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20240

STRENGTHENING THE TECHNICAL AND MANAGERIAL CAPACITIES OF
THE CARPENTRY COOPERATIVES IN MUKALLA AND SEIYUN

SM/YEM/92/035

THE REPUBLIC OF YEMEN

Technical report: Study tour*

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

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expert in furniture and joinery production

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* This document has not been edited.

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A. Basic data

Project title: Strengthening the Technical and Managerial Capacities of the Carpentry Cooperatives in Mukalla and Seiyun

Project number: SM/YEM/92/035

Country: The Republic of Yemen

Host Countries: Germany and Republic of Slovenia

Organizer in Slovenia: The Ministry of Science and Technology

Participants:

1. Alwi Omer Al-Jufri, Chief Engineer in the Cooperative in Mukalla and the counterpart in the project
2. Ali Mohamed Riyaban, Foreman in Mukalla
3. Silan Mahfood Ubad, Foreman in Seiyun

Duration and time: One month, from 10 May to 10 June 1993

Budget: US\$ 26,200 (Budget Line 32)

Executing agency: UNIDO Vienna

Study tour accompanied by: Radmilo Malis, Expert in Furniture and Joinery Production

B. Itinerary

9 May 1993	Belgrade - Vienna, by train
12 May 1993	Vienna - Cologne, by air
18 May 1993	Cologne - Hannover, by train
24 May 1993	Hannover - Zurich - Ljubljana, by car
25 May 1993	Ljubljana - Loz - Ljubljana, by car
26 May 1993	Ljubljana - Crnuce - Ljubljana, by car
27 May 1993	Ljubljana - Grosuplje - Ljubljana, by car
28 May 1993	Ljubljana - Medvode - Ribnica - Ljubljana, by car
30 May 1993	Ljubljana - Ajdovscina, by car
31 May 1993	Ajdovscina - Nova Gorica - Volcja Draga - Ajdovscina, by car
1 June 1993	Ajdovscina - Brnik - Dutovilje - Maribor, by car
2 June 1993	Maribor - Portoroz, by car
4 June 1993	Portoroz - Dekani - Portoroz, by car
7 June 1993	Portoroz - Slovenj Gradec - Otiski Vrh - Ljubljana, by car
9 June 1993	Ljubljana - Vienna, by train
11 June 1993	Vienna, Belgrade, by train

C. Visits and observations

Following a study tour programme earlier proposed by the expert and finalized jointly by UNIDO and the Ministry of Science and Technology of the Republic of Slovenia, the study tour participants visited:

1. The International Furniture Fair, INTERZUM, in Cologne, Germany
2. The World Fair for Machinery and Equipment for the Wood and Forestry Industries, LIGNA, in Hannover, Germany
3. Five furniture factories, two joinery factories, one particle board factory, two manufacturers of hardware and fittings, one producer of surface finishing materials, three factories producing woodworking machines and three institutions, all in the Republic of Slovenia.

1. INTERZUM, Cologne

During four days that the study tour participants visited INTERZUM, special attention was paid to materials and components that can be used in the cooperatives. These items are: surface improved (laminated) particleboards, various hardware and fittings for joinery and furniture products and various woodworking tools.

The Yemenis realized that efficiency and quality of production greatly depends on a right choice and use of appropriate materials and components. Catalogues and some commercial information have been collected from some suitable producers.

2. LIGNA, Hannover

Five days were available for visiting LIGNA Fair. More attention was paid to the exhibited equipment for the production of furniture and joinery. These are mainly standard universal woodworking machines such as: planers, moulders, routers, edge banding machines, simple presses, multi-spindle drilling machines, tenoners, mortisers, turning lathes, powered hand tools etc. Many fixtures and measuring instruments that can be used for more accurate and safe processing were exhibited. Catalogues, brochures, price lists and other commercial information have been collected in order to be given to the management staff.

One Yemeni who speaks English took part in a half day conference on woodworking technologies.

3. Visits in Slovenia

3.1 Furniture factories

The study tour group visited five furniture factories producing mainly bedroom furniture and other interior furnishing items. These factories are:

- MIZARSTVO, Grosuplje
- SORA, Medvode
- MEBLO-BRANIK, Branik

- KRASOPREMA, Dutovlje
- LESNA, Slovenj Gradec

These are all medium size factories with a technological level that could be accessible to Yemen. Attention of the visitors was focused on: kind and quality of the materials, design and construction of the products, production documentation, internal transportation, processing methods, tools and jigs, quality control, organization of production and way of marketing the products.

The study tour participants were impressed with the rather high quality of finished products which are mostly made as knock-down and packed for delivery.

One of the visited factories, KRASOPREMA, Dutovlje, has in its product line several bedrooms especially designed for the Middle East market and they raised exceptional interest of the visitors.

3.2 Joinery factories

Two joinery factories were visited:

- INLES, Ribnica
- MIZAR, Volcja Draga

Both these factories manufacture windows and doors. Construction details, profiling, tenoning/mortising, assembling and finishing have been studied for both doors and windows. Special interest was shown for the construction and production methods of flush doors made with honey-comb cores. Cylindrical "screw-in" hinges are predominantly used, and the housings for locks are mainly made by using special machines which were seen while visiting LIGNA.

Very high utilization of raw material is achieved by gluing small pieces of wood in all three dimension to get required sizes of frame or leaf parts.

All the products are mainly exported.

3.3. Particleboard factory

The group visited the particle board factory in Otiski Vrh belonging to the company LESNA, Slovenj Gradec. The factory has a capacity of around 100,000 cum of board per year, and one fifth of that is surface improved (laminated) mainly with melamine foils. The factory products are: regular three-layer particle board, surface-improved particle board, particle board parts cut to the sizes of furniture parts and laminated furniture parts with or without edge banding.

Surface-improved particle board and laminated furniture parts could be used in the cooperatives in Yemen in order to substitute for more expensive materials presently used. The participants of the study tour took small sample pieces and price lists in order to propose to their management introduction of such materials in the cooperatives' production.

3.4 Manufacturers of hardware and fittings

KOVINOPLASTIKA, Loz, is specialized for production of joinery fittings, stainless sinks, roof windows and punching tools. Several items such as: hinges for doors and windows, fittings for louvered window leaves and fittings for two-way opening windows could be used in Yemen and both quality and productivity would be improved. Fittings for sliding doors have been noticed as well. Catalogues and some samples were taken back to Yemen.

LAMA, Dekani is specialized for production of hardware and fittings for furniture production. Concealed hinges, "screw-in" hinges, locks, catches, pulls etc. are the main items of LAMA. In the case that the cooperatives start using particle board, some of these items are inevitable.

Brochures and other commercial information have been collected by the visitors who were impressed with new possibilities to improve production by using more suitable hardware.

3.5 Producer of surface finishing materials

BELINKA, Crnuce is a manufacturer of many chemical products, among them are some wood finishing and protecting lacquers. These are so-called lazur lacquers mainly used for finishing externally used products such as doors and windows and for finishing flooring and panelling products. Especially they emphasize their water-based lacquers which are ecologically harmless.

Brochures and some other information have been collected.

3.6 Manufacturers of woodworking machines

Two factories making woodworking machines and one factory producing electrical powered hand tools were visited:

- NASTRO, production of woodworking machines, Ljubljana
- LESTRO-LEDINEK, woodworking machines and tool manufacturer, Maribor
- BLACK & DECKER, production of powered hand tools, Grosuplje

All three visited factories have some machines that could be of an interest for the cooperatives. A general impression is that these machines are sturdy and precise and with competitive prices.

3.7 Visits of institutions

The following institutions were visited:

- The Chamber of Economy of Slovenia, Association for Forestry and Wood Processing Industry;
- The Ministry of Science and Technology of Slovenia;
- The Technical Middle School for Wood Processing in Nova Gorica.

In the Chamber of Economy general facts about the wood processing industry in the country were presented and study tour programme discussed and confirmed.

In the Ministry of Science and Technology tasks and results of the Ministry were explained, and the study tour analyzed.

In the Technical Middle School the education system of the school was explained and practical training of students in the school's workshop was demonstrated. Many questions were asked and answered.

On the last day in Ljubljana, the study tour group was invited to visit the famous engineering and consulting firm SMELT, Ljubljana. The main activities of the company were explained and illustrated with some projects in Arabic countries. The SMELT's staff also got some information about Yemeni economy, and in particular about irrigation projects in this country.

D. Conclusions

This study tour was well organized and conducted without a single problem. All the concerned people in the Ministry of Science and Technology and in the visited factories and institutions were very helpful and friendly. They all showed interest in doing business with Yemen.

The study tour participants were very disciplined and wanted to learn as much as possible. They vividly discussed all examples that could be applied in their cooperatives.

E. Recommendation

The cooperatives' managements should analyze and try immediately to implement all suggestions of the study tour group, especially with regards to introduction of better and less expensive materials and hardware/fitting components.

F. Backstopping Officer's comments

This is a reasonable account of what was clearly a well organized and successful study tour. It was particularly useful to combine the fairs with factory visits to observe and discuss applications.

REPUBLIC OF SLOVENIA
MINISTRY OF SCIENCE AND
TECHNOLOGY

Department for International Cooperation

Mr. Alwi Omer Al Jufri
Mr. Muhfood Awad Ba Swaad
Mr. Silan Muhfood Salim Abad

SM/YEM/92/035/32-11

PROGRAMME

of the study tour to Slovenia, 24 May - 8 June, 1993

Monday, 24 May

- 12.25 - arrival to the Ljubljana airport (Brnik)
by flight JP 1663 from Zurich
- accomodation at the Hotel Slon,
Ljubljana, Slovenska 32

Tuesday, 25 May

- 9.00 - introductory discussion at the Chamber of Economy
of Slovenia with representatives of the Department
for foreign economic relations and of the Wood
Department;
- Ljubljana, Slovenska 41

- 12.00 - visit to KOVINOPLASTIKA, Production of Joinery
Fittings
- Lož

Wednesday, 26 May

- 9.00 - NASTRO, Production of Woodworking Machines
- Ljubljana
- 12.00 - visit to BELINKA, Production of Surface Finishing
and Wood Preserving Materials
- Ljubljana-Črnuče, Zasavska 95

Thursday, 27 May

- 9.00 - visit to a private production plant of
various furniture MIZARSTVO
- Grosuplje

11.00 - visit to Black&Decker, Production of Powered Hand Tools

Grosuplje

Friday, 28 May

9.00 - visit to the Furniture Plant SORA

Medvode (in the Ljubljana area)

12.00 - visit to INLES, Production of Windows and Solid Wood Furniture

Ribnica

Monday, 31 May

9.00 - visit to Technical Middle School for Wood Processing (Srednja lesarska šola)

Nova Gorica

15.00 - Mizar, Production of Windows

Volčja Draga near Nova Gorica

Tuesday, 1 June

9.00 - visit to MEBLO-BRANIK, Production of Bedroom Furniture

Branik

12.00 - visit to KRASOPREMA, Production of Bedroom Furniture

Dutovlje

Wednesday, 2 June, and Thursday, 3 June

visit to LESTRO-LEDINEK, Woodworking Machine and Tool Manufacturers

Hoče near Maribor

Friday, 4 June

10.00 - visit to LAMA, Production of Furniture Hardware

Dekani

Monday, 7 June

10.00 - visit to LESNA, Particle Board Factory
Slovenj Gradec

13.00 - visit to (facultatively) Otiški vrh, Surface
Improved Boards
Otiški Vrh

Tuesday, 8 June

10.00 - concluding discussion at the Ministry of Science
and Technology, Department for International
Cooperation
Ljubljana, Slovenska 50

Ljubljana, 24 May 1993