjects.

LUNCH

Afternoon:

- | | | |
|----------------------|---|-------------------|
| Lecture | 12. Mechanized sawmilling operations appropriate to conditions in developing countries | E. Lankop |
| Film | 13. Mechanized sawmilling | Messrs. Canali |
| Lecture | 14. Economic evaluation of heating systems for timber kiln driers in comparison with open air seasoning | A. Opel |
| Lecture | 15. Economic evaluation of control systems for lumter kilns | S. Schmid |
| Industry Information | 16. Log and lumber handling in log and lumber yards by travelling gantry cranes | Messrs. Wenker |
| Film | 17. Gantry cranes in operation | Messrs. Keienburg |

Wednesday, 23 May 1979

Morning:

- | | | |
|---------------|---|---------------------|
| Lecture | 18. Appropriate plywood and veneer production for developing countries | I. Grebe |
| Lecture | 19. Evaluation of low grade lumber and secondary species for the production of wooden components for log houses, etc. appropriate for developi. countries | H. Siller |
| Demonstration | 20. Log house components | Messrs. WEMA Probst |
| Lecture | 21. Evaluation on utilization of fibres from annual plants for the manufacture of resin or cement bonded particle board | C. Vermaas |

LUNCH

Afternoon:

- | | | |
|---------------|---|------------------|
| Lecture | 22. Chip/glue blending equipment for quality improvement and cost reduction in chipboard production | H. Dressler |
| Lecture | 23. Economic evaluation of chip and dust exhaust equipment | Mr. Sander |
| Lecture | 24. Pre-requisites for the economic evaluation of flush door panel to frame operation | H. Grimmer |
| Demonstration | 25. Presses in operation | Messrs. Wemhöner |

Official Dinner
presented by VDMA, German Association of Wood-
working Machinery Manufacturers

Thursday, 24 May 1979

Morning

- | | | |
|---------|---|-----------|
| Lecture | 26. Manufacture of semi-finished products | K. Post |
| Lecture | 27. Evaluation of production facilities for joinery products | H. Frank |
| Lecture | 28. Preliminary considerations in planning case good manufacturing industries | H. Reuter |

LUNCH

Afternoon

- | | | |
|---------------------------|---|---------------------------------------|
| Group work | 29. Based on drawings of a cabinet unit | H. Reuter |
| Panel discussion | 30. Small-scale wood processing industries based on the brochures: "Planning aids for small and medium-scale wood processing industries", "Planning aids for carpentry and joinery industries". | Landesgewerbeamt
Baden-Württemberg |
| Slides | 31. Auxilliary equipment for small and medium-scale industries | H. Maier |
| Lecture | 32. Economic edge machining operations with new tooling systems | U. Hartl ^{1/} |
| Lecture and demonstration | 33. Tool maintenance equipment
Reinforcement of sawteeth on toolings for woodworking | Messrs. O. Stier
Vollmer |
| Demonstration | 34. Multi-spindle moulding operation on 4 side moulding machines | Messrs. Weinig |

Friday, 25 May 1979

Morning

- | | | |
|---------|---|--|
| Visit | 35. Furniture show rooms: Möbel Kette Nord | Messrs. Wrachtrup u.
Ottensmeyer GmbH |
| Lecture | 36. Production of educational toys appropriate for developing countries | P. Schuldt ^{1/} |
| Lecture | 37. Lacquer coating by airless spray systems | P. Bader |
| Lecture | 38. Economic utilization of wood waste and its value for power generation in wood processing industries | G. Schrenk |

LUNCH

Afternoon

- | | | |
|------------------------|--|-------------------|
| Lecture | 39. Considerations on wood residues utilization possibilities within an integrated timber complex | G. Heilborn |
| Lecture | 40. Evaluation of wood residues as energy source for forest industries | K. Kehr |
| Film and demonstration | 41. Sanding machines for furniture production literature on appropriate sanding equipment for developing countries | Messrs. Heesemann |

^{1/} In absence of lecturer the paper was distributed to participants.

Saturday, 26 May 1979

Morning

Travel Bus tour to Bevern, Holzminden
Visit 42. Bison-Element GmbH and Co. KG Bison
Chip-Cement panel production
Visit 43. Fairgrounds LIGNA

LUNCH

Afternoon

Continuation

Demonstration 44. Sash manufacturing for windows Messrs. Hemag
Demonstration 45. Rational sash manufacturing Messrs. OKO^{1/}
Specialized toolings for window Messrs. Oppold
production

Panel 46. Considerations about pilot plants Messrs. Hildebrand/
discussion UNIDO^{1/}
training centres for carpentry,
joinery and cabinet making and
R + D centres

Sunday, 27 May 1979

Travel 47. Sightseeing Hannover
Town and Suburban area

Monday, 28 May 1979

Morning

Lecture 48. Calculation of pneumatic systems for G. Julian
and slides furniture and joinery industries
Lecture 49. Comparisons of capacity, investment H. Schanz
and maintenance costs
Lecture 50. Basic methodologies on calculating the E. Koschke
profitability as final judgement

LUNCH

Afternoon

Information 51. Hints for developing countries interest- K. Koch^{2/}
ed in exhibiting in specialized fairs
52. Presentation of assignment work

Tuesday, 29 May 1979

Morning 53. Presentation of assignment work

Afternoon

Continuation

Evening 54. UNIDO reception

Wednesday, 30 May 1979

Departure

^{1/} Discussed with those participants especially interested in training.

^{2/} Presented because of common interest to participants.

A N N E X V I I I

RELATION BETWEEN LECTURES, FILMS, DISCUSSIONS, DEMONSTRATIONS AND ASSIGNMENT WORK

Lectures/Discussion Subjects	Film/slides/demonstration	Assignment subject	Exhibition		Standards Regulations	
			INTERZUM	LIGNA		
Modern upholstery material and appropriate upholstery equipment	-	Selection of upholstery material for upholstered chair seats and backs or for easy chairs including appropriate tooling and machines	Upholstery material + equipment	-	ATP Specifications	
Export products from developing countries for industrialized countries) Demonstration) Quality Control) of Furniture and) Joinery Products	Selection of machines for the production of semi-finished products for the furniture industry	Semi-finished product exhibits	-		
Strategy for the export promotion and commercialization of wooden products from developing countries		-				
Locks and hardware for furniture manufacturing) Research) Institute for) Hardware) Testing) Special) Exhibits) for locks) and hardware	-	DIN standards
Terminology, classification, testing methods and quality labels			Selection of hardware for furniture and joinery products		Hardware Recessing and Setting Equip.	
Fittings and hardware for furniture and joinery products for mechanized setting	-) Exhibit) quality) contrl. equip.	-		
Relation of production control and quality control for furniture and joinery prod.	-)))	-	Quality standards comparison.	
Quality control of wooden products	Demonstration of testing equip.			-	DIN standards and BG-Regulations	
Safe operation of woodworking machines	Film Safety in woodworking	Selection of safety equipment for standard machines	-	Exhibit of safety devices		
Planning of integrated wood processing ind.	-	-	-	Machine exhibits	-	

A N N E X VIII (contd.)

Lectures/Discussions Subjects	Film/slides/ demonstration	Assignment subject	Exhibition		Standards Regulations
			INTERZUM	LIGNA	
From forest concession to log breakdown - evaluation of wood utilization	-	-	-	Machine exhibits	-
Basic principles in selecting logging equipment))Film	Forest management operations in relation to wood processing	-	Machine exhibits	-
Factors influencing logging costs in West Africa)Tree felling,)logging operations				
Mechanized saw milling opera- tions appropriate to condi- tions in dev. countries	Film - Samples of me- chanized sawmilling gantry crane in operation	-	-	Machine exhibits	-
Economic evaluation of heating systems for timber kiln driers in comparison with open air seasoning	-	Some problems in sawn timber and veneer drying operations		Equipment exhibits	-
Economic evaluation of con- trol systems for lumber kilns					
Appropriate plywood and veneer production for de- veloping countries	Film gantry crane opera- tion	-	-	Machine exhibits	-
Evaluation of low grade lumber and secondary species for the production of wooden components for log houses, etc. appro- priate for dev. countries	Demonstration of log house compo- nents	-	-	Machine exhibits	-
Evaluation on utilization of fibres from annual plants for the manufacture of resin or cement bonded particle board	Factory visit of wood cement boards and components	Some problems in cement particle board manufacturing systems	-	Machine exhibits	-

A N N E X VIII (contd.)

Lectures/Discussions Subjects	Film/slides/ demonstration	Assignment subject	Exhibition		Standards Regulations
			INTERZUM	LIGNA	
Chip/glue blending equip- ment for quality improve- ment and cost reduction in chipboard production	-	-	-	Machine exhibit	-
Economic evaluation of chip and dust exhaust equip- ment	-	Selection of chip and dust exhaust equipment appropriate for a small scale workshop	-	Machine exhibit	-
Pre-requisites for the econo- mic evaluation of flush door panel to frame operation	Demonstration of presses	-	-	Machine exhibit	-
Manufacture of semi-finished products	-	Selection of machines for the produc- tion of semi-finished products	Semi-finished products ex- hibit	Machine exhibit	-
Evaluation of production faci- lities for joinery products	Demonstration of sash production and special toolings	Selection of machinery for a small scale workshop manufacturing joinery products on a contract basis	-	Machine exhibit	DIN standards
Preliminary considerations in case good manufacturing industries	Visit furniture show- rooms, samples of small scale plant layouts. Slides	Preparation of sequence operations for a cabinet, chair or other pro- ducts made of solid wood and framed furniture doors	-	Machine exhibit	Standards for furni- ture
	Auxillary equipment for small and medium scale industries	Selection of machinery for a small scale workshop manufacturing joinery products		Machine exhibit	Machine standards
Economic edge machining opera- tions with new tooling systems	Demonstration of toolings and tool maintenance equipment	Selection of toolings for the given small scale projects appropriate to the machines listed	-	Tooling exhibit	Tooling stan- dards safety regulations
Tool maintenance equipment Reinforcement of saw teeth on toolings for woodworking					

A N N E X V I I (c o n t d .)

Lectures/Discussions Subjects	Film/slides/ demonstration	Assignment subject	Exhibition		Standards Regulations
			INTERZUM	LIGNA	
Production of educational toys appropriate for developing countries	-	-	-	-	-
Lacquer coating by airless spraying	Demonstration of sanding machines for furniture production	Selection of surface finishing equipment for spray coating	-	Machine exhibit	-
Economic utilization of wood- waste and its value for power generation in wood processing industries	-	-	-	Machine exhibit	-
Consideration on wood residue utilization possibilities within an integrated timber complex	-	-	-	-	-
Evaluation of wood residues as energy source for forest industries	-	-	-	Machine exhibit	-
Calculation of pneumatic systems for furniture and joinery industries	-	Selection of pneumatics to mechanise basic machines	-	Equipment exhibit	-
Comparison of capacity, invest- ment and maintenance costs	-	-	-	Machine exhibit	-
Basic methodologies on cal- culating the profitability as final judgement	-	-	-	Machine exhibit	-

ANNEX IX

Compilation of Questionnaire Evaluation through Participants

Name of participant: 23 questionnaires Home country:
Programme: Seminar on wood processing industries Host country: FRG
Year: 1979

I. Pre-programme information

What is your opinion about the advance information on the programme received in your home country?

	Sufficient	Too little	None
Aim of programme	17	3	2
Contents of programme	13	5	2
Level of programme	11	5	5

Do you think that additional information should have been provided? If so, please state your suggestions:

- There was a communication gap, this needs to be improved:
- Submitted nomination form on 15 February, received phone call on 4 May confirming nomination;
- When translating into Spanish:
- No information in advance about transportation from airport to hotel;
- Especially in; cost living, how many dollars of pocket money, exchange rate;
- Final information not in time- should be three weeks in advance

Workshop and factory visits:

- Information should be provided on course content, lecture, schedule, assignments required, selection of material;
- Insufficient information on travel and accommodation:
- About level of programme, yes, about accommodation procedures in the host country and travel from the air port.
- The programme was too technical for decision makers:
- Acceptance information should be given in good time to enable participant prepare himself adequately.

II. Concept and organization of programme

2. What is your opinion about the contents of the programme?

Appropriate	19
Not appropriate	0

Comments

- Better results to be obtained when forming groups at the beginning: round table discussions once a day for one hour:
- Programme could be better if combined with factory visits:
- Start the course 2 - 3 days earlier for extra time to visit the fair.

3. What is your opinion about the level of the programme?

too high	2
sufficient	17
too low	2

4. Is, in your opinion, the programme:

too specialized	3
too broad (covering too many subjects)	16
correct in its concept	2

5. What is your opinion about the total duration of the programme?

much too short	1
too short	13
correct	6
too long	4
much too long	-

If too short or too long what should have been the duration?

One extra day in Cologne Fair

One extra day in Hannover

6. Do you consider the size of the total group of participants:

too large	1
adequate	16
too small	0

7. Give your opinion about the composition of the group of participants (homogeneity as to cultural background, profession, age, etc.)

Were there too many under-qualified or over-qualified participants?
Did you personally feel integrated in the group or, if not, why?

- Age does not matter at all, but profession and cultural background would make a more homogenous group;
- Group of participants: suitable: qualification: generally good and appropriate.
- Contact with participants from so many countries was very interesting and educational;
- Good for the broad programme;
- Good group composition, could exchange knowledge
- Group composition O.K.
- Not very homogenous professionally and in experience integrated to a certain extent;
- Integrated but not experienced enough:
- Too many different backgrounds
- Level of development too mixed:
- Composition adequate;
- Just right for the seminar:
- Participants should be grouped according to profession and the given assignments in relation to their profession or grouped to the professional requirement, so that each member should be given a chance to discuss his views:
- many different backgrounds - so integrated - went along with each other perfectly.
- There should be more practice demonstrations and discussions on the experience by developing countries. Theory should be minimized.

8. What is your opinion about the general character of the programme?
Should it, in your opinion, be:

More practical	15
more theoretical	3
as it is	1
More practical to lower level	
more theoretical to higher level	

9. How was, in your opinion a) the amount of practical training?

too much	1
adequate	2
too little	16

b) the amount of theoretical studies (lectures):

too many	14
adequate	5
too few	1

c) the number of study visits:

too many	1
adequate	4
too few	13

Please state your changes if any:

- Theoretical training 40 %
- Practical training 35 %
- Study visits 25 %
- Lectures (with films or slides) in the morning, study visit in the afternoon, one hour a day to work in groups
- In a more specialized programme. we believe that practical training would help after each lecture, when dealing with technology
- Lectures in the morning, visits in the afternoon
- More time to visit the fairs
- Theoretical studies should be followed by practical training relevant to the lectures to see whether the theory of system is applicable for the countries involved.
- There should be visits to small scale industries.
- 1 week lecturers - 1 week practical, 1 week study visits, 4 days specialization on assignment work, 3 days presentation
- More visits to manufacturers
- Communication was fair
- Arrange more factory visits
- Provision should be made at the beginning of the course for participants to modify the tentative programme

10. What is your opinion about the time allotted to language studies?

absolutely indispensable	1
useful	2
unnecessary	2

Please indicate to what extent you could communicate with the personnel of the factories where you had your in-plant training:

- Decision made man
- Limited to English speaking people.

11. What is your opinion about the training material used?

- Adequate	5
- Very useful	1
- Good	3
- Too little	1
- Sufficient	1
- Very good	1
- Some material should be translated into English	

12. Did you have sufficient time for a professional exchange of views with instructors:

Yes	12
No	7

With fellow participants:

Yes	17
No	2

With staff of the factories:

Yes	4
No	12

13. Did you benefit from that exchange

with instructors	Yes	16
	No	3

with fellow participants:	Yes	13
	No	2

with staff of the factories	Yes	1
	No	5

14. Did you feel that you could influence the programme content?

much	0
somewhat	10
little	4

III. Relevance and applicability of the programme

15. Did you find the programme as conducted relevant to the conditions in your home country:

to some extent only	6
to a sufficient extent	10
to a great extent	0

16. Do you think this programme should be repeated:

yes	18
no	0

17. If yes, do you think it should be held

in the same country and place	7
in the same country but another place	1
in another developed country	10

Please state the reasons for your answer:

Only for exchange of technical know-how which will help in adopting the same in my home country:

- Next LIGNA
- The enormous development of this country in this specific field of wood technology;
- Seminars in combination with exhibition have their advantages; furthermore, developed countries offer the advantage that visits can be made to well operated plants where expertise is available:
- Especially in a host country with English mother-tongue (UK or USA):
- Any European country (during summer in England, Sweden, Denmark, Italy).
- Language problems
- Participants can have experience on the machinery available in other countries
- Do not understand German
- Cross sectional influences
- Availability of visual aids
- For comparison purposes
- There is a need to see the advancement of other countries in the industry to gauge the applicability of such in the country:
- Development in different countries have taken place along different lines and in different ways, this observation is of more practical use:
- Where there are significant numbers of machinery and able lecturers:

18. Do you feel that your participation in this programme has benefitted you professionally?

to a very small extent	1
to some extent	4
to a sufficient extent	8
to a high extent	4
to a very great extent	3

19. Do you think that the qualifications you have acquired will be recognized in your home country?

yes	8
no	3

20. Will you have the opportunity to pass on the acquired knowledge in your home country?

to a very great extent	1
to a great extent	7
to a certain extent	11
to a limited extent	1
to a very limited extent	0

21. How will the transfer of knowledge be made?

a) during daily work with colleagues and personnel	16
b) during meetings organized for this purpose in your company	8
c) during meetings organized on a bigger scope	5

21. Are you of the opinion that you might encounter difficulties in passing on the knowledge obtained. If so, what are the problems you are anticipating?

- We need to modify our machine line or else, we are to procure new machines to provide the personnel adequate opportunity to have the technical know-how used;
- The main problem on this topic is the low level of most of the workers in his field back home;
- Too much lectures, participant should choose special programme throughout the Seminar as an assignment work;
- Insufficient time during working hours to disseminate information;
- Prolong time may be required;
- Just normal problems you always encounter when something new or different is introduced;
- It will be passed on without difficulty.

22. Other suggestions:

- Too many theoretical lectures, not much practical aspects, make this programme a dull one, it may not provide adequate know-how to participants.
- Divide Seminar in two groups primary and secondary wood processing to be more effective;
- Money allowance should be known in advance in order to avoid problems faced in this Seminar;
- Old saying: A picture is more comprehensive than a thousand words - so, more films with different languages sound tracks could be made available for in-plant training at home;
- The presentation of the lectures can be improved considerably and other visual aids. The lectures should be summerized, concentrating wherever possible, professional applications and procedures.
- One day off within 14 days programme, hotel should be located within 30-40 minutes traveling itme, more time for assignment work, people from the hotel responsible for UNIDO participants must provide better services and show the appropriate respect to UNIDO participants.
- Participants grouped for lecture and practical programme;
- Hotel facilities should be within 15 minutes travel
- More time for consultation and business relevant to Seminar work, Saturdays should be left free.
- Administrative side of programme needs a lot of improvement;
- No work on saturday and sunday;
- Some of the literature is only in German available some exhibit booth staff cannot speak English.
- Travel arrangement should be known in time and detailed information for accomodation;
- Organization and administration of travel and accomodation facilities could have been better if some of the work was delegated perhaps to consultants. It proved to be too much for one man to handle and attend to complaints.
- Lectures should have less marketing influence and more independent to apply;
- Administrative functions should not be handled by one person, adequate staff must be provided;
- Participating countries should be grouped according to industry situation in each country.

- There should be at least one UNIDO staff with the group all the time speaking the language of the host country. Do not mix courses of different interest like forestry and upholstery. Make different groups. Please create something that encourages participants to voice opinions, which sometimes based on each lack of information.
- Most valuable are subjects such as economic evaluation of projects and decision on the profitability of a firm.
- Comments made by programme staff were helpful whenever they took place particularly in the lecture room.
- Each country should be represented by at least two people to enable discussions of affairs to continue after lecture or demonstration.

ANNEX X

CONSULTANCY SERVICE CENTRES UNIDO/FAO

Consultant Name/Nationality	Organization	Specialized field	
		INTERZUM (16-22 May)	LIGNA (23 - 29 May)
D. Cody (Ireland)	UNIDO US/INT/78/153/ 11-01/B	Upholstery material, machinery and equip- ment Hardware for furni- ture and joinery	Upholstered furniture production Solid wooden furniture production
P. Paavola (Finland)	UNIDO US/INT/78/153/ 11-01/A	Production and quality control in furniture production	Casegood furniture production
R. Heinrich (FRG)	FAC (staff member)		Forestry operations Logging operations
O. Wahi (FRG)	FAO (staff member)		Sawmilling log conver- sion, lumber production
K. Kehr (FRG)	UNIDO US/INT/78/153/ 11-01/D		Wood based panel manu- facturing
H. Brion (Philippines)	UNIDO US/INT/78/153/ 11/11-01/C		Joinery production
H. Eldag	UNIDO (staff member)	Semi-finished wooden products	Woodworking machinery and toolings

13 February 1979

ANNEX XI (a)

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Job Description

US/INT/78/153/11-01/A

Post: Consultant in case good furniture production

Duration: 2 weeks

Date required: 15 May 1979

Duty Station: Cologne and Hannover, FRG

Purpose: Consultation Service for visitors from developing countries at both INTERZUM and LIGNA Fair

Duties: The consultant will be attached to the UNIDO Consultancy Service Centre within the fairgrounds to assist visitors of the wood processing industries from developing countries in selecting furniture hardware, machinery and equipment appropriate for the needs of developing countries.

The consultant will also assist the participants of the UNIDO Seminar in their individual assignment work.

Qualification: Woodindustry Engineer with special experience in case good furniture production. Familiarity with the latest design and technical development in this field.
Experience in developing countries

Language: English

Background Information

At the LIGNA 1977, the largest international exhibition forestry equipment and machinery for primary and secondary wood processing UNIDO had an office with three internationally recruited consultants and a staff member to provide assistance in equipment selection to participants from developing countries attending the fair (TF/INT/77/001).

UNIDO's presence has been requested for the 1979 LIGNA Fair by the Organizers again to provide impartial technical advice covering the following fields:

- 1) Logging equipment
 - 2) Sawmilling machinery
 - 3) Wood based panel production
 - 4) Case good furniture production
 - 5) Upholstered furniture production
 - 6) Joinery furniture production
-) will be provided by FAO

The consultants under item 4 and 5 are also requested for the Consultancy Service Centre at the INTERZUM Fair.

ANNEX XI (b)

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Job Description

US/INT/78/153/11-01/B

Post: Consultant in upholstered furniture production

Duration: 2 weeks

Date required: 15 May 1979

Duty Station: Cologne and Hannover, FRG

Purpose: Consultation Service for visitors from developing countries at INTERZUM and LIGNA Fair.

Duties: The consultant will be attached to the UNIDO Consultancy Service Centre within the fairgrounds to assist visitors of the wood processing industries from developing countries in selecting upholstered material and equipment appropriate to the needs of developing countries.

The consultant will also assist the participants of the UNIDO Seminar in their individual assignment work.

Qualification: Wood industry Engineer with special experience in upholstered furniture production. Familiarity with the latest design and technical development in this field.
Experience in developing countries

Language: English

Background Information:

At the LIGNA 1977, the largest international exhibition for forestry equipment and machinery for primary and secondary wood processing UNIDO had an office with three internationally recruited consultants and a staff member to provide assistance in equipment selection to participants from developing countries attending the fair (TF/INT/77/001).

UNIDO's presence has been requested for the 1979 LIGNA Fair by the Organizers again to provide impartial technical advice covering the following fields:

- 1) Logging equipment)
- 2) Sawmilling machinery) will be provided by FAO
- 3) Wood based panel production
- 4) Case good furniture production
- 5) Upholstered furniture production
- 6) Joinery furniture production

The consultants under item 4 and 5 are also requested for the Consultancy Service Centre at the INTERZUM Fair.

13 February 1979

ANNEX XI (c)

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Job Description

US/INT/78/153/11-01/C

Post: Consultant in joinery production

Duration: 2 weeks

Date required: 15 May 1979

Duty Station: Cologne, Hannover (FRG)

Purpose: Consultation Service for visitors from developing countries at the INTERZUM and LIGNA Fair

Duties: The consultant will be attached to the UNIDO Consultancy Service Centre within the fairgrounds to assist visitors of the wood processing industries from developing countries in selecting joinery hardware, machinery and equipment appropriate to the needs of developing countries

The consultant will also assist the participants of the UNIDO Seminar in their individual assignment work

Qualification: Wood industry Engineer with special experience in joinery production. Familiarity with the latest technical development in this field. Experience in developing countries.

Language: English

Background information:

At the LIGNA 1977, the largest international exhibition for forestry equipment and machinery for primary and secondary wood processing UNIDO had an office with three internationally recruited consultants and a staff member to provide assistance in equipment selection to participants from developing countries attending the fair (TF/INT/77/001).

UNIDO's presence has been requested for the 1979 LIGNA Fair by the Organizers again to provide impartial technical advice covering the following fields:

- 1) Logging equipment
 - 2) Sawmilling machinery
 - 3) Wood based panel production
 - 4) Case good furniture production
 - 5) Upholstered furniture production
 - 6) Joinery furniture production
- } will be provided by FAO

13 February 1979

ANNEX XI (d)

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Job Description

US/INT/78/153/11-01/D

Post: Consultant in wood based panel production

Duration: 7 days

Date required: 23 May 1979

Duty Station: Hannover, FRG

Purpose: Consultation Service for visitors from developing countries at the LIGNA Fair

Duties: The consultant will be attached to the UNIDO Consultancy Service Centre within the fairgrounds to assist visitors of the wood processing industries from developing countries in selecting equipment for wood based panel production appropriate to the needs of developing countries.

The consultant will also assist the participants of the UNIDO Seminar in their individual assignment work.

Qualification: Wood industry Engineer with special experience in the production of wood based panels. Familiarity with the latest technical development in this field. Experience in developing countries

Language: English

Background Information:

At the LIGNA 1977, the largest international exhibition for forestry equipment and machinery for primary and secondary wood processing UNIDO had an office with three internationally recruited consultants and a staff member to provide assistance in equipment selection to participants from developing countries attending the fair (TF/INT/77/001).

UNIDO's presence has been requested for the 1979 LIGNA Fair by the Organizers again to provide impartial technical advice covering the following fields:

- 1) Logging equipment
 - 2) Sawmilling machinery
 - 3) Wood based panel production
 - 4) Case good furniture production
 - 5) Upholstered furniture production
 - 6) Joinery furniture production
-) will be provided by FAO

ANNEX XII

UNIDO has discussed with the German Government during the planned visit to Hannover in April 1971 by UNIDO and UNCTAD regarding the proposed investment promotional meeting associated with LICMA 1981 Fair in Hannover.

I. BASIC ISSUES

1. Geographical coverage of the proposed meeting:

UNIDO's proposal is to make the meeting world-wide like the previous Montreal Meeting, involving all developing and developed countries who wish to attend it at their own expense. UNIDO's evaluation report on the Montreal Meeting is attached as Annex I.

2. Coverage of wood-processing branches:

UNIDO's proposal is to include:

- Logging
- Sawmills
- Wood-based panels
- Building components
- Furniture
- Packaging
- Waste utilization
- Chemical wood-processing (pulp and paper etc.)

3. Financial aspects

They will consist of:

- a) Costs for preparatory work
- b) Costs for running the meeting
- c) Costs for follow-up projects after the meeting.

(a) and (b) will be detailed later in this paper and (c) would be more appropriate to be discussed immediately after the meeting

4. Timing of the meeting:

UNIDO proposes to hold it during the week preceding the opening of LICMA 1981.

5. Title of the meeting

"Meeting to Promote Investment and Industrial Co-operation in Selected Wood-Processing Industries "

6. Joint organizer(s) of the meeting:

In addition to the United Nations Industrial Development Organization, joint German organizer(s) is to be appointed.

II. SUBSTANTIVE ISSUES

1. Target figures:

- Number of projects: 50 (24 developing countries)
- Number of developing country participants: 60 (23 countries)
- Number of developed country participants: 125 (43 countries)

2. Outline of plan of implementation (with estimated target dates)
 - Sending initial documentation of the meeting to both developing and developed countries by ()
 - Deadline of submission of projects from developing countries by ()
 - Completion of consultants' preparatory missions by ()
 - Deadline for advance registration from both developed and developing countries by ()
 - Organization of the meeting
 - Follow-up action on projects (to be discussed separately after the meeting)

3. Planned coverage of advance contacts by UNIDO:
 - A) In developing countries
 - Ministries having liaison with UNIDO (103 countries)
 - Administrators of forests (105 countries)
 - Chambers of commerce, timber-related trade associations and development banks (93 countries, 300 organizations)
 - Participants in the Montreal Meeting (45 parties in 24 countries)
 - United Nations Development Programme offices (93 countries)
 - UNIDO Senior Industrial Development Field Advisers (17 persons)

 - B) In developed countries
 - Individual firms and development aid agencies included in UNIDO's regular mailing list (21 countries, 132 organizations) ¹
 - Press releases to major European and American journals of forestry, timber and wood-processing

4. Planned coverage of advance contacts by the German joint organizers:
 - Timber-related firms, aid agencies and banks. (After their submission of advance Registration forms, direct contacts will be established between them and UNIDO.)

5. Respective roles of the joint organizers:
 - A) UNIDO
 - Project identification and collection in developing countries
 - Selection and recruitment of specialized consultants for project preparation missions to developing countries
 - Processing of submitted projects and their dissemination in developed countries
 - Organization and running of the meeting
 - Preparation of a plan of action for follow-up of projects

^{1/} 10 German firms attended the Montreal Meeting.

3) German joint organizers

- Provision of all necessary meeting facilities in Hannover (to be detailed in due course)
- Financial contribution (to be detailed in due course)

6. Place of the meeting:

To be selected by the joint German organizers during or within 4 weeks after this preparatory meeting.

7. Timetable of the meeting:

Monday	9:00 - 10:00	Registration
	10:00 - 12:00	Opening session
	14:00 - 17:00	Bilateral meetings
Tuesday	9:00 - 12:00	Bilateral meetings
	14:00 - 17:00	Bilateral meetings
Wednesday	9:00 - 12:00	Bilateral meetings
	12:00 onwards	Free
Thursday	9:00 - 12:00	Bilateral meetings
	14:00 - 17:00	Bilateral meetings
Friday	9:00 - 10:00	Bilateral meetings
	10:00 - 12:00	Closing session
	14:00 - 17:00	Bilateral meetings

III. DETAILS OF MEETING FACILITIES REQUIRED

1. Requirements from hotel

- a) One large conference room (350 seats) for opening session (Monday, 10:00 - 12:00)
- b) One medium-sized conference room (150 seats) for closing session (Friday, 10:00 - 12:00)
- c) 40 (tentatively estimated) bilateral meeting rooms (Monday, 14.00 through Friday afternoon)
- d) 4 office rooms (previous Thursday through closing Friday)
- e) 220 (tentatively estimated) single bedrooms for participants and visiting UNIDO staff at a concessional room rate

2. Local personnel requirements

- a) 3 English/French interpreters
- b) 2 English/Spanish interpreters
- c) 1 English short-hand typist
- d) 8 appointments secretaries

3. Necessary equipment

- a) 350 pigeon holes
- b) 2 units of Gestetner mimeo machines to be operated by professionals also outside normal working hours

- c) 1 unit of photo-copying machine
- d) 5 electric typewriters
- e) Simultaneous interpretation system for opening/closing sessions
- f) Stationaries

4. Social events

To be planned soonest by the joint German organizers.

5. Local transportation in Hannover

If the meeting's place and participant's hotel are different, shuttle bus service between the two places will have to be provided.

IV. COSTING DATA

1. Consultant fees for project preparation missions:

- Assumptions: - 30 projects would require services
- 2 weeks would be necessary for each project
- per man/month costs would be US\$ 5,000.-

at \$ 5,000 x $\frac{60 \text{ weeks}}{4}$ = \$ 5,000 x 15 man/months = 75,000.-

2. Visiting UNIDO and FAO staff:

- On the basis of:
- 1 Executive Director (UNIDO)
 - 1 Division Director (UNIDO)
 - 1 Conference Officer (UNIDO) x 2 times
 - 5 substantive officers(4 UNIDO, 1 FAO)
 - 1 secretary (UNIDO)

a) First class flight, VIE-HAN-VIE (Executive Director)		
at \$ 635.- x 1 person	\$	635.-
b) Economy class flight, VIE-HAN-VIE (other staff)	\$	3,440.-
at \$ 430.- x 8 persons		
c) Economy class flight, ROM-HAN-ROM (FAO staff)		
at \$ 400.- x 1 person	\$	400.-
d) Per diem		
\$ 95.- x 2 days x 1 person (E.D.)	\$	190.-
\$ 78.- x 7 days x 1 person (D-2)		546.-
\$ 68.- x 1 day x 1 person (C.O.)		68.-
\$ 68.- x 10 days x 3 persons		2,040.-
\$ 68.- x 7 days x 4 persons		1,904.-
Total.....	\$	<u>4,743.-</u>
GRAND TOTAL		<u>9,203.-</u>

3. Local costs:

To be estimated by the joint German organizers according to the requirements specified in part III above.

A N N E X XIII

SEMINAR BUDGET - SEMINAR ON WOOD PROCESSING INDUSTRIES - US/INT/78/153,

TF/INT/79/003

	US\$
A. Cost of travel and per diem of participants	
39,000 + 22,330 + 7,080 =	68,310
Excess baggage	3,000
B. Fees, cost of travel and per diem of consultants	<u>12,054</u>
Sub-total:	83,364
C. Cost of training course	
Lectures	3,000
Local travel	1,500
Facilities	
- Rental of premises for two weeks, 3 days at Cologne and 10 days at Hannover	
- Conference room	p.m.
- One small committee room ^{1/}	p.m.
- One fully equipped office adjacent to conference room	p.m.
- Rental of audiovisual equipment	p.m.
- Operator of audiovisual material	p.m.
- Information booth (service centre)	p.m.
- Sundry, stationary	400
Hospitality:	
- Conference room	p.m. ^{2/}
- Reception by VDMA/GZF	p.m.
- Reception by UNIDO	500
Documentation:	
- Lecture translation (2 lectures were translated by UNIDO staff all others were provided in English but some had to be corrected and rewritten)	p.m.
- Reproduction of these lectures	p.m.
- Book allowance for participants (portfolio)	900
- Transport of course library (course material)	<u>300</u>
Sub-total	6,600
D. Administrative cost:	
Salaries: Course director (2 m/m)	p.m.
Course secretary (2 m/m)	p.m.
2 Secretaries (14 days)	p.m. ^{3/}
Travel: Travel to Vienna for finalization of programme	p.m.
Ditto for the selection of participants	
travel of staff member to Cologne and Hannover to arrange conference facilities and co-ordinate INTERZUM and LIGNA assistance	1,755
E. Miscellaneous	2,415

ANNEX XIII (contd.)

F. Administrative support by UNIDO Letters of invitation, screening participants' nominations, issuance of letters award, travel arrangements, receiving text of lectures and their reproduction, etc.	p.m.
G. Additional support by counterpart Secretary for 2,5 days during sick leave of UNIDO secretary	p.m. ^{4/}
French and Spanish interpretation assistance through Interpreter Centre	p.m.
Copying service through fair authorities	p.m.
Emergency cab and driver provided by the Hannover fair for contacts with police and hospital because of the sick Peruvian participant	p.m.
Additional training material (blue prints) for participants	p.m.
Long distance telephone calls	p.m.
Internal transport cost for UNIDO material return	<u>p.m.</u>
Grand total:	<u>04.134</u>

^{1/} Provided at Hannover in the International Centre.

^{2/} Provided at the Cologne fair free of charge; in Hannover UNIDO paid
for soft drinks but coffee during breaks was provided by the Hannover Fair

^{3/} At Cologne and Hannover secretariat assistance was provided in addition
to the UNIDO secretary paid by the counterpart.

^{4/} Secretarial assistance was paid in addition by funds provided through
counterpart.

ANNEX XIV

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

Project No. US/INT/78/153

Seminar on Economic Criteria for the Selection of
Woodworking Machinery and Plant Systems

Final Statement of Account as at 30 June 1980

	\$	\$
Funds received:		99,271

Expenditures

1. Experts	4,088	
1a Travel	2,154	
2. Subcontracting		
3. Training	76,347	
4. Equipment		
5. Miscellaneous	<u>1,346</u>	
6. Sub-total	83,935	
7. Project Service Costs 14% calculated on total appearing on line 6	<u>11,751</u>	
		<u>95,686</u>
Balance as at 30 June 1980		3,585 =====



