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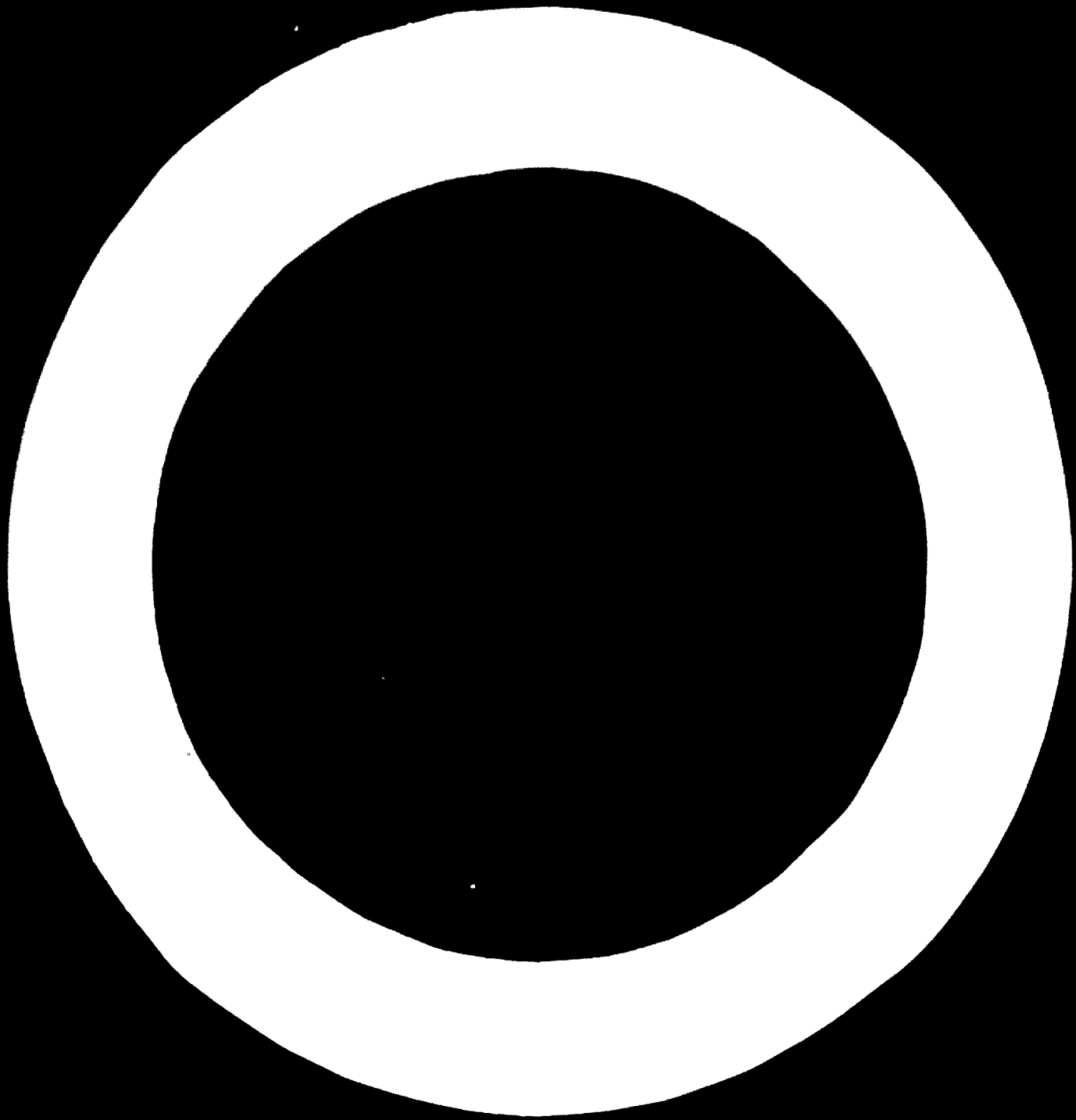
Appendix 1/1

ROLE OF UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
IN THE DEVELOPMENT OF THE FERTILIZER INDUSTRY

prepared by

the Secretariat of UNIDO

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.



The United Nations Industrial Development Organization (UNIDO) was established by the U.N. General Assembly Resolution 2152 (XXI) as an autonomous part of the U.N. secretariat. UNIDO started functioning from July 1967 in Vienna, Austria. The purpose of UNIDO is to promote industrial development in accordance with the charter of the United Nations, and, by encouraging the mobilisation of national and international resources, to assist in, promote and accelerate the industrialization of the developing countries with particular emphasis on the manufacturing sector.

The development of the fertilizer industry has engaged the serious attention of UNIDO in the last four years and before that of its predecessor the Centre for Industrial Development (CID). The main activities of UNIDO in the fertilizer field are described in the paper.

UNIDO has assisted member countries in the following types of operational activities:

- provision of experts to assist developing countries
- fertilizer market surveys
- feasibility studies
- preparation of tender documents
- analyses of tenders
- assistance to existing plants for trouble shooting, starting up, etc.
- establishment of pilot demonstration plants
- assistance in the development and use of natural gas for the fertilizer industry
- product diversification
- assistance to obtain finance
- training of personnel.

A typical list of operational projects are given in an annexure to the paper.

The supporting activities of UNIDO consist in back-stopping operational projects and in carrying out certain important studies and projections of value to developing countries. The projections for fertilizer supply and demand during the Second Development Decade may be mentioned in this connection. UNIDO has published some of these studies and a list is given in an annexure to the paper.

Meetings of transfer of technology and "know-how" are organized in the form of expert group meetings, seminars and symposia. Examples of the latter were the Interregional Seminar on the Production of Fertilizers held in Kiev, USSR in 1965 and the present Second Interregional Fertilizer Symposium. A list of such meetings is given as an annexure to the paper.

Although UNIDO cannot enter into direct investment in the fertilizer industry, it can assist member countries in all facets of the pre-investment stage. UNIDO's efforts have contributed in a large measure to the following developments:

- acceptance of the idea in developing countries of large single train ammonia plants thus ensuring economy of scale;
- widespread use of gaseous and liquid fuel for feedstock especially in countries where abundant and cheap supplies are available;
- production and use of multi-nutrient high analysis fertilizers;
- import of intermediates like ammonia and phosphoric acid thus initiating regional co-operation;
- standardization of plant capacities, products and processes to help in training and use of spares;
- assistance in reducing under-utilization of existing capacities.

ANNEXURE A

List of approved operational projects in fertilizer industry

<u>Submission no.</u>	<u>Country</u>	<u>Project title</u>
I. <u>UNDP/SPECIAL FUND</u>		
<u>AFRICA</u>		
TOG-12	Togo	Fertilizer use promotion, demonstration and production scheme, Lomé
<u>ASIA AND THE FAR EAST</u>		
PAK-26	Pakistan	Pre-investment studies for the promotion of the fertilizer and petrochemical industries
II. <u>UNDP/TECHNICAL ASSISTANCE</u>		
<u>THE AMERICAS</u>		
UNIDO/LAT/69/14	Regional	Meeting for the development of the fertilizer and pesticides industry in Latin America
III. <u>UNIDO REGULAR PROGRAMME</u>		
<u>AFRICA</u>		
ALG/05/1/4	Algeria	Fertilizers, Pesticides and Petrochemicals
MAG/05/1/2	Madagascar	Fertilizer industry
SOM/05/1/1	Somalia	Fertilizer industry
<u>THE AMERICAS</u>		
TRI/05/1/1	Trinidad and Tobago	Fertilizer, pesticides and petrochemical products industries
<u>ASIA AND THE FAR EAST</u>		
ID//RP/05-3	Pakistan	Fertilizer industry -In-plant group training
PAK/05/1/2	Pakistan	Fertilizers, pesticides and petrochemicals
VIE/05/1/1	Vietnam, Rep. of	Fertilizer, pesticides and petrochemicals

<u>Subproject No.</u>	<u>Country</u>	<u>Project title</u>
III. <u>UNIDO REGULAR PROGRAMME (cont'd)</u>		
<u>EUROPE AND THE MIDDLE EAST</u>		
ID/RP/05-3	Iraq	Fertilizer industries - In-plant group training
SAA/05/1/1	Saudi Arabia	Fertilizer, pesticides and petrochemicals
ID/RP/05-3	Syrian Arab Republic	Fertilizer industries
ID/RP/05-8	Inter-regional	Course in fertilizers
IV. <u>UNIDO/SPECIAL INDUSTRIAL SERVICES</u>		
<u>AFRICA</u>		
69/507 GUI-6	Guinea	Composting of town's garbage
69/692 MOR-13	Morocco	Expansion of the phosphatic fertilizer industry
69/409 RWA-16	Rwanda	Elaboration of technical and economic data necessary for possible construction of prototype unit for gas recovery and washing - Lake Kivu
69/472 UAR-6 Phase II	United Arab Rep.	Ammonia/urea fertilizer project
69/471 UAR-5 Phase II	United Arab Rep.	Phosphorus and phosphatic fertilizer complex
<u>THE AMERICAS</u>		
69/624 NIC-3	Nicaragua	Fertilizer project (ammonia urea, complex fertilizers)
<u>ASIA AND THE FAR EAST</u>		
69/646 CEY-14	Ceylon	Consultancy services to state State Fertilizer Manufacturing Corporation
<u>EUROPE AND THE MIDDLE EAST</u>		
70/756 SYE-7	Southern Yemen	Composting of town's waste at Aden - Marketing expert (organic fertilizer) - Production expert (compost fertilizer)
68/309 SYR-5	Syrian Arab Rep.	Assistance to Home nitrogen fertilizer project

<u>Submission no.</u>	<u>Country</u>	<u>Project title</u>
IV. <u>UNIDO/AFRICAN INDUSTRIAL SERVICE (Cont'd)</u>		
<u>EUROPE AND THE MIDDLE EAST (Cont'd)</u>		
69/385 SYR-3/Rev.1	Syrian Arab Republic	Study of fertilizer requirements and urea production - Chemical engineer
69/509 SYR-19	Syrian Arab Republic	Adviser on natural gas development (Petrochemicals and fertilizers)
69/566 YUG-17	Yugoslavia	1. Production development trends and by-product finalisation 2. Processing of coal into fuel and complex fertilizers (exploratory mission)
<u>INTERREGIONAL</u>		
70/737 INRIBRECO-13	Inter-regional	Assistance to Industrial Development Centre for Arab States - Fertiliser expert

ANNEX C

Selected UNCTAD Publications on Fertilizer Industry

Symbol	Date	Title	Page	Language	Price (US\$)
DT/TAO/SER.C/17	69.11.B.3	Report of the International Commission on the Production of Fertilizers		E,F,S	\$1.00
WS/UID/1	61.11.B.1	Fertilizer Manual	271	E,F,S	\$1.50
11/5	66.11.B.1	Fertilizer Production, Technology and Use (Proceedings of the International Seminar on the Production of Fertilizers - Kiev 1964)	404	E,F	\$5.00
11/5	69.11.B.5	Fertilizer production in six selected countries with good natural resources	58	E,F,S	\$1.75
ID/13	69.11.B.21	Factor inhibiting the indigenous growth of the fertilizer industry in developing countries	170	E,F,S	\$1.00
ID/40/6	69.11.B.49 Vol. 6	Monograph 6 Fertiliser Industry	76	E,S	\$0.50
ID/44 Vol.1	70.11.B.28	Directory of Fertilizer Production Facilities Part 1 - Africa	271	E	\$3.00
Fertilizer Industries Series					
ID/SER.F/1	68.11.B.17 No. 1	Chemical fertilizer projects: their creation, evaluation and establishment	22	E,F,S	\$1.75
ID/SER.F/2	69.11.B.10 No. 2	Guide to building an ammonia fertilizer complex	24	E,F,S	\$0.75
ID/SER.F/3	69.11.B.26 No. 3	The reduction of sulphur needs in fertilizer manufacture	61	E,F,S	\$0.75
ID/SER.F/4	69.11.B.20 No. 4	The ammonia chloride and soda am-dual manufacturing process in Japan	33	E,F,S	\$0.75
ID/SER.F/5	69.11.B.23 No. 5	New process for the production of phosphatic fertilizers using hydrochloric acid	31	E	\$0.75

1972-1973

Year	Title	Category	Amount (USD)
1972-73	Market for Fertilizer Supply	F	100
	Production of Fertilizer in Latin America	F	100
	Technical Assistance	T	100
1972-73	Report of the Working Group on Development of Fertilizer and Phosphate Industries in Latin America	S	100
		S	100
-	World Supply and Demand and Price Trends of Sulphur	S	270
		P	200
		S	100
-	Directory of Fertilizer Production Facilities Part II - Asia	E	250
-	Directory of Fertilizer Production Facilities Part III - Latin America	E	250
-	Techno-economics of Nitro-phosphate Fertilizers	F	100
		P	100
		S	100

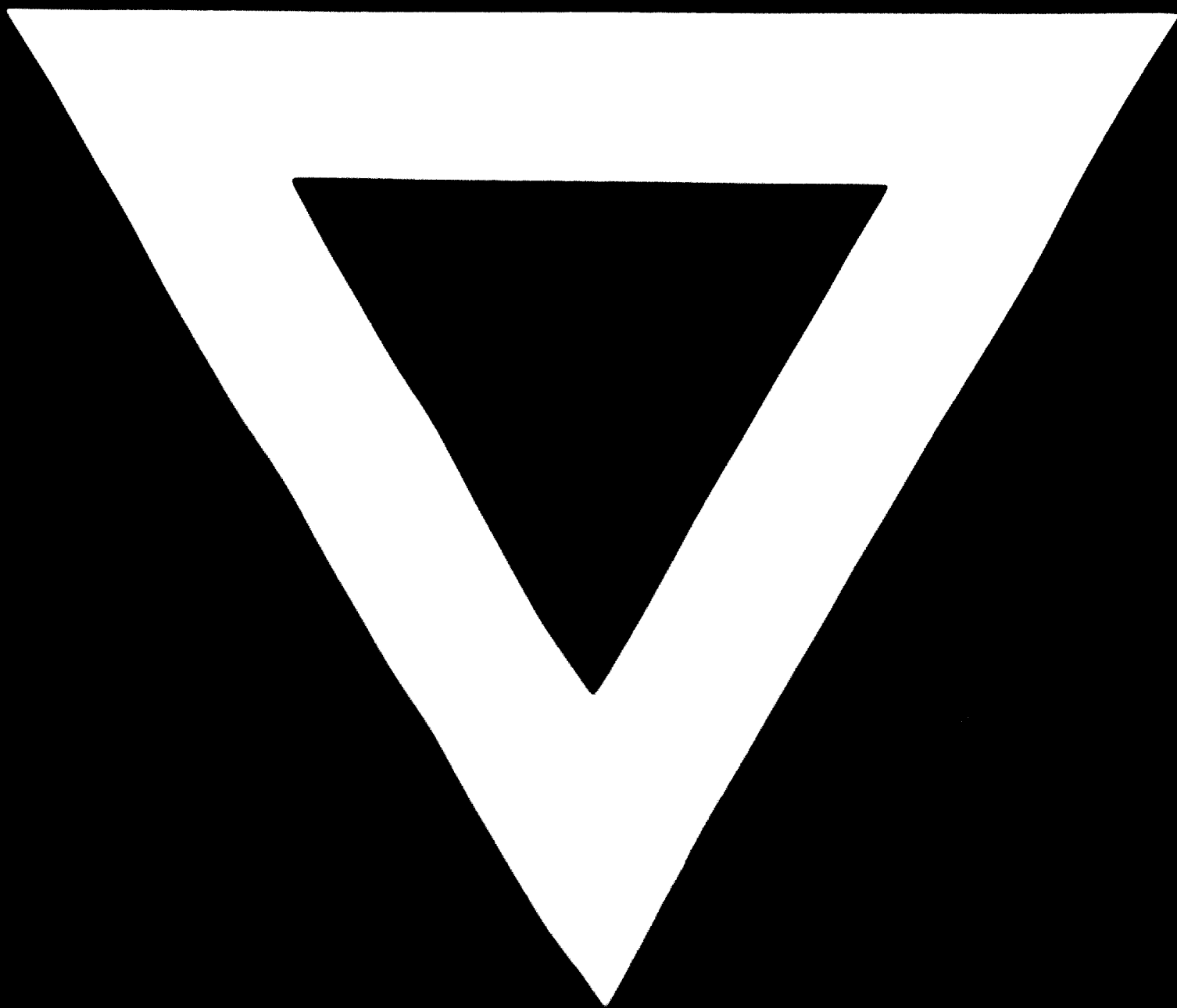
Support of UNCTAD Publications Program

-	Directory of Fertilizer Production Facilities Part IV - MEDITERRANEAN region	E	250
-	Report of the Second International Fertilizer Symposium	S	400
		H	100
-	Proceedings of the Second International Fertilizer Symposium	S	2,000
		H	2,100
-	Report of the Expert Group Meeting on Catalyst Production	E	100

CONFERENCE AND SYMPOSIUM

Year	Title	Location	Date
1967	Workshop on the Role of the Teacher in the Development of the Child	New York	November 1967
1968	Workshop on the Role of the Teacher in the Development of the Child	New York	September 1968
1969	Workshop on the Role of the Teacher in the Development of the Child	New York	December 1969
1970	Workshop on the Role of the Teacher in the Development of the Child	New York	May 1970
1971	Workshop on the Role of the Teacher in the Development of the Child	New York	October 1971
1972	Workshop on the Role of the Teacher in the Development of the Child	New York	October 1972
1973	Meeting on the Role of the Teacher in the Development of the Child	New York	November 1973
1974	Ad hoc Committee on the Role of the Teacher in the Development of the Child	New York	December 1974
1975	Symposium on the Role of the Teacher in the Development of the Child	New York Kranford New York	September/October 1975





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