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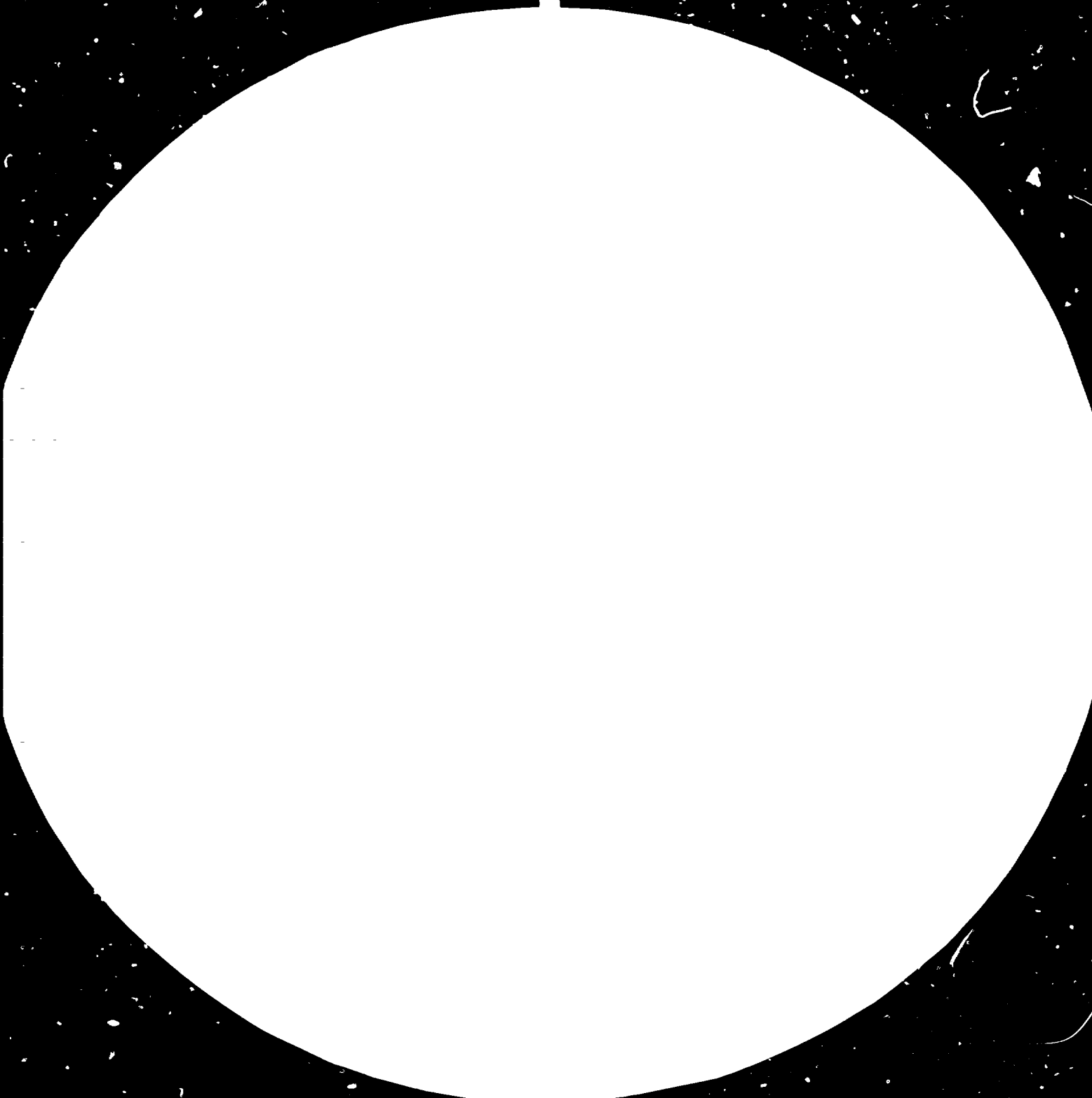
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Expert Group Meeting for Exchange of  
Experiences on Technology Services  
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Manila, Philippines, 2 - 6 November 1981

TECHNOLOGY SERVICES DELIVERY SYSTEM (TSDS),

FORPRIDECOM EXPERIENCE \*

by

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## INTRODUCTION -

The Forest Products Research and Industries Development Commission (FORPRIDECCM), NSDB was invited to join the UNIDO Technology Service Delivery System Project as a Technology Resource Institute for wood processing with the following objectives:

1. To provide consultancy to industry groups and entrepreneurs by holding seminar/workshops/demonstrations on new developments in the furniture industry;
2. To assist in the formation of strong industry groups to serve better their common interests;
3. To increase the level of technical awareness of the furniture industry thus paving the way for a strong linkage between individual firms and the Technology Resource Institution;
4. To upgrade the technology of the furniture industry.

These objectives have been attained with a high degree of success.

Since May, 1980 to September 1981, ten (10) training projects have been implemented outside Metro Manila. Topics covered were on wood seasoning, furniture construction and design, modern methods of

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Paper presented during the Technical Service Delivery System Dissemination Meeting on Nov. 2-6, 1981 at the Ministry of Trade and Industry, Makati, Metro Manila.

upholstery and preparation, and modern abrasives and wood finishing techniques. These are the towns of Binmaley and Lingayen, Pangasinan; Betis, Guagua, Pampanga; Olongapo City; Bacolod City, Cagayan de Oro City; Cebu City and Ilagan, Isabela; which have greater number of furniture shops. A total of 351 participants attended these seminar/workshops.

A furnace type lumber kiln dryer with a capacity of 10,000 bd. ft. per charge was designed and constructed for the Ilagan, Isabela furniture makers, as part of Technology Services Delivery System (TSDS) Project.

Group and individual consultancies are provided by the staff during and after each seminar. A number of participants in previous seminar visit FORPRIDECOM in Los Banos, Laguna to avail of consultancy services from the technical staff.

As a result of the recently concluded seminar/workshop/demonstration conducted for the furniture makers of Ilagan, Isabela, two groups of furniture makers clamored for similar projects in Aparri, Cagayan and Santiago, Isabela. In response, another workshop/seminar is tentatively scheduled during the second week of November, 1981.

#### The Technology Resource Institution

The FORPRIDECOM an organic agency of the National Science Development Board, located at the foothills of Mt. Makiling, Los Banos Laguna was established as a research institution for the optimum utilization of wood and other forest products involving studies on lumber; veneer and plywood, wood laminates, wood structure, fiberboard, particleboard, wood preservation and seasoning, furniture, charcoal production and charcoal briquetting, pulp and paper manufacture, etc.

FORPRIDECOM has modest research facilities and pilot plants but it has a competent research staff trained in various disciplines. Their scientific studies augmented by their extensive training in highly developed countries have served as a reservoir of knowledge on wood and forest products utilization from which government agencies and private sectors draw technical assistance.

A system of technology transfer mechanism has been evolved over the years since its inception in 1955. Its scientists and technologists, regularly visit the forest-based industries to get a first-hand information on their operations and technical problems. The information gathered are compiled, analyzed, collated and channeled to the experts for thorough study and appropriate and immediate action. These also serve to coordinate these plant visits/technical assistantships are efforts aimed at maintaining lines of direct communications between FORPRIDECOM and the industrial sector.

Added to these technology transfer strategies, research findings and inventions that are deemed ready for transfer are further developed in the pilot scale and promoted for use of the industry.

These activities are achieved by way of print media, audio-visual conferences, dialogues, seminars/workshops and actual demonstrations. FORPRIDECOM has a quarterly technical journal, the FORPRIDECOM Digest, which projects the research and industries development efforts of the Commission, Technical Notes which are a series of review of the accumulated world knowledge and/or work of the Commission about wood and other forest products; and individual division series which are full length articles on the results of researches in the respective divisions.

Most technical papers of researchers are published in prestigious

local and foreign technical journals and magazines.

In line with the government's policy of bringing technology to end-users and to assist the development of the much needed manpower of the forest based industries, FORPRIDECOM conducts in-plant training courses, seminars, workshops and technical training programs within its resources.

We have prepared a program which outlines the various technical training programs within the framework of the technical field of forest products processing.

A multi-disciplinary training staff composed of engineers, foresters, wood technologists, chemists, etc. is drawn from the technical and non-technical manpower resource of the Commission to compose the training faculty and demonstration assistants for each training program. Whenever necessary, guest lecturers from the private sector as well as from other government agencies are tapped.

Training participants are also given free access to the technical library which contains rich collections of books, technical journals, magazines and other publications related to forest products.

When FORPRIDECOM was invited to join the UNIDO sponsored Technology Service Delivery System Project, about 1,893 participants have completed training seminar/workshop in various field of forest products processing conducted by FORPRIDECOM, either in-house or in-plant.

Our efforts to render maximum assistance to the wood-based industry are hampered by very low budgetary allocations granted to the Commission.



### The UNLCO Technology Service Delivery System Project

In the preparation of the work plan for the project, it was decided that FORPRIDECOM should be the Technology Resource Institution for wood processing. As an initial undertaking, fourteen (14) small wood processing shops composed of furniture, toys and woodcraft manufacturers located in the cities of Cebu, Iloilo, Bacolod, Irigan, Legaspi, Ilocos Norte, San Fernando, La Union, Legaspi and Zamboanga City were visited. The information gathered were analyzed and collated. Reports were prepared and submitted.

Most common problems which surfaced were in the areas of wood handling and seasoning, storage of lumber, wood sanding and finishing, furniture design and construction, and the lack of traditional furniture species, such as narra, which are fast dwindling.

Based on these initial findings, a preliminary program for Technical Training for the furniture industry was planned.

### METHODOLOGY

The Small Business Advisory Centers in the different regions of the country where furniture makers are located, invite groups of furniture makers to discuss the plans for seminar/workshops on furniture making to be undertaken in their respective regions. A team from the Ministry of Trade and Industry, FORPRIDECOM and Small Business Advisory Centers (SBAC) attended these preliminary conferences and visit as many shops as possible to ascertain the level of technical training required. During the conference, the groups are advised to form associations of furniture manufacturers and affiliate with a nationally recognized organization such as the Chamber of Furniture Indus-

tries of the Philippines (CFIP). The government prefers to deal with industry associations for unity and close coordination. The findings of the team are then discussed with the industry group and a final training program is drawn.

The program consists of lectures and actual demonstration, such as in abrasives and wood finishing application and upholstered furniture making. Lectures are delivered in the participant's local dialects, if necessary. The use of audio-visual aids and handouts is deemed necessary. Actual demonstrations are conducted likewise. The participants are required to demonstrate the techniques they learn after watching the trainer. They are encouraged to ask questions for clarification of points.

The industry group is required to share a minimal cost in the training by shouldering at least the cost of food and rental of facilities incidental to the training. In areas where this minimal cost seems to be rather onerous, the participants are allowed to bring their own food. The training is conducted right in public places such as the church halls or school buildings to minimize expenses.

#### Common Service Facilities:

For the acquisition of common service facilities such as a lumber kiln drier, the members of the associations are advised to form a corporation to attain a juridical personality. The staff of the Small Business Advisory Centers prepare the project feasibility for the project, such as the setting up of a furnace type lumber dryer in Iligan, Isabela. A request for technical assistance is submitted to FORPRI-DECOM through the Ministry of Trade and Industry. Then an appli-

cation for a loan to finance the establishment of a lumber kiln dryer is submitted to the Development Bank of the Philippines (DBP) or other lending institutions, both public or private.

FORPRIDECOM provides the plans and specifications for the kiln dryer and personnel to supervise the fabrication of the metal parts, the construction of the structure and the installation of the flue tube heater, fans and control equipment.

The kiln operators are trained by FORPRIDECOM before they are allowed to operate the kiln dryer. The initial operation of the lumber kiln dryer is supervised by the FORPRIDECOM staff and a program of monitoring the operation of the facility is drawn for the projects, until it operates efficiently.

The lumber kiln dryer of the Ilagan Industries, Inc. has been fully installed except for the power connection.

Following are the activities undertaken under the TSDS Project:

<u>Date</u>	<u>Topics Discussed</u>	<u>Venue</u>	<u>No. of Participants</u>
May 20, 1980	Wood seasoning	Dagupan City	18
May 27-31, 1980	Wood seasoning Wood finishing	Tonton, Lingayen Pangasinan	136
June 4-6, 1980	Modern Techniques of Furniture Construction	Betis, Guagua Pampanga	15
July 9-11	Furniture finishing	Betis, Guagua Pampanga	15
Sept. 25-26, 1980	Modern Method of Upholstery Preparation	Cagayan de Oro City	20
Sept. 29-Oct. 1, 1980	Modern Processes of Rattan Furniture Manu- facture	Olongapo City	19
Oct. 3-5, 1980	Furniture Production Technology	Bacolod City	22

<u>Date</u>	<u>Topics Discussed</u>	<u>Venue</u>	<u>No. of Participants</u>
Oct. 23-25, 1980	Furniture Structure & Construction	Iligan, Isabela	44
Feb. 7-8, 1981	Middle Management Training for the Rattan Furniture Industry	Cebu City	20
Sept. 14-13, 1981	Furniture Construction and design; modern methods of upholstery preparation and wood abrasives and finishing techniques	Iligan, Isabela	42
T O T A L			351

August 1981 to present      Technical Assistance in the design and construction of a 10,000 bd ft. furnace-type lumber kiln dryer for the Iligan Industries Incorporated, a corporation owned by 47 small furniture manufacturers.

This is FORPRIDECOM experience which it hopes to share with the other delegates.



