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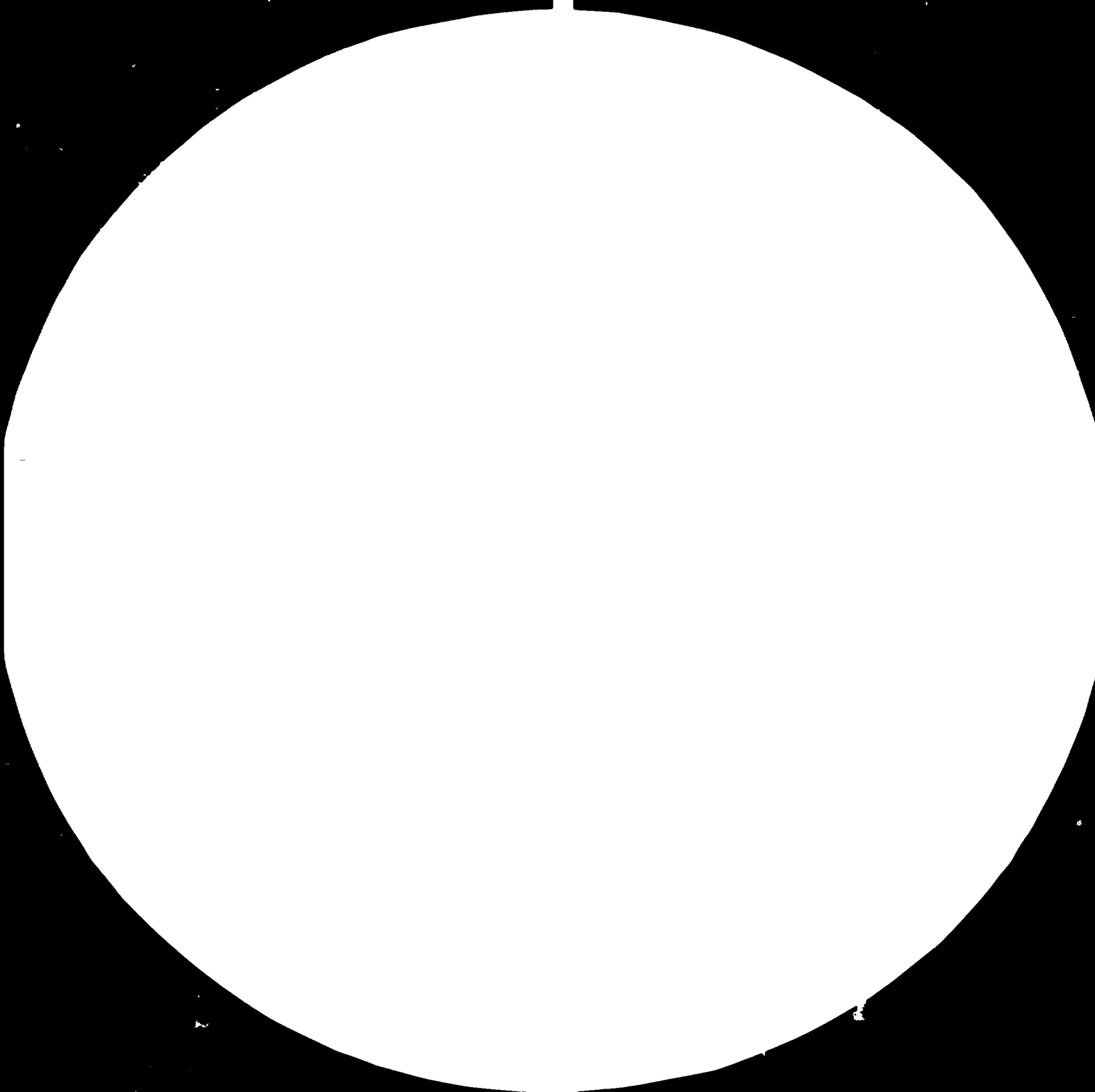
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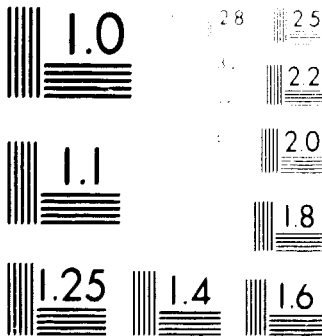
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REPORT  
OF  
THE UNIDO COUNTRY PROGRAMMING  
MISSION  
TO  
SAUDI ARABIA

4-7 May 1981

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TABLE OF CONTENTS

I. INTRODUCTION AND FINDINGS AND  
RECOMMENDATIONS OF THE COUNTRY  
PROGRAMMING MISSION

II. ANNEXES

INTRODUCTION - FINDINGS AND RECOMMENDATIONS  
OF THE COUNTRY PROGRAMMING MISSION  
FOR SAUDI ARABIA

The UNIDO Country Programming Mission visited Saudi Arabia from 4 - 7 May 1981. The objectives of the mission were to (i) exchange techno-economic views with the Saudi authorities and UNDP officials on various aspects of industrial development, (ii) develop programme themes on possible UNIDO contributions within the framework of Government development priorities and (iii) suggest a series of integrated projects for the consideration of the Government and UNDP for possible inclusion in the Country Programme. The mission was composed of:-

- Mr. A. Kayalar  
Senior Industrial Development Officer  
Programme Development and Evaluation Branch/DPC  
Mission Co-ordinator
  
- Mr. René Schmied  
Senior Industrial Development Officer  
Institutional Infrastructure Branch/DIO
  
- Mr. Peter Ryan  
Industrial Development Officer  
Feasibility Studies Section/DIO

The mission was very well received by the Government and UNDP. Meetings were held in the Ministry of Industry and Electricity chaired by Mr. Mubarak Al Khafra, Secretary General, Foreign Capital Investment Bureau. H.E. Abdel Aziz Al-Zamel, Vice Chairman and Managing Director of Saudi Basic Industries Corporation (SABIC) met the mission members to discuss UNIDO's project proposals. Other meetings were held at Saudi Arabian Standards Organization (SASO) and at the Saudi Consulting House (SCH) to review in detail their technical assistance requirements.

The UNDP Resident Representative, Dr. Ibrahim Adly and the Assistant Resident Representatives Mr. Yoshihiro Kishi and Mr. Zuheir Amin gave an excellent briefing to mission members and Mr. Kishi took part in most of the meetings with the government institutions together with the mission members. Dr. Adly informed the mission that submission of the Country Programme for UNDP Governing Council's approval has been postponed from June 1982 to June 1983, thus giving ample time for sound preparation of the country programme.

1. MEETING AT THE MINISTRY OF INDUSTRY AND ELECTRICITY

The mission was received by Mr. Mubarak Al-Khafra, Secretary-General, Foreign Capital Investment Bureau. Mr. Kishi, Assistant Resident Representative and Mr. R.M. Withana, UNIDO expert, were also present. The implementation of project "Industrial Advisory Services to the Ministry of Industry and Electricity" DP/SAU/79/005 was reviewed. By taking into account technical assistance requirements of the Ministry, it was agreed in principle to expand UNIDO's inputs into this project by adding some new posts to the existing ones and to have a tripartite review of the project, possibly the end of this year or early 1982, to prepare a new project document with well defined objectives. The UNDP Riyadh Office will notify UNIDO as to the exact timing of the tripartite review meeting.

During this very important meeting with Mr. Mubarak Al-Khafra, programming themes and project concepts of particular interest to Saudi Arabia were also introduced by the mission. These are:

1. Assistance to Saudi Arabian Standards Organization

As originally planned, a large scale project with a duration of five years was considered during detailed discussions with SASO. This draft project document will be submitted as soon as possible for Government and UNDP consideration and approval.

2. Industrial Survey

The Ministry is very much interested to have an Industrial Survey carried out by UNIDO similar to the one made in the United Arab Emirates in 1978. The Industrial Planning Section of UNIDO is preparing a project proposal along this line, and all background documents will be sent to the Government and UNDP accordingly.

3. Bureau for Transfer of Technology and Licensing Agreements

Mr. Mubarak Al-Khafra expressed a keen interest in this proposal. It was agreed that Mr. Tanaka, Head of Development and Transfer of Technology Branch of UNIDO, or a senior staff member from his Branch, should visit Saudi Arabia to develop this project concept into a project document. His travel and per diem should be covered from the project budget DP/SAU/79/005. The UNDP Office will send a telex to UNIDO accordingly.

4. Industrial Training

UNIDO's technical assistance programmes in the field of industrial training were briefly explained by the mission members. A similar proposal which was prepared by the Training Branch for Kuwait should be developed in UNIDO by taking into account training needs of Saudi Arabia.

5. SAUDI ARABIAN Institute for Industrial Research and Development

UNIDO's experience in assisting developing countries in the establishment and/or strengthening of the multi-branch and single-branch industrial research



and development institutes was put forward for the consideration of Saudi authorities. UNIDO will prepare a project concept shortly to be submitted to the Saudi Centre for Science and Technology.

#### 6. Industrial Pollution Control Centre

The mission explained UNIDO/UNEP joint activities in the field of industrial pollution control and gave examples of these activities in neighbouring countries such as; Qatar, Kuwait, Oman. Copies of the project concept on establishment of an Industrial Pollution Control Centre were left with the UNDP and with the Ministry of Industry and Electricity and attached to this report as Annex I.

#### 7. Consultancy and Training Centre for the Use of Mini Computers

The mission submitted copies of a project concept in English and Arabic to UNDP and the Ministry of Industry and Electricity for consideration.

#### 8. Industrial Information System Implementation through Mini Computers

Copies of a project concept developed for Oman by an UNIDO short-term expert were submitted to UNDP and to the Ministry of Industry and Electricity. The development objective of this project is to improve the analytical, planning and management capabilities and operating efficiency of the Ministry of Industry and Electricity.

The immediate objectives are:-

- a) procure, integrate and install two microcomputer based integrated work station terminals with word processing capability and able to communicate on line with the Gulf Organization for Industrial Consulting (GOIC) Industrial Data Bank in Doha, Qatar. It should be capable of video display and printing in both English and Arabic.
- b) design and participate in the implementation of an on-line industrial registration information bank.
- c) train Ministry personnel in the principles of on-line systems and data base design and in system maintenance.
- d) train Ministry personnel in the use of the system for information retrieval, analysis and word processing.

#### 9. Food Processing Industries

UNIDO's technical assistance activities in the following food processing industries were briefly explained:

- Meat and meat processing industry
- Dairy industry
- Fisheries industry
- Cereal industry
- Sugar industry
- Vegetable oils and fats industry
- Fruits and vegetable industry
- Beverage industry
- Chocolate and Confectionery industry

A short note on food processing industries was submitted to UNDP and to the Ministry of Industry and Electricity for consideration. (Annex II).

10. Master Plans for Several Industrial Sectors

The mission gave a short briefing on this important UNIDO technical assistance activity and expressed UNIDO's readiness in the preparation of master plans for different branches of industries such as: chemicals, petro-chemicals, iron and steel, fertilizers, cement, etc. projecting the needs, requirements, market potentials, production capacities, technological developments etc. in any given branch of industry up to the year 2000.

11. Establishment of Common Engineering Services  
Repair and Maintenance and Training Units at  
Juhail and Yanbu Industrial Areas

By taking into account the rapid development of Jubail and Yanbu Industrial areas, the mission proposed a project concept for the consideration of the Saudi authorities in establishing common engineering services, repair and maintenance and training units to serve the industries in these areas. If the Government is interested, UNIDO may field the Senior Inter-regional adviser on Engineering Industries to develop this project concept and to prepare a technical assistance project document accordingly.

12. Rural Industrialization and Assistance to the Small  
and Medium Scale Industries and Industrial Estates

The mission introduced UNIDO's activities in this field which cover practically all developing countries as recipients of UNIDO's technical assistance. If the Government is interested, UNIDO should prepare a project proposal for consideration.

13. Short-term High-level Consultancy Services

The idea of elaborating an umbrella project for short-term high-level consultancy services for the Ministry of Industry and Electricity for SABIC and for different industries in Saudi Arabia was explained by the mission. Especially SABIC considered this proposal very useful and requested the lists of a panel of high level consultants for consideration in the following fields:

- Iron and Steel
- Petrochemicals
- Chemicals
- Fertilizers

UNIDO will submit these lists as soon as possible.

14. Technical Co-operation Among Developing Countries

The mission suggested that an allocation may be set aside in the Country Programme to enable representatives of selected developing countries to benefit from the valuable experience of Saudi Arabia in some important industrial activities.

II. MEETING AT THE SAUDI ARABIAN BASIC INDUSTRIES CORPORATION (SABIC)

The mission was accepted by H.E. Abdel-Aziz Al Zamel, Vice Chairman and Managing Director of SABIC. He gave an excellent briefing on Saudi Arabian industrial development and Saudi institutions concerned and expressed his valuable opinions on programming themes, project concepts introduced by the mission. He was very much interested in getting the lists of a panel of high-level consultants to come to Saudi Arabia twice a year for ten days and to discuss with Saudi authorities the recent developments on their sectors and to give practical advice on the following fields:

- Iron and Steel
- Petro-chemicals
- Chemicals
- Fertilizers.

UNIDO will submit these lists as soon as possible.

III. MEETING AT SAUDI CONSULTING HOUSE (SCH)

The mission visited the Saudi Consulting House and had a very useful meeting with H.E. Ahmed El-Twaigry, Chairman of SCH and Mr. Abdel-Aziz Al Khathlan, Head and Manager of Industrial Studies Section. Mr. Kishi, Assistant Resident Representative was also present.

The mission enquired whether SCH requires further UNIDO assistance after phasing out of the project DP/SAU/79/009 Technical Advisory Services to Industrial Studies and Development Centre (ISDC).

The SCH which grew out of ISDC, now provides a feasibility study service on a fee basis to the public and private sector. It was mentioned by H.E. Ahmed El-Twaigry that for the 50-60 studies done each year, SCH may need specialists for at least 10 of these. He asked whether UNIDO could provide such short-term consultants without long recruitment delays. It was proposed by the mission that a Funds-in-Trust project could be signed whereby UNIDO could provide, on a trial basis, 4 man months of consultancy. If this trial goes well, a longer project may follow. Accordingly the mission prepared a draft Funds-in-Trust Agreement for four man months of consultancy rounded off to US\$ 30,000 plus 14% overhead administrative cost. This draft which should be typed by the UNDP Riyadh Office, will be submitted to SCH for their consideration and approval.

IV. MEETING AT SAUDI ARABIAN STANDARDS ORGANIZATION (SASO)

The mission participated in a very well organized meeting at the Saudi Arabian Standards Organization. Mr. Sami A.K. Mirza, Director of Metrology and Calibration Department, Mr. Siraj Masoudi, Director of Quality Control Laboratory, Mr. Nabil Mullah, Director of Specification

Department, Mr. Mohammed Salamah, Director of General Affairs Department, Mr. Badr Al-Saad, Head of Food Products Section, Mr. Abdul Muhsen Al Yousif, Head of Follow-up Section and Mr. Abdullah Al-Homoudi of Follow-up Section gave an excellent briefing on SASO's activities and technical assistance requirements. It was agreed in principle that parallel to UNIDO's efforts to recruit long-term experts, it should be considered to have short-term experts and consultants to assist SASO's urgent needs. The difficulties encountered in finding high-level long-term experts and possibilities in providing short-term high-level experts and consultants visiting SASO in split missions of short duration within a period of five years were explained to SASO high-level representatives by the mission members.

UNIDO's wide experience in procurement of equipment for laboratories of SASO was also brought to the attention of SASO. The mission members pointed out that in most cases procurement of equipment is cheaper through UNIDO than direct purchasing by the Governments themselves because equipment producers see UNIDO as a continuous buyer of their equipment due to UNIDO's rapidly growing technical assistance to many developing countries in the fields of Standardization, Quality Control and Metrology. For this reason, equipment producers make special offers to UNIDO which are in general lower than their direct offers to individual governments.

The UNIDO mission benefited a great deal from direct contact with SASO. Within the light of very fruitful discussions and visit to the laboratories, the mission was able to prepare a sound project document with well-defined objectives covering a period of five years including required expert and consultant services of long- and short-terms, training of SASO staff in the country and abroad and procurement of necessary equipment for laboratories. As a first step to drafting this document, UNIDO will be submitting soon an outline of the project concept, for the Government's and UNDP's consideration and approval. Meanwhile UNIDO has intensified its efforts to accelerate the recruitment of experts as agreed during the meeting with SASO.

#### V. SUMMING-UP MEETING AT THE UNDP OFFICE

The mission members briefed Mr. Yashihiko Kishi and Mr. Zuheir Arun, the Assistant Resident Representatives on their preliminary findings and recommendations. Mr. Ranjith M. Withana, UNIDO expert who was a great assistance to the mission was also present. It was agreed that upon receipt of the mission report, UNDP should send a copy of this report to all the Government institutions visited by the mission and to all concerned Saudi authorities for their consideration. The UNDP Office will keep UNIDO informed on any developments in this respect.

ACKNOWLEDGMENT

The members of the UNIDO Country Programming mission would like to express their wholehearted thanks to H.E. Abdel-Aziz Al Zamel, Vice-Chairman and Managing Director of SABIC, to H.E. Ahmed El-Twaigry, Chairman of Saudi Consulting House, to Mr. Mubarak Al-Khafra, Secretary-General, Foreign Capital Investment Bureau, Ministry of Industry and Electricity and all SASO high-level officials for their sincere and cordial co-operation during the mission.

The members of the UNIDO Country Programming mission also wish to express their sincere thanks to Dr. Ibrahim Adly, the UNDP Resident Representative, to Messrs. Yoshihiro Kishi and Zuheir Amin, the UNDP Assistant Resident Representatives and to all the colleagues at the UNDP Office for their hearty co-operation.

PROJECT PROPOSAL

SECTION 1 PROJECT IDENTIFICATION

- 1.1 Title of Project : Industrial Pollution Control Centre
- 1.2 Project Number :
- 1.3 Subject Area : Industry and Environment
- 1.4 Scope :
- 1.5 Implementation : (a) Executing Agency - UNIDO  
(b) Supporting Organization:
- 1.6 Duration of Project: (First phase)  
: Commencing :  
: Completion :  
(30 months activity planned)
- 1.7 Cost of project : Total cost of project is US \$1,270,854

Signature :

For the Executing Agency (UNIDO)

For the Government of Saudi Arabia

Signature : .....

Signature : .....

Name and Title : .....

Name and Title : .....

.....

.....

Date : .....

Date : .....

1. Purpose of Project

1.1 The immediate objectives of the project are :

- (a) to assess the extent and the nature of industrial pollution from existing and planned industries
- (b) to formulate specific recommendations and plan of action with regard to legislative and technical measures in the field concerned
- (c) to define technical assistance activities required to implement above
- (d) to erect new installations for treatment of waste effluents
- (e) to train national staff

1.2 In pursuance of the above, the Project will establish an Industrial Pollution Control Center in order to :

- (a) assess sources, types and inventory of industrial pollution from existing and planned industries by the establishment and operation of sampling, monitoring and analytical systems for air, water and land.
- (b) identify and assess environmental impacts by existing and potential industrial activities as well as recommending environmental criteria for the siting of new industry
- (c) recommend and implement environmental engineering, management and institutional procedures and actions to control, minimize and prevent the deleterious effects of industrial pollution in and outside the plant, arising from normal operations or through accidental discharges
- (d) develop, organize, co-ordinate and implement industrial environmental education and training activities, including the training of counterparts personnel
- (e) advise and assist in the establishment of an industrial environmental information system by the development of library facilities; regional and international linkage with other similar information systems
- (f) study other sources and types of pollution and recommend appropriate measures for control and prevention

2. Description of the Project

- 2.1 To establish and operate an Industrial Pollution Control Centre and to strengthen the capabilities of the states in industrial environmental management and technical matters.

Inputs

- a) UNIDO will be the executing Agency of the project and will provide the following expert services :-
- Project Co-ordinator (Industrial Pollution Expert - 30 m/m)
  - Environmental Analytical Chemist 24 m/m
  - Environmental Engineer 24 m/m
  - Consultants 24 m/m
  - Secretary 30 m/m

Fellowships, study tours abroad, equipment and documentation will also be provided according to the attached project budget.

- b) Saudi Arabia will provide Funds in Trust US \$1,250,124 for the implementation of the project, as well as providing the necessary liaison and co-ordination with other Government authorities for the operation of the project.

3. Activities

The project activities will be co-ordinated through a Co-ordination committee.

- a) Survey of capabilities in states in the field of industrial development and combating pollution covering:
- i) scientific, educational and administrative institutions
  - ii) research facilities and equipment in the industrial sector
  - iii) manpower in the industrial sector
  - iv) existing environmental laws and regulations on industrial pollution
  - v) ongoing and planned industrial activities
- b) assess base line level of air, water and solid (land) quality in and around industrial complex



- c) make an inventory of existing and potential pollution loads
- d) recommend gaseous and liquid discharge standards/guidelines as well as TLVs based on existing economic, technical, socio, geographical meteorological and environmental basic line conditions.
- e) assess the operation of existing pollution control equipment
- f) identify additional pollution control equipment to meet acceptable discharge standards
- g) draw up performance and operating specifications of pollution control equipment required
- h) plan and operate sampling, monitoring and analytical system, for source discharge as well as ambient quality and working environments
- i) develop and coordinate industrial environmental management education and training courses and workshops
- j) develop industrial environmental information storage and retrieval system
- k) co-ordinate and/or carry out environmental impact assessment of new industries

#### 4. Outputs

- a) a report describing in detail existing and potential pollution problems related to the industrial complexes. Report on all significant sources of pollution under various conditions and examine industrial operations with a view to identifying likely discharge points for pollutants
- b) assessment of the effects of pollutants from these problems together with data on local meteorological and base line conditions
- c) an inventory of gaseous, liquid and solid pollutants discharged from existing and expected industrial activities
- d) recommend action regarding appropriate discharge standards and maximum allowable concentration/threshold limit values
- e) plan and operate pollution sampling monitoring and analytical system for determining source discharge concentrations as well as the quality of the environment in and outside the plants.
- f) develop and operate an industrial environmental information system to assist in the planned activities of the Centre
- g) develop education and training capacities in the field of industrial pollution assessment and management
- h) develop capabilities to assist and advise other authorities in Qatar on pollution control systems and equipment

Institutional arrangements

- (a) The project will be attached to
- (b) A Co-ordination Committee will be set up composed of the following representatives :

|         |   |                             |
|---------|---|-----------------------------|
| State/s | - | One representative each     |
| UNIDO   | - | Two representatives         |
| UNDP    | - | The Resident Representative |

The Committee will meet at least twice a year to jointly formulate and recommend policies and procedures for the implementation of the project. It will also recommend experts and consultants to be recruited and approve of project personnel who will be recommended by UNIDO. The Committee will select the national personnel for training. It will review and monitor the operation of the project.

The Committee will decide on elaborating the term of reference, if necessary.

Workplan and Timetable

1982

- April Signing of project document
- June - Meeting of Co-ordination Committee  
- Appointment of Project Co-ordinator
- Sept-Dec. - Recruitment of environmental analytical chemist and environmental engineer
- Oct-Dec.- (1) Survey National capabilities  
(2) Develop detailed plans for carrying out activities (b) to (k) in Section 3
- December- Meeting of Co-ordination Committee, Selection of trainee for fellowship abroad  
Selection of environmental legislation consultant

1983

- January - First progress report to be prepared by the project co-ordinator  
initiate local training programmes in the Centre
- Jan.-Dec. - carry out activities (b) to (k) in Section 3
- June-July - meeting of Co-ordination Committee  
second progress report to be prepared by the project co-ordinator

1984

- January - Continuation of activities under (b) to (k) of 3  
third progress report to be prepared by the project co-ordinator
- June - Meeting of Co-ordination Committee  
Fourth progress report to be prepared by the project co-ordinator.
- Nov.-Dec. - Preparation of terminal report of the project by the project co-ordinator.  
Final meeting of Co-ordination Committee

Reports

Management Reports

(a) Half-yearly progress reports

UNIDO shall submit half yearly progress reports within thirty days after each meeting of the Co-ordination Committee.

(b) Terminal Report

A terminal report will be submitted by UNIDO within sixty days on completion of the project. The report should concentrate on the management of the project and should indicate the principal factors which determine it.

Follow-Up Action

On completion of the first phase of the project, and based on the evaluation of the project operations by the Co-ordination Committee the Government of the States may wish to consider a second phase of the project.

UN159

PROJECT BUDGET/REVISION

|  |                             |                                 |
|--|-----------------------------|---------------------------------|
| 3. COUNTRY   | 4. PROJECT NUMBER AND AMEND | 5. SPECIFIC ACTIVITY<br>32.1.II |
| 10. PROJECT TITLE<br>Establishment of an Industrial Pollution Control Centre |                             |                                 |

| 15.<br>10. | PROJECT PERSONNEL<br>EXPERTS / Post title          | 16. TOTAL |         | 17. 1982 |        | 18. 1983 |         | 19. 1984 |         | 20. |    |
|------------|--|-----------|---------|----------|--------|----------|---------|----------|---------|-----|----|
|            |  | m/m       | \$      | m/m      | \$     | m/m      | \$      | m/m      | \$      | m/m | \$ |
| 11-01      | Project Co-ordinator (Industrial Pollution-Expert) | 30        | 186,000 | 6        | 34,800 | 12       | 75,600  | 12       | 75,600  |     |    |
| 02         | Environmental Analytical Chemist                   | 24        | 151,200 |          |        | 12       | 75,600  | 12       | 75,600  |     |    |
| 03         | Environmental Engineer                             | 24        | 151,200 |          |        | 12       | 75,600  | 12       | 75,600  |     |    |
| 04         | Consultants  | 24        | 151,200 |          |        | 12       | 75,600  | 12       | 75,600  |     |    |
| 05         |  |           |         |          |        |          |         |          |         |     |    |
| 06         |  |           |         |          |        |          |         |          |         |     |    |
| 07         |  |           |         |          |        |          |         |          |         |     |    |
| 08         |  |           |         |          |        |          |         |          |         |     |    |
| 09         |  |           |         |          |        |          |         |          |         |     |    |
| 10         |  |           |         |          |        |          |         |          |         |     |    |
| 11         |  |           |         |          |        |          |         |          |         |     |    |
| 12         |  |           |         |          |        |          |         |          |         |     |    |
| 13         |  |           |         |          |        |          |         |          |         |     |    |
| 14         |  |           |         |          |        |          |         |          |         |     |    |
| 11-99      | SUBTOTAL:  | 102       | 639,600 | 6        | 34,800 | 48       | 302,400 | 48       | 302,400 |     |    |

21. REMARKS



PROJECT BUDGET/REVISION

2. PROJECT NUMBER

| 3. PROJECT NUMBER | 16. TOTAL |                     | 17. 1982 |               | 18. 1983 |                | 19. 1984 |                | 20. |      |
|-------------------|-----------|---------------------|----------|---------------|----------|----------------|----------|----------------|-----|------|
|                   | m/m       | \$                  | m/m      | \$            | m/m      | \$             | m/m      | \$             | m/m |      |
| 12.01             |           |                     |          |               |          |                |          |                |     |      |
| 13.00             | 30        | 50,000              | 6        | 10,000        | 12       | 20,000         | 12       | 20,000         |     |      |
| 14.00             |           |                     |          |               |          |                |          |                |     |      |
| 15.00             |           | 10,000              |          |               |          | 5,000          |          | 5,000          |     |      |
| 16.00             |           | 20,000              |          | 5,000         |          | 7,500          |          | 7,500          |     |      |
| 17.01             |           |                     |          |               |          |                |          |                |     |      |
| 17.02             |           |                     |          |               |          |                |          |                |     |      |
| 19.00             | 132       | 719,600             | 12       | 49,800        | 60       | 334,900        | 60       | 334,900        |     |      |
| 20.               |           |                     |          |               |          |                |          |                |     |      |
| 29.00             |           |                     |          |               |          |                |          |                |     |      |
| 30.               |           |                     |          |               |          |                |          |                |     |      |
| 31.00             |           | 100,000             |          |               |          | 50,000         |          | 50,000         |     | -18- |
| 32.00             |           | 10,000              |          |               |          | 5,000          |          | 5,000          |     |      |
| 33.00             |           |                     |          |               |          |                |          |                |     |      |
| 34.00             |           |                     |          |               |          |                |          |                |     |      |
| 35.00             |           |                     |          |               |          |                |          |                |     |      |
| 39.00             |           | 110,000             |          |               |          | 55,000         |          | 55,000         |     |      |
| 40.               |           |                     |          |               |          |                |          |                |     |      |
| 49.00             |           | 250,000             |          |               |          | 150,000        |          | 100,000        |     |      |
| 50.               |           |                     |          |               |          |                |          |                |     |      |
| 51.00             |           | 6,000               |          |               |          | 2,000          |          | 4,000          |     |      |
| 52.00             |           | 5,000               |          |               |          | 2,000          |          | 3,000          |     |      |
| 53.00             |           | 2,000               |          |               |          | 1,000          |          | 1,000          |     |      |
| 55.00             |           | 4,000               |          |               |          | 2,000          |          | 2,000          |     |      |
| 59.00             |           | 17,000              |          |               |          | 7,000          |          | 10,000         |     |      |
| 99.               |           | <b>GRAND TOTAL:</b> |          | <b>49,800</b> |          | <b>345,900</b> |          | <b>492,900</b> |     |      |

Agency Overhead 153,524  
Grand Total 1,250,124

## FOOD PROCESSING INDUSTRY

### Background

One of the priority sectors mentioned in the Lima Declaration and Plan of Action is the development of efficient agro-industries by securing an effective and viable link between agriculture and industry with the objective of achieving a high degree of integration and inter-action between these two sectors of the economy in the developing countries.

The principal agro-based industries are: food-processing industries, the leather and leather products industry, the textile industry and the wood industry. A world wide study which reviewed the various branches of the agro-based industry concluded that the food-processing group of industries form the major part of the agro-based industry, accounting for 57% of their output. The principal branches of the food-processing industry are:

- Meat and meat-processing industry
- Dairy industry
- Fisheries industry
- Cereal industry
- Sugar industry
- Vegetable oils and fats industry
- Fruits and Vegetable industry
- Beverage industry (including tea and coffee)
- Chocolate and confectionery industry

The Global Preparatory Meeting for a Consultation Meeting on the Food-processing Industry was held at UNIDO Headquarters, Vienna, from 8 - 12 January 1979. The meeting considered the documents prepared for the Secretariat by UNIDO consultants - the regional analysis papers on the food-processing industry in Asia, Africa and Latin America as well as the synthesis paper which assesses the food-processing industry bearing in mind the regional priorities and the constraints affecting the sector. The main problems identified were:

- (a) Lack of co-ordinating mechanisms for the food industry at the national level;
- (b) Shortage of packaging manufacturing capacity: the need for the application of sophisticated technology such as tin plating;

- (c) Need for supply of raw material of suitable quality and adequate quantity;
- (d) Inadequate transport, storage and other infrastructural facilities;
- (e) Insufficient research and development and almost total lack of extension, services and training facilities at the national and regional levels;
- (f) Need for technology adapted to local conditions;
- (g) Need for quality control system and food standards;
- (h) Shortage of food-processing machinery and equipment;
- (i) Need to raise the present low level of indigenous technology;
- (j) Need for the removal of tariff and non-tariff barriers on exports of processed foods to industrialized markets.

The first consultation meeting on the Food-processing Industry will be held possibly in December 1980 or early 1981 to discuss the above mentioned issues.

#### UNIDO'S ASSISTANCE TO FOOD-PROCESSING SECTOR

UNIDO may assist developing countries in the following fields:

- 1) Planning, establishing strengthening food-processing industries;
- 2) Creation of an appropriate national co-ordinating body to harmonise existing and proposed policies affecting food processing;
- 3) Planning, establishing and strengthening packaging manufacturing capability in developing countries - paper, glass, flexible packs, cans, etc.;
- 4) Designing and manufacturing of basic food processing equipment;
- 5) Repair and maintenance of food-processing equipment;
- 6) Up-grading, existing small-scale processing methods (cottage industry) and where appropriate to expand them to factory scale;
- 7) Development of new or modified products with potential to create new markets;
- 8) Planning, establishing and strengthening food-processing research and development institutes at national and regional levels. Initiating twinning agreements and co-operative arrangements between research and development institutes in developed and developing countries, and among developing countries themselves;
- (9) Development of training facilities for food-processing sector;
- 10) Application of suitable quality control and standards;



- 11) Planning, establishing and strengthening the national capability to store, transport and distribute finished food products;
- 12) Selection of appropriate technologies in the food-processing sector;
- 13) Providing industrial management consultancy services to food-processing industries;
- 14) Providing instruments and equipment e.g. for quality testing and for training purposes;
- 15) Establishing and strengthening industrial data base;
- 16) Identifying potential partners for joint-ventures from both developed and developing countries and to bring them together for further consultations and negotiations and ascertaining the interest of multilateral and bilateral public and private financial institutions;
- (17) Preparation of feasibility studies for new investments;
- 18) Organizing TCDC programmes to accelerate flow of know-how and information among developing countries;
- 19) Carrying out studies and surveys in the food-processing sector.
- 20) Offering the services of INTIB and industrial enquiries to food-processing industries.

#### FUNDS TO FINANCE UNIDO'S ASSISTANCE

Developing countries may make technical assistance requests to UNIDO through appropriate channels. These requests may be financed from the following funds:

1. United Nations Development Programme (UNDP)  
Country Programme (IPF) This is the main source of financing for technical assistance projects covering expert and consultant services, training and equipment.
2. United Nations Industrial Development Fund (UNIDF)  
Developed and developing countries voluntarily contribute into this fund which is administered by UNIDO.
3. Special Industrial Services (SIS)  
This is a programme financed by the UNDP and it covers short term expert services to assist developing countries. It should be noted that this programme has a yearly allocation of US\$ 3.5 million which is expected to be increased to US\$ 5 million from 1982 on.

4. UNIDO Regular Programme for Technical Co-operation

This programme which amounts to a yearly allocation of US\$ 3.3 million is mainly used for training (US\$ 1.1 million) and for the special needs of the Least Developed Countries (US \$ 1.1 million) which covers:

- Training
- Assistance in project preparation, evaluation and implementation
- Improvement of existing production facilities
- Development of new production facilities
- Industrial development planning and infrastructure.

UNIDO Secretariat, Senior Industrial Development Field Advisors (SIDFA) stationed in developing countries, UNIDO's Regional and Inter-regional Advisors and the UNDP Resident Representatives in the developing countries are at the disposal of developing countries to give more information on the sources of financing and to assist developing countries in the preparation of technical assistance requests in the food-processing sector.



