



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

16680

Distr.
LIMITED
PPD.71
21 January 1988
ENGLISH

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

WORKSHOP ON PRODUCTION OF ESSENTIAL AND NON-ESSENTIAL DRUGS
IN AFRICAN COUNTRIES
MILAN, ITALY
12-16 October 1987*

TF/RAF/87/003

Terminal Report**

Prepared by the
United Nations Industrial Development Organization

* Organized by the United Nations Industrial Development Organization
and Farmitalia Carlo Erba S.p.A.

** This document has been reproduced without formal editing.

283

C O N T E N T S

	<u>Page</u>
I. Introduction	3
II. Objectives	3
III. Selection of Participants	4
IV. Programme content	5
V. Evaluation of Programme	7

Annexes

- I. Aide Mémoire
- II. List of Participants
- III. Workshop Programme
- IV. Evaluation Summary
- V. FICE Presentation
- VI. Address by UNIDO

I. INTRODUCTION

The Workshop was organized jointly by UNIDO and Farmitalia Carlo Erba S.p.A. (FICE), a member of the Montedison Group and a major producer of pharmaceuticals in Italy, and held from 12 to 16 October in Milan, Italy, hosted by FICE.

The project was financed by FICE through a Trust Fund Agreement with UNIDO. The budget total was projected for US\$ 66,641 and included a fact-finding mission by one consultant to selected African countries to be invited to the Workshop and a subsequent visit to the plant of the Somali Pharmaceutical Industry in Mogadiscio, Somalia, which receives technical assistance from FICE.

The Workshop was conducted in English with provision for simultaneous translation into Portuguese for the participants from Cape Verde and Mozambique.

II. OBJECTIVES

Following the Alma Ata declaration "Health for All by the Year 2000" the Governments of the region have formulated new policies in the sector of health, among which the availability of essential drugs is a main factor. Accordingly there is an increasing interest in creating or improving the necessary infrastructure to produce locally the medicaments required for the health programmes.

In Africa, the majority of the countries do not have facilities for the production of pharmaceuticals and therefore have to import almost the entire quantity of essential drugs required for their health programmes. As a result of this, they spend a large amount of the hard currency of their health budgets and therefore, often, the vital drugs for the treatment or prevention of endemic and epidemic illness are not available to the population.

UNIDO is assisting the African countries to achieve the goal of becoming self-sufficient in the production of essential drugs. Recognizing that one of the most important aspects in the development of the pharmaceutical industries in developing countries is the availability of trained personnel, this Workshop was organized with the objective of contributing to an increase and improvement in the production of essential and non-essential drugs in the countries invited to participate in this project and to plan the development of their pharmaceutical industry.

III. SELECTION OF PARTICIPANTS

Two participants each from Cape Verde, Ghana, Kenya, Mozambique, the Sudan, Tanzania and Uganda were invited, one being from the policy-making level and the other an industrial pharmacist related to pharmaceutical production. The Workshop constituted a valuable supplement to the technical assistance UNIDO is and has been implementing in Cape Verde, Ghana, Mozambique and Tanzania. In addition, Kenya, the Sudan and Uganda were chosen since they are potential candidates for UNIDO technical assistance and their pharmaceutical industries have been developed to a level enabling technical co-operation among developing countries.

Prior to the Workshop, a fact-finding mission by a consultant of FICE was conducted in the Sudan, Uganda, Kenya, Tanzania, Ghana and Cape Verde to assess the current situation of the local pharmaceutical industry and to identify the training requirements and possible constraints in the production of pharmaceuticals. The mission visited also the sites of the two UNIDO projects UC/RAF/78/154 "Pilot Plant for the Production of Medicaments in Cape Verde", and DP/URT/77/013, "Assistance in the Establishment of a Pharmaceutical Plant in Zanzibar".

The findings and recommendations of this mission, together with the participants' presentations of papers on the pharmaceutical sectors in their countries formed the basis for discussions during the Workshop. The mission also served the purpose of identifying candidates to be invited to the Workshop.

From each of the above projects as well as from project DP/MOZ/83/004, "Preparatory Assistance for the Establishment of a Pilot Plant for Pharmaceuticals in Mozambique", one member of the project staff was among the participants and attended the Workshop.

The Aide Mémoire and the list of participants is contained in this report under Annexes I and II respectively. Out of the 14 participants selected (two from each country) three had to cancel their attendance at the very last moment.

IV. CONTENT OF PROGRAMME

The programme of the Workshop was basically structured as follows:

1. Presentations by Farmitalia Carlo Erba and Tecnimont, the engineering company of the Montedison Group.
2. Presentations by UNIDO:
 - UNIDO's project and programme in the pharmaceutical sector.
 - UNIDO's new approach of direct co-operation with enterprises in developed and developing countries.
 - Results and recommendations of UNIDO's 3rd Consultation Meeting on the Pharmaceutical Industry, held in Madrid, Spain, during the week preceding this Workshop.
3. Presentation and discussion of country papers on the pharmaceutical industry in the countries represented.
4. Lectures on various issues of drugs production, such as health and drug problems in the developing countries, quality control and quality assurance, plant design, formulation of solid oral dosage forms and injectables, packaging and organization of storage.
5. Discussions related to the actual situation of the plants in Cape Verde, Zarzibar and Mozambique receiving technical assistance from UNIDO.

6. Discussion on a practical case: Upgrading of an existing plant.

7. Visit to the plant of FICE in Nerviano, near Milan.

Subsequent to the Workshop in Milan, the participants travelled to Rome for a meeting with the Health Division of the General Directorate of Co-operation for Development within the Ministry of Foreign Affairs, in which the Italian policy regarding co-operation with developing countries in the health sector, specifically in the field of pharmaceuticals, was explained in detail. The Italian Government grants assistance to national projects for essential drugs within the framework of co-operation in basic health care policy.

On the return journey to their home countries, the participants, accompanied by staff members of UNIDO and FICE, visited the plant of the Somali Pharmaceutical Industry (IFS) in Mogadiscio, Somalia, to receive further practical demonstration on the production of drugs. Since 1986 IFS and FICE have been co-operating on a project to operate this plant with financing by the Italian Government. The project includes technical assistance for production start up, training on the job and supply of raw materials. The factory is now producing antibiotics, sulphamides, analgesics, antimalarias and antimycotics. The annual production capacities are as follows:

Tablets and sugar-coated tablets	50 million units
Capsules	25 million units
Syrups	100,000 litres
Suppositories	150,000 units
Creams and ointments	10,000 kg
Ampoules	9 million units
Perfusion bags	400,000 units

The plant, employing about 100 workers, has put Somalia in a position to produce pharmaceuticals in line with international standards. For the time being these products are purchased by the Italian Government Co-operation for use in both Somalia and other African countries under Italian aid programmes.

The visit was very much appreciated by the Workshop participants since they could receive further practical demonstration on the production of drugs under conditions similar to those in their countries, and on the good standards reached by the manufacturing unit.

A detailed programme of the Workshop is contained in this report as Annex III.

V. PROGRAMME EVALUATION

The programme concluded with an evaluation session in which the participants' comments and suggestions on the Workshop were discussed. The participants completed evaluation forms and a summary of their answers expressed in percentages is attached as Annex IV.

In general terms it can be stated that all the participants rated the contents of the Workshop programme as appropriate and its level as sufficient. They all expressed their recommendation to repeat the Workshop. It was however felt that the duration of the programme was too short thus causing a tight schedule of the contents. The participants from the policy-making level would have welcomed it if policy issues regarding pharmaceutical production had been given adequate coverage.

With particular appreciation it was stressed that such a Workshop as this could be realized through the co-operation of UNIDO with an enterprise in an industrialized country which provided, in addition to training, a platform for discussions on possible co-operation at an enterprise-to-enterprise level.

AIDE MEMOIRE

WORKSHOP ON PRODUCTION OF ESSENTIAL AND
NON-ESSENTIAL DRUGS IN AFRICAN COUNTRIES

organized by the

United Nations Industrial Development Organization (UNIDO)

in co-operation with

Farmitalia Carlo Erba S.A., (FICE)

to be held in Milan, Italy, from 12 to 16 October 1987

1. Background

Following the Alma Ata declaration "Health for All by the Year 2000" the Governments of the African countries have formulated new policies in the sector of health among which the availability of essential drugs is a main factor. Accordingly there is an increasing interest in creating or improving the necessary infrastructure to produce locally the medicaments required for the health programmes.

In Africa, the majority of the countries do not have facilities for the production of pharmaceuticals and therefore have to import almost the totality of the essential drugs required for their health programmes. As a result of this, they spend a large amount of hard currency of their health budgets and therefore, often, the vital drugs for the treatment or prevention of endemic and epidemic illness are not available to the population.

UNIDO is assisting the African countries in achieving the goal of becoming self-sufficient in the production of essential drugs. Recognizing that one of the most important aspects in the development of pharmaceutical industries in developing countries is the availability of trained personnel, a workshop on production of essential and non-essential drugs in African countries will be jointly organized by UNIDO and Farmitalia Carlo Erba S.A. (FICE) an important producer of pharmaceuticals in Italy, from 12 to 16 October 1987 in Milan.

2. Objectives

The objective of this Workshop is to increase the production and improve the quality of essential and non-essential drugs in developing countries of Africa leading towards a self-sufficiency in this sector and improved health conditions.

3. Programme

The Workshop will be organized jointly by UNIDO and Farmitalia Carlo Erba S.A. (FICE). All events will be held in the offices of FICE at Via le Bezzi 24 in Milan, Italy, from 12 to 16 October 1987. The working language of the Workshop will be English.

The Workshop will follow the tentative programme attached to this Aide Mémoire.

As part of the Workshop the participants will visit the pharmaceutical plant of FICE at Nerviano near Milan and, on return to their home countries, the plant of the Somali Pharmaceutical Industry in Mogadiscio to acquaint them with the functioning of a pharmaceutical plant in a developed as well as a developing country. The visit to the plant in Mogadiscio is scheduled for 17 October. The participants will depart from Somalia to their home countries.

4. Participants

UNIDO will circulate this Aide Mémoire to the Governments of

Cape Verde	Sudan
Ghana	Tanzania
Kenya	Uganda
Mozambique	

inviting them to submit two candidates each for participation in the Workshop, one being from the policy-making level and the other an industrial pharmacist related to pharmaceutical production. The participants are requested to present at the Workshop a paper outlining the current situation of the pharmaceutical industry in their respective countries. Each presentation should not exceed 30 minutes.

The participants are requested to make all necessary arrangements to arrive in Milan on 11 October 1987.

5. Financial and Administration Arrangements

Financial arrangements for the participation from the developing countries selected by UNIDO will be in accordance with the United Nations rules and regulations and will consist of:

- (i) Round-trip economy class air transportation from the airport of departure in the home country to Milan, Italy, and back to the home country via Mogadiscio, Somalia.

The ticket will be sent to the selected participants through the UNDP offices of the respective countries.

- (ii) Daily subsistence allowance (DSA) at the official UN rates applicable at the dates of the Workshop for Milan (5 days) and Mogadiscio (2 days).

The participants' Governments will be required to bear the following costs:

- (i) All expenses in the home country incidental to travel abroad, including expenditures for passports, required medical examination, inoculations and other such miscellaneous items and internal travel to and from the airport of departure in the home country.
- (ii) Salary and related allowances for the participants during the period of the Workshop.

Neither UNIDO nor the host Government will assume any responsibility for the following expenditures:

- (i) Costs incurred by the participants with respect to any insurance, medical bills and hospitalization fees, or due to travel other than by direct route.

- (ii) Compensation in the event of death, disability or illness of the participants.
- (iii) Loss or damage of personal property of the participants.
- (iv) Purchase of personal property and compensation for loss or damage caused by climatic or other conditions.
- (v) Supplementary services such as extra meals, telephone calls, taxis and individual hospitality.

In order to avoid any difficulties at the airports in Milan and Mogadiscio, the participants are invited to make sure that they meet all requirements for international travel (e.g., vaccinations and visas if applicable).

7. Communications

Communications regarding the Workshop should be addressed to:

UNIDO: Mr. M. Janjic, Chief
Section for Co-operation with Non-governmental
Organizations and Industrial Enterprises
United Nations Industrial Development Organization
Vienna International Centre
P.O. Box 300
A-1400 Vienna, Austria

Tel: (0222) 2631 (Ext. 4760/3163)
Telex: 135612 UNO A

LIST OF PARTICIPANTS

CAPE VERDE	Mrs. Judith F. R. Oliveira Lima	Director General Empresa Produtos Farmaceuticos, E.P. (EMPROFAC)
	Mrs. Maria da Luz N. Nobre Leite	Director General of Pharmacy Ministry of Health, Labour and Social Affairs
KENYA	Mr. Enoch B. Nyanusi	Chief Pharmacist Ministry of Health
	Dr. John Otete	Deputy Director of Medical Service Ministry of Health
MOZAMBIQUE	Dr. Rui de Almeida Alves Pereira	Chief of Pharmaceutical Industry Division and Technical Commission for Drugs and Teurapetics Ministry of Health
	Mrs. Maria E. Pinto	Director EMOFAR State Industry
SUDAN	Dr. Amin O. El Zein Sagyroun	Senior Pharmacist Quality Control Department United General Pharmaceutical Company
TANZANIA	Dr. Efraim Njau	General Manager Tanzania Pharmaceutical Industries Ltd
	Dr. Talib M. Ali	General Manager of pharmaceutical plant and Acting Chief Pharmacist Ministry of Health
UGANDA	Mr. Justo V. Oidu	Acting Chief Pharmacist Ministry of Health
	Mr. Moses Wanume	Production Manager Uganda Pharmaceuticals Ltd.

List of Participants (cont'd)

FARMITALIA	Mr. L. C. Gastel	General Manager Technologies and Engineering
	Mr. A. Maggiar	Training Expert Technologies and Engineering
	Mr. M. Portesi	Public Relations
	Dr. L. Donno	Tropical Medicine Expert
	Mr. G. C. Scuderi	Quality Assurance
	Mr. P. Pasquale	Technologies and Engineering
	Mr. C. Veglio	Technologies and Engineering
	Mr. M. Adami	Research and Development
	Mr. R. Bianchini	Research and Development
	Mr. G. Castoldi	Nerviano Factory Manager
	Mr. S. Merli	Technologies and Engineering
UNIDO	Mr. J.-L. Lanet	Chief Pharmaceutical Industries Unit Chemical Industries Branch
	Mr. M. Majid	Special Technical Adviser System of Consultations Division
	Mr. H. Rosnitschek	Associate Industrial Development Officer Section for Co-operation with Non-governmental Organizations and Industrial Enterprises

PROGRAMME

<u>Day/Time</u>	<u>Lecturer</u>
Monday, 12 October 1987	
09.00 - 10.45	
- Welcome to the participant by UNIDO and FICE, and presentation of the work group FICE/TECNIMONT (Engineering and Know-how)	FICE (Mr. Gastel) UNIDO (Mr. Rosnitschek)
- Presentation of UNIDO programme in the pharmaceutical sector	UNIDO (Mr. Lanet)
- Presentations of seminar programme	FICE (Mr. Maggiar)
11.00 - 12.00	
- Presentation by FICE Fields of activities, plants, R. & D. etc.	FICE (Mr. Portesi/ Mr. La Selva)
12.00 - 13.00	
- Health and Drugs problems in Developing Countries	FICE (Mr. Lonno)
14.00 - 16.30	
- Presentation (by the participants) of the current situation of the pharmaceutical industry in their countries (half an hour for each country)	Participants
17.00	
- Meeting at the Chamber of Commerce, Industry and Agriculture of Milan	
Tuesday, 13 October 1987	
09.00 - 11.00	
- Quality control, Quality assurance, Basic concepts	UNIDO (Mr. Lanet)
- Quality control, Quality assurance, FICE approach and organization	FICE (Mr. Scuderi)

<u>Day/time</u>	<u>Lecturer</u>
11.15 - 13.00	
- Correct approach for a new plant design: identification of needs, pharmaceutical process, design procedure	FICE (Mr. Pasquale)
- Presentation of a practical case (a project for an African country)	
14.00 - 16.00	
- Discussion related to actual situation of 3 labs (Zanzibar, Mozambique, Cape Verde) in participants' countries	FICE (Mr. Vegio) UNIDO (Mr. Lanet) Participants
- Results and recommendations of UNIDO's 3rd Consultation Meeting on the Pharmaceutical Industry	UNIDO (Mr. Majid)
21.00	
- Group discussion (two separate groups) of the case: "Upgrading of an existing plant"	

Wednesday, 14 October 1987

09.00 - 13.00

- Visit to a FICE plant at Nerviano, near Milan

14.30 - 18.30

- Pharmaceutical Development:

- Injectables FICE (Mr. Adami)
- Oral and topic formulations FICE (Mr. Bianchini)

Thursday, 15 October 1987

09.30 - 11.00

- Manufacturing, packaging and storage organization and management FICE (Mr. Castoldi)

11.00 - 13.00

- Discussion of a case: "Upgrading of an existing plant" FICE (Mr. Merli)

Thursday, 15 October 1987 (cont'd)

14.30 - 16.30

- Visit to TECNIMONT
(Engineering FICE sister company)
and presentation of pharmaceutical
engineering activities
- TECNIMONT
(Mr. Varano)

17.00 - 18.00

- Evaluation and conclusions
- Participants

Evening

- Departure for Rome

Friday, 16 October 1987

11.30

- Meeting with Health Division of Direzione Generale Cooperazione
allo Sviluppo, Ministry of Foreign Affairs

Evening

- Departure to Mogadiscio, Somalia

Saturday, 17 October 1987

Morning

- Arrival in Mogadiscio, Somalia

Sunday, 18 October 1987

09.00 - 12.00

- Visit to the plant of the Somali Pharmaceutical Industry (IFS)

Evening

- Depart for home country

FARMITALIA CARLO ERBA - UNIDO

Workshop on

**"PRODUCTION ON ESSENTIAL AND NON-ESSENTIAL DRUGS
IN AFRICAN COUNTRIES"**

MILANO - ROMA - MOGADISHU OCTOBER 12th-18th 1987

EVALUATION OF THE WORKSHOP

No. of participants:11..... No. of countries:6.....

Programme: Host CountryItaly.....

Year : 1987.....

(Figures quoted hereafter are percentages)

I. Pre-programme information

- 1. What is your opinion about the advance information on the programme received in your home country?
(Please indicate with an X in the appropriate box).

	Sufficient	Too little	None
Aim of programme	<input checked="" type="checkbox"/> 64	<input checked="" type="checkbox"/> 36	<input type="checkbox"/>
Contents of programme	<input checked="" type="checkbox"/> 73	<input checked="" type="checkbox"/> 27	<input type="checkbox"/>
Level of programme	<input checked="" type="checkbox"/> 91	<input checked="" type="checkbox"/> 9	<input type="checkbox"/>

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

Information on the countries involved should have been provided.
.....

II. Concept and organization of programme

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

appropriate 100

not appropriate

If not appropriate, please state why:

.....

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

too high

sufficient 100

too low

4. Is, in your opinion, the programme:

too specialized

too broad 9
(covering too many subjects)

correct in 91
its concept

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

much too short

too short 82

correct 18

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

more practical 73

more theoretical

as it is 27

7. Did you benefit from that exchange

with lecturers	yes	<input type="checkbox"/> 91	no	<input type="checkbox"/>
with fellow participants	yes	<input type="checkbox"/> 82	no	<input type="checkbox"/> 9
with staff of the factories	yes	<input type="checkbox"/> 73	no	<input type="checkbox"/> 18

(One participant did not answer.)

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

much	<input type="checkbox"/> 9
somewhat	<input type="checkbox"/> 9
little	<input type="checkbox"/> 82

III. Relevance and applicability of the programme

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

to some extent only	<input type="checkbox"/> 64
to a great extent	<input type="checkbox"/> 36

10. Do you think this programme should be repeated?

yes	<input type="checkbox"/> 100	no	<input type="checkbox"/>
-----	------------------------------	----	--------------------------

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

to a very small extent

to some extent

to a sufficient extent

to a high extent

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

to a great extent

to a certain extent

to a limited extent

to a very limited extent

13. How will the transfer of knowledge be made?

See summary attached.

.....
.....
.....

14. Other suggestions:

See summary attached.

Summary of individual comments

13. How will the transfer of knowledge be made?

By distributing the documents to colleagues and discussing the contents.

In meetings at policy level decision making.

Through seminars or lectures.

Making working documents available to the Pharmaceutical Department of Ministry of Health

By holding a meeting with all managers of the local pharmaceutical industry and the Minister of Health.

Suggestions and opinions expressed at the Workshop would be put into practice or at least conveyed to my Organisation for consideration.

By having a training and discussion forum.

By correction of problems within my plant according to both the theoretical and practical ideas acquired during this Workshop.

14. Other suggestions:

Taking into account the seminar was addressed to the people responsible for pharmaceutical policy, we believe the following topic should have been included in the programme:

"The role of pharmaceutical policy in the development of a local pharmaceutical industry."

The seminar should have stressed practices and problems specifically dealing with production.

Evaluation by participants should be anonymous. This I believe would enhance frankness.

Policy issues should have been given the necessary prominence during the Workshop.

The programme should be organized in one of the developing countries and include some other participants other than the pharmacists.

UNIDO can to a certain extent be like a "chamber of commerce" of developing countries, identifying useful projects and investments to be made by big companies like FICE with mutual advantages. With that identification all of us can realize more practical workshops.

To repeat this Workshop at the soonest opportunity.

More participants should be invited to such programmes to give it more scope of participation and benefit of varied opinions. These should include also some Latin American countries.

Such workshops should take place as often as possible.

Some free time should be allowed for more interaction with fellow participants.

If there happen to be other chances of organizing such workshops the practical assessment of individual plants should be made and if possible UNIDO should always monitor the performance.

PRESENTATION OF FICETECH.

Farmitalia Carlo Erba Technologies (FICETECH.) is a new Unit of the Montedison Group.

The Unit is utilizing the world-wide pharmaceutical experience of Farmitalia Carlo Erba with the engineering capabilities of Tecnimont, the Montedison Engineering Company, which has built several hundred Chemical plants all over the world in the last 20 years.

Scope of the new Unit is to help Governments or the private sector to answer to the basic necessities of pharmaceutical products (including bulk chemical) especially in the field of Generic Drugs.

Farmitalia Carlo Erba Technologies is taking an active role from the very initial phases of the project verifying the country morbidity and selecting the appropriate products, in line with existing distribution facilities and Health Scheme necessities.

The work then goes on, in cooperation with Tecnimont, in the engineering phase (process package, basic and detailed engineering, constructions -either turn key or work direction -) and, last but not least, training of the local staff, start-up of the plant and management of the operation as long as it is necessary.

The know-how of FICETECH is based on the experience Farmitalia Carlo Erba has gathered building plants for captive consumption in Italy and abroad. In Italy, Nerviano, the most advanced European plant for injectables and Ascoli Piceno, where oral forms are prepared. Fine Chemical plants have been built in Settimo Torinese (fermentation) and Rodano (synthesis). Abroad, pharmaceutical plants have been built and are now in full production in Spain, Argentina, Brazil, Chile, Peru, Venezuela, Mexico and Indonesia. Brazil and Indonesia are also engaged in Fine Chemicals production.

On the basis of this experience FICETECH is now working on behalf of third parties, in the following Countries:

- In Jakarta helping the Indonesian Ministry of Health in the Indofarma project, a generic formulation unit which will produce generic drugs for the local health care scheme.

This help goes from the extension of know-how to the designing of the Unit, to the work direction, training, start-up and management of the plant in the initial phases.

- In Somaliland FICETECH is managing since one year the Government generic pharmaceutical plant IFS, idle since its construction was terminated in 1963. After selecting appropriate products and providing know-how, FICETECH is now supplying IFS with technical and administrative management, training local staff in Italy through a special EEC Scholarship Program, and starting new productions.
- In China FICETECH is helping the local Government with two know-how in the field of basic Fine Chemical (Vit. B12 and Dexamethazone).
- In India FICETECH is extending know-how, basic and detailed engineering and staff training for a very large bulk production of Pen. G derivatives.

Several projects are in various phases of negotiation in Nigeria, Sudan, Egypt, Algeria, DDR, URSS, Venezuela, China and India.

These projects are often financed by the Italian Directorate General of Cooperation for Development, and FICETECH is in continuous touch with several multinational agencies such as UNIDO, EEC and WHO.

Oct. 1987

**Workshop on Production of Essential and
Non-essential Drugs in African Countries**

Milan, Italy

12-16 October 1987

ADDRESS

by

**H. K. Rosnitschek
Associate Industrial Development Officer**

**Section for Co-operation with Non-governmental
Organizations and Industrial Enterprises**

United Nations Industrial Development Organization

Distinguished Participants

It is indeed a great honour and a pleasure for me to have been given the opportunity to address this Workshop on behalf of the United Nations Industrial Development Organization.

I wish to express my sincere thanks to Farmitalia Carlo Erba for the preparatory work its staff have undertaken to organize this Workshop and for the hospitality we have all enjoyed since our arrival here in Milan.

To see this Workshop becoming a reality encourages us at UNIDO to continue with the new approach the Organization has entered upon since its conversion into a specialized Agency within the United Nations system at the beginning of 1986. Founded in 1967, UNIDO was entrusted by the General Assembly of the United Nations with the mandate to promote and accelerate the industrialization of the developing countries. In fulfilling this task, UNIDO provides projects and programmes of technical assistance to its developing Member States, which include the provision of experts and consultancy services, demonstration equipment, and - this Workshop is an example - manpower training. During this year UNIDO's target is to implement projects with a total value of around 100 million dollars.

In addition, UNIDO provides a forum and acts as an instrument for both developing and industrialized countries to establish contacts and to hold consultations. Just last week, a Consultation Meeting on the Pharmaceutical Industry was held in Madrid.

Another of UNIDO's services is to assist developing countries to obtain external financing for industrial investment projects. Only recently an Investment Promotion Office was opened for this purpose here in Milan.

The Organization further assists developing countries in the transfer of technology and through action-oriented studies on industrial sectors, countries and regions.

The very complex field of industrialization makes it essential for UNIDO to maintain close co-operation with enterprises and non-governmental organizations in developing and developed countries being the motors of industrial development. UNIDO has responded to this requirement. The new Constitution, adopted by the Member States of UNIDO at its conversion into a specialized agency, permits the Organization to intensify direct co-operation with industry in two directions:

Firstly, UNIDO is now permitted to receive contributions based on a Trust Fund Agreement from enterprises in developed countries to implement projects for the benefit of developing countries such as this Workshop which has been realized through a contribution by Farmitalia Carlo Erba.

Secondly, the Organization is now in a position to render direct assistance to private enterprises in developing countries, a difficult task in the past because funds from the United Nations Development Programme, which contributes around 72 per cent to the funds available to UNIDO for project implementation, are usually not available for the private sector. In a recent, encouraging development, companies from developing countries are not only making these requests, but are prepared to finance the projects themselves through - what we call - a self-financing trust fund agreement.

Closer collaboration with industrial enterprises and non-governmental organizations will enable UNIDO to improve its services. By co-operating directly with companies in the developing world it will be possible to achieve a greater impact of our technical assistance on target groups in these countries. Industrial enterprises and non-governmental organizations from developing countries have much to contribute as innovators of technology more suited to the local conditions. Their access and acceptability to the communities in the country, their knowledge of local languages, culture and traditions are some of the advantages to be gained from associating them more closely with the formulation and implementation of technical co-operation projects. Through the increased involvement of enterprises in the industrialized countries in project implementation we aim at mobilizing and channelling the technological, managerial and financial resources available in these countries into the industrialization process of the developing countries.

Another important addition to existing traditional sources of technical assistance could be achieved through greater international industrial co-operation between enterprises from developed and developing countries (North-South and South-South). Experience gained in this respect led to the conclusion that much more effort must be directed to expand promotional activities particularly through increased involvement and co-operation with industry organizations, chambers of commerce and industry, associations of manufacturers, professional organizations, and financing institutions. Responses in this regard from industrial enterprises from developed countries like Farmitalia, and their readiness to co-operate with UNIDO and partners from developing countries are encouraging and will be further pursued.

To comply with these requirements a new Division for Special Programmes and Activities was established in UNIDO which includes a Section especially entrusted with co-operation with industrial enterprises and non-governmental organizations. It is the main objective of this Division to expand UNIDO's technical co-operation programme in developing countries beyond the projects financed by the United Nations Development Programme.

We are confident that this Workshop will also provide a forum for discussions between partners from developing countries and Farmitalia Carlo Erba on possible future co-operation. It may also generate requests to UNIDO for technical assistance projects which we would welcome. UNIDO will do its best to assist in the realization of these projects.

I would like to conclude by thanking all the participants, their companies and governments, for having responded positively to the invitation to this Workshop. This event is an excellent occasion to strengthen co-operation and enhance the relationship between North and South. I wish the Workshop every success in its endeavours.

Thank you.