



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

RESTRICTED

18940

DP/ID/SER.B/683
28 March 1991
ORIGINAL: ENGLISH

vi, 63p

18940

STRENGTHENING THE APPRAISAL AND REGISTRATION CAPACITY
OF THE MINISTRY OF ECONOMY, TRADE AND SUPPLY

DP/YEM/87/020

REPUBLIC OF YEMEN

Terminal report*

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

Based on the work of Samir Gindy, expert in industrial engineering
and officer-in-charge

Backstopping Officer: G. Rezek,
Feasibility Studies Branch

United Nations Industrial Development Organization
Vienna

* This document has not been edited.

LIST OF ABBREVIATIONS

CTA	:	Chief Technical Advisor
YR	:	Yemeni Riyal
METS	:	Ministry of Economy, Supply and Trade
YAR	:	Yemen Arab Republic
OIC	:	Officer in Charge
NPI	:	National Planning Institute
PPER	:	Project Performance Evaluation Report
PC	:	Personal Computers
UNIDO	:	United Nations Industrial Development Organization
UNDP	:	United Nations Development Programme
CPO	:	Central Planning Organization
ROY	:	Republic of Yemen
PDRY	:	Peoples Democratic Republic of Yemen
TPR	:	Tri-Partite Review
COMFAR	:	Computer Model of Feasibility Analysis and reporting

ACKNOWLEDGEMENT

THE EXPERT OWES SPECIAL GRATITUDE TO H.E. MR. AL-DAHBI, THE DEPUTY MINISTER OF ECONOMY AND LATER DEPUTY MINISTER OF INDUSTRY FOR TECHNICAL AFFAIRS FOR THE CO-OPERATION, COURTESIES, AND VALUABLE ADVICE INSPITE OF HIS EXTREMELY BUSY WORK SCHEDULE, HE SPARED CONSIDERABLE TIME IN ESTABLISHING AND DIRECTING THE PROJECT.

THE EXPERT EXPRESSES HIS THANKS TO MR. M.A. SALEH, DIRECTOR OF INVESTMENT DEPARTMENT AND THE PROJECT NATIONAL COORDINATOR FOR HIS ASSISTANCE AND COOPERATION.

THE EXPERT IS APPRECIATIVE TO THE TWO TEAMS OF NATIONAL COUNTERPARTS WHO PARTICIPATED IN THE TRAINING COURSES FOR THEIR DEVOTION TO LEARNING.

THE EXPERT IS GRATEFUL FOR THE ASSISTANCE AND SUPPORT OF UNDP RESIDENT REPRESENTATIVE MR. M. HYLAND AND UNDP STAFF.

PREFACE

I was recruited as an Industrial Engineer under this project for one year as per job description. The CTA of the project was Mr. M. Shalaby who started his assignment in May, 1989. However, due to ill health, he left the duty station in January, 1990. During the period in which Mr. Shalaby was CTA, I undertook certain assignments either independently or jointly with him. These are indicated in the body of this report.

The project in question was attached to the Investment Department in the Ministry of Economy, Supply, and Trade (METS). The project national director was Mr. M.A Saleh, who has been working under the guidance of Mr. M. Al-Dahbi, the Deputy Minister of Economy.

As it is well known, YAR and PDRY took the political decision to unify the two Yemens. This merger took place officially in May 1990 and the unified country became known as the Republic of Yemen (ROY). With this change, the aforesaid Ministry was split into two ministries: Ministry of Commerce and Supply and the Ministry of Industry and consequently the project was serving the Ministry of Industry. Apart from this, there has been no change in objectives and activities of the project. Moreover, during this initial phase, the project was not serving the branch of the ministry of Industry in Aden as there existed a similar project for that purpose. However, it is likely a new project serving the entire Country will be formulated in the immediate future. During the period which followed the departure of the CTA till the end of my assignment, I was OIC of the project. The UNIDO has submitted a number of candidates for the post of CTA as well as for the post of the Financial Analyst and for the short term Consultancy post of Market Analyst. However, Counterpart Authorities did not take any decision to select a suitable candidate for any of these posts partly because of their involvement in the reorganization which took place following the Unification of the country.

This unfortunate situation left certain important outputs unaccomplished. The same may be stated regarding certain requests for equipment which I proposed to UNIDO through UNDP, where the latter thought such requests should be postponed or are unwarranted under the circumstances. The UNIDO had proposed on a number of occasions the holding of a TFR of the project in accordance with UNDP rules and regulations. However, UNDP Field Office found reason to postpone them.

As a result of the above mentioned situation, I remained the only long term expert attached to the project covering the assignment as specified in the job description as well as the administrative work required.

I am pleased to note that I have enjoyed my mission in

Sana'a and hope that I have made a valuable contribution within the terms of Reference of my assignment. I can only report that the counterpart director of the Project, Mr.M. Saleh and the Deputy Minister of Industry Mr. M.Al-Dahbi have expressed verbally and in writing their full satisfaction with my accomplishments.

C O N T E N T S

P A G E

List of Abbreviations
Acknowledgement
Preface

Chapter	1	: Project Concept & Design		
		A. Socio-economic & Institutional		
		Context of the Project	1	- 6
		B. Project Document		7
Chapter		: Assignment accomplished		
		A. Assignments accomplished	8	- 14
		B. Conclusions	15	- 16
Chapter	3	: Overview of Obstacles to		
		Investment in the ROY	17	- 19
Chapter	4	: Outlines of the Proposed Draft		
		Investment Law		
		A. Main features of the draft		
		investment law	20	- 21
		B. Licensing & registration		
		procedures for projects	22	- 27
Chapter	5	: Project Budget & Project		
		Equipment		28
Chapter	6	: Follow-up and Specific Priority		
		Areas of Action	29	- 33

A N N E X E S

		<u>P A G E</u>
Annex	: Job Description	34 - 35
Annex 2	: Work Plans for 10/89 till 8/90	
2a:	and 09/90 till 8/91	36 - 40
Annex 3	: List of Participatns in Training Course on the Usage of Personal Computers	41
Annex 4	: List of Participants in the Group Seminars on the Technical Aspects of Preparation & Appraisal of Feasibility Studies	42
Annex 5	: Technical training courses contents	43 - 44
Annex 6	: Contents of training seminar on Technical - Technological Analysis of feasibility studies	45 - 46
Annex 7	: List of Activities/Training/ Reports	47 - 58
Annex 8	: Budget Revision	59 - 61
Annex 9	: Non - expendable Property Control Record	62 - 63

Chapter 1 : PROJECT CONCEPT AND DESIGN

A. Socio Economic and Institutional Context of the Project

1. Development Strategy in 1985-1990

After a decade of impressive expansion, the economy of the Yemen Arab Republic (YAR) entered a period of slow growth and increasing external and internal imbalances in 1983-1984. The slowdown was mainly due to a fall in North Yemen migrants transfers and official foreign grants, which together accounted for more than 70% of development resources in late 1970's and early 1980's. The annual GDP growth rate declined from the 6.7% in 1970-1982 period to 3.5% in 1983-1985 period and the current account deficit had swollen from US\$ 150 mln to more than US\$ 500 mln. The government was forced to reduce expenditures and to tighten expansionary policies, trying to restore equilibrium.

The discovery of large oil deposits in 1986-1987 revitalized hopes for accelerated growth. The government embarked on an ambitious investment program, based on expected revenues from oil extraction and exports. Main objectives of the Third Five year Plan 1987-1991 (TFYP) included the expansion and the diversification of the industrial base of the the North Yemeni economy through introducing intermediate products and services, and developing technological and commercial linkages within the manufacturing sector. The government expected not only to accelerate growth, but also to eliminate substantial budget deficit and radically improve the balance of payments position.

It is clear from today's perspective that these plans were far too optimistic. Although the development strategy adopted in TFYP was in general appropriate, especially in putting emphasis on industrial development and on export expansion, available development resources had been largely overestimated. First, oil revenues turned out to be smaller than expected because both the volume of output and export prices were lower. Second, the balance of payments position was seriously deteriorated by continuous fall in migrants remittances and official foreign assistance. Last but not least, the economic policy pursued in the second half of the 1980's was in many respects counter-productive and restrictive. As a result, the acceleration of growth from 1988 produced increased inflationary tendencies and soaring current account deficit.

2. Overview of the manufacturing sector

Thirty years ago the manufacturing sector in the Yemen Arab Republic comprised artisanal workshops producing a limited range of simple artifacts and tools with primitive, traditional techniques. Plunged into the world economy by the Revolution of 1962 and the country lacked both the experienced entrepreneurs and technicians and the institutional framework modern industry needs:

Despite these inauspicious beginnings the manufacturing sector has grown rapidly. Growth rates averaged 13.2 % from 1975-1977 to 1979-1980 and 12.8 % from 1981 to 1986. Manufacturing industry's contribution to GDP rose from 4.7 % in 1974-75 to 11.1% in 1988. This rapid rate of industrialization was achieved by the proliferation of import substitution projects in the food, beverage, and tobacco, construction materials, chemicals, textiles and metal-working branches. Most of these projects were established by private entrepreneurs and relatively small number of enterprises generated 85% of MVA and 86 percent of employment.

From 1983 to 1988, however, levels of investment in the manufacturing sector have tailed off. To a large extent this was due to the deterioration macro-economic situation. The government had to cut back on ambitious development projects as a result of the reductions in capital flows from donors while the private sector's investible resources were affected by the drop in migrants remittances. In addition, the strict application of import licensing and foreign exchange allocations forced some companies to curtail production since previously imported raw materials and spare-parts were no longer available. Inevitably, output was adversely affected.

However, the decline in investment also reflects the level of overcrowding in the manufacturing sector. By the mid 1980's, most of the obvious import substitution projects had already been undertaken. Entrepreneurs had begun to duplicate existing investments and the market was becoming increasingly competitive. Overcapacities developed for many products and, due to limitations of local engineering industry, enterprises found it difficult to diversify their product lines.

It would be misleading to equate industry's impressive performance in terms of growth with industrial development. Most of the import substitution projects established in the manufacturing sector depend heavily on imports. There are virtually no linkages between enterprises in the manufacturing sector and almost all capital goods and spare parts-though there is an abundance of vehicle servicing and repair workshops- are imported. Furthermore, the pace of technological development has exceeded the ability of educational institutions to graduate adequately trained personnel and industry has come to depend heavily on expatriate staff particularly in managerial, technical and supervisory roles. This is particularly true of enterprises manufacturing products under license since the manufacturing

procedures of the mother company have been generally adopted without consideration of the technical limitations of the local personnel or engineering industry.

Manufacturing industry in the Yemen Arab Republic is now at a crossroad. While there are still opportunities for further import substitution projects the government has come to realize that development along this path alone will not bring the benefits associated with industrialization. Instead efforts must be made to diversify the industrial base, introduce intermediate products and minerals and develop linkages within the manufacturing sector through the spread of practices such as sub-contracting. At the same time, there is room to increase the productive capacities of existing enterprises through the diversification of production lines, upgrading product quality and introducing new managerial and production techniques. These developments might bring an additional benefit in increasing the potential for exports which is currently negligible.

3. Financial Policies.

In general, fiscal and credit policies in North Yemen are encouraging for the development of the industrial sector. All companies pay 25% corporate income tax on profits, and all are granted generous tax holidays (up to 5 years). On the other hand almost no subsidies are paid from the central budget to the industrial sector.

While public sector projects are essentially financed from the budget, private entrepreneurs may borrow from the banking system. Industrial Bank of Yemen (IBY) specializes in financing of small and medium scale private sector projects. Loans are granted for licensed projects up to 50-60% of the initial investment costs, with interest rates ranging from 8 to 11% and grace periods of 1-2 years from the beginning of operation. Maximum amount of loan which can be granted is YR 16-17 mln, i.e. US\$ 1.5 mln, and the amortization periods extend normally over 5-7 years, sometimes even up to 12 years. It is estimated that roughly 22-25% of the private sector investment is being financed by the Industrial Bank of Yemen.

Commercial banks have not yet developed a consistent methodology of project evaluation, and loans are granted more on subjective grounds using available data and information received from project sponsors. But Industrial Bank of Yemen uses already some elements of the UNIDO methodology for feasibility studies evaluation; and also IDA experts are consulted on a case-by-case basis in the process of project lending. Other commercial banks however are less advanced in this area.

Prices in North Yemen are under government controls. All prices have to be approved by the Pricing Committee attached to the Central Planning Organization. But the controls are not very efficient: as a result, inflation rate was relatively high, oscillating around 20% per annum for the last several years. On the other hand, wages are not administratively controlled, and they are regulated by the market.

4. The Institutional Context

The main organizations concerned with industrial development are:

- a) The Ministry of Economy, Supply and Trade (METS) which later became The Ministry of Industry (MOI) after the unification. In accordance with its mandate, the Ministry is responsible for charting the industrial policy and regulating the industrial sector. In addition, it should set the national methodology, criteria and standards for the identification, appraisal and selection of projects in line with the strategies and objectives of the development plan.
- b) The Central Planning Organization (CPO) and later Ministry of Planning and Development which is responsible for the Development Plans and Strategies.
- c) National Development Finance Institutions in particular the Yemen Industrial Bank and the Yemen Company for Investment Finance. They are engaged in project identification activities and more importantly in project appraisal in connection with loan applications.

The Ministry of Economy, Supply and Trade through its Economic Affairs Agency (EAA) is entrusted with the following objectives:

1. The achievement of a continuous development of the economy and the promotion of the industry.
2. Providing the atmosphere that encourages and provides the necessary protection for the support and achievement of the plans' objectives and the realisation of the adopted industrial policies.
3. Creating a balance in the economic development by developing the less developed areas.
4. Promotion of small and medium scale industries.

The Broad Functions are as follows:

- Co-ordination and administration of the industrial development policies and programme with the CPO and other organizations in the industrial sector.
- Creation of the necessary framework for development, protection and encouragement of private sector domestic industries so as to ensure the achievement of industrial targets and develop-programme in the Development Plan.
- Representation of EAA on interministerial committees and international meetings.
- Administering the Foreign Capital Investment Law and to license all foreign investment.
- Evaluation and licensing of industrial projects and administration of incentive schemes.

- Identification and evaluation of prospective industrial projects and promotion of foreign and local investment in industry.
- Development and utilization of industrial statistics and data as well as conducting periodic industrial surveys.
- Apply economic measures to reduce budget deficit and controlling outflow of foreign exchange, e.g., import licenses, duty reductions, investment opportunities of interest to immigrant Yemenies.

Within the METS, the economic sector which includes industry is looked after by three main departments, the General Department for Investment and Economic Studies (GDIES), the General Department for Industry (GDI), and the General Department for Economic Relations and for Arab and International Organizations.

The technical assistance envisaged under this project will have benefitted the first two General Departments, the GDIES and the GDI. The GDIES have three branches; Branch for Investment Studies and Research, Branch for Investment Projects and Branch for Exemptions, The GDI also has three branches: Branch for Registration and Industrial Statistics, Branch for Industrial Projects, and BRanch for Industrial Production. According to their mandates, the two General Departments are charged with a multiplicity of tasks. But in practice, most of the effort has been devoted to the functions of licensing, industrial registration and exemptions, advising investors, and identifying investment opportunities.

B. - PROJECT DOCUMENT

1. The Development Objective of the Project

To channel and promote industrial investment, of both the public and the private sectors within the framework of the objectives and strategies of the Third Five Year Development Plan.1987-1991. The following development strategy was adopted for the Third Five-Year Development Plan, 1987-1991:

- 1.1 Expanding the output of agriculture, mining and quarrying;
- 1.2 Promoting Industrial Investment, particularly industries utilising local raw materials; and
- 1.3 Development of human resources

2. The Main Immediate Objectives of the Project

To strengthen the capacity and ability of the relevant Department within the Ministry of Economy, Commerce, and Supply to perform their functions in the appraisal and the registration of industrial investment projects. The more specific areas mentioned as indicators of achieving the objectives are:

- 2.1 Adoption of methodology, criteria, guidelines and standards for project appraisal and selection in connection with the requirements of the licensing scheme, and in co-ordination with national development finance institutions;
- 2.2 Improved project appraisal reports, as well as better quality feasibility studies and opportunity studies;
- 2.3 Improved and up-dated Register of Industries;
- 2.4 Availability of reference material on industrial and technological information, data and statistics, etc.
- 2.5 Advice to industrial entrepreneurs to improve the quality of their feasibility studies and better assessment of the market and acquisition of the proper technology. The ultimate goal is to minimize risks of failure.

The immediate objective clearly fit in with the development objectives and form a tool for successful implementation of the development plan at the microlevel. They also clearly contribute to enhancing the Ministry's ability of effectively discharging its functions.

Chapter 2: Assignments Accomplished

The job description for the post DP/YEM/87/020/11-03 is attached in annex 1.

A; Assignments Accomplished

During the initial period of the assignment, the expert was collaborating with the former CTA i.e. from 2-09-89 until 31-12-89. Upon the departure of the CTA for health reasons, the Expert was nominated by UNDP as an office in Charge and performed on this basis until the end of the assignment on 31-12-90. The Project achievements are:

1. Assignments undertaken jointly with CTA

- 1.1 Work plan for the first year of the project (Annex 2).
- 1.2 Preparation of the draft of the new investment law. The draft was designed to eliminate most of the obstacles for investors and significantly improve the investment climate in YAR. The intended purpose of the new law will be to reflect a policy to encourage investment. It was to remove vagueness, uncertainty, and unnecessary discretion from the present law in addition to creation of the investment promotion authority.
- 1.3 Policy paper on incentives to be granted to investments
- 1.4 Preparation of export potential forms of the private sector enterprises.

2. Activities performed by the expert

2.1 Training Seminars

Following training seminars were held by the Expert as indicated below. Preparation of teaching materials (working papers, lectures, case studies, outlines, etc) was included in this activity in addition to the preparation of simplified technology and industrial profiles Series.

2.1.1 ON THE JOB TRAINING

Extended to the employees of the Investment Department on the daily work in the appraisal of the technical aspects of the investment projects, with the purpose of upgrading their skills in that concern. This activity continued throughout the life of the project. The expert assisted and directed the counterparts in the appraisal of the technical aspects of the feasibility studies of 18 projects and in providing the technical assistance to the

Exemption branch in four cases and training missions to projects under implementation. The appraised projects covered the industrial, agricultural services and healthcare domains. The expert offered also guidance and technical advice to the investors to improve the quality of their feasibility studies. Such discussions with entrepreneurs were attended by the counterparts to enlarge their engineering and technical knowledge, as well as their practice in the field of technology acquisition and technology transfer.

2.1.2 Training Seminar on the use of personal computers was held at IBM Sana'a during February and March 1990 and attended by nine participants as per the list of participants annex 3, page 41 on the various usage of personal computers and word processing. The expert organized and supervised this training course.

2.1.3 Assist in a Seminar on Financial Analysis of Feasibility study and the COMFAR applications. The expert collaborated with UNIDO Consultant Mr. Marian Geldner on a full time basis - to conduct and smoothly implement the COMFAR training Seminar(Computer model of feasibility analysis and reporting at METS-Sana'a from 2nd June till 27 th June 1990.

The collaboration comprised:

- Finalize the license agreement between UNIDO and METS regulating the usage of comfar (English and Arabic versions)
- Secure a well furnished and equipped classroom computer laboratory (with 6 personal computers, 4 of them are bilingual) as well as the physical, hardware and software facilities for the training.
- Undertake all organizational and logistic matters following discussions of all relevant issues connected with the organization of the Seminar, its programme and its daily work load.
- Undertake all translations in Arabic - since participants did not Master English sufficiently to follow the instructor - throughout the Seminar and its teaching methods namely lectures, discussions, exercises and case studies.
- Assist in Seminar Evaluation.

2.1.4 Follow - up to the COMFAR Seminar

- Initiate the necessary measures towards the Arabization of the two PC's X30 belonging to the Project (e.g. Al-Nafitha, software and request a purchase of two 24 pins printers instead of the available 9 pins printers).UNDP, Sana'a froze all these requests.

2.1.4 Continued

-The expert trained some of the interested participants on case studies to master the COMFAR applications fully, but on the English version only.

-The expert initiated the practical usage of the English version of the COMFAR for project Appraisal and assisted in filling the tables for COMFAR Data Entry of two projects- namely:

-Gypsum production project-Sana'a

-Leather tanning project, Kamer

2.1.5 Group training on the technical aspects of preparation and appraisal of feasibility studies.

The group training was extended to a group of seven counterparts assigned to the expert and their names are to be found in annex 4, page 42. The classification of the participants are as follows:

1 Chemical Engineer

2 Agriculture Engineers

4 Economists

The contents of the training course are indicated in Annex 5, pages 43-44 and the course started in October 1989 and ended in August 1990. The expert had to start practically with the counterparts from "scratch" because of their poor technical background and inadequate knowledge of technology, processes and related subjects.

2.1.6 Group training on the technical and technical logical Analysis of Feasibility Studies:

The Contents of this training seminar are to be found in Annex 6, pages 45-46 and attended by a group of newly assigned engineers as counterparts with engineering background as per annex 4, page 42. The seminar was held on daily basis from early September until mid October 1990.

2.1.7 Training Seminar on the appraisal of Technical aspects of feasibility studies and usage of the appraisal manual.

This was conducted on a daily basis from the 3rd week of October 1990 until end November 1990 for the same group of counterparts as per para.(2.1.6) The contents are in accordance with the Appraisal manual prepared by the Expert in Arabic (151 pages)

2.3 Pre- Investment Studies Undertaken

The expert contributed to the identification of numerous investment opportunities. Main criteria for selecting these project ideas are-

- Efficient utilization of local resources as well as the unutilized installed production capacities.
- Participation in improving the commercial balance and in import substitution.
- Fitting in the forward and backward linkages, production of intermediate products completing the industrial integration.
- Manufacture and or recycling of residuals.
- Provision of new activities which would result in upgrading the technical - technological level and expertise in Yemen.

Following is the list of projects:

1. Production of paper (wrapping, writing- carton)
2. Production of fertilizers (N2 based)
3. Production of Caustic Soda
4. Production of Gypsum and Gypsum panels.
5. Production of ceramics
6. Production of desalination units operating with solar energy
7. Recycling and purification of used oils
- 8 Production of animal feed
9. Production of ready made garments
10. Production of underwear
11. Production of towels and Ihram cloth
12. Production of leather shoes
13. Production of vinegar
14. Production of crown caps
15. Production of nails
16. Production of furniture accessories
17. Production of pins and clips

18. Production of buttons and jewelry
19. Numerous proposals for small and medium scale industries
20. A proposal for a complex containing various small scale projects.

2.3 Adoption of Methodology, guidelines and standards for project appraisal and a set of investment criteria for the selection and ranking of industrial projects.

In this category, the following has been achieved:

- 2.3.1 Preparation of a manual with the appraisal guidelines of the technical aspects of feasibility studies.
- 2.3.2 Preparation of Project appraisal format.
- 2.3.3 Review of the technical appraisal Methods of the Ministry and YIB.
- 2.3.4 Preparation of guidelines and check list to the appraisal team and to the investors to review and and review their studies.
- 2.3.5 Preparation of a list for the internationally recognized requirements (items) of the technical appraisal of the projects
- 2.3.6 Preparation of guidelines for the evaluation of industrial projects in Yemen.
- 2.3.7 Presentation of a new Format for license application forms as well as the scope of documentation required.
- 2.3.8 Finalizing a proposal for improving the current licensing procedures
- 2.3.9 Finalising Criteria for the preparation of the list of major manufacturers of capital equipment and machinery in the industrialised world and establish contacts to link the ministry with industrial and technological data banks.
- 2.3.10 Provide technical advice and guidelines and guidance to entrepreneurs (9 cases)
- 2.3.11 Assist in the promotion of the investment opportunities (for pre- investment studies undertaken see. para 2.2)
- 2.3.12 Assist in drafting the new investment law (under Ratification) as to include the positive experience of the other countries in the field of investment.

2.4 Improving, computerizing and updating the industrial Register

The expert reported on the weaknesses and superficial construction of the current industrial, register therefore an adequate licensing format was designed and submitted for approval by the Ministry's officials. The said format was considered as a pre-requisite for improving, computerizing, and up-dating the register. The government requested to handle this output at a later stage once the ratification process for the investment law is completed. Also, the transition period followed the unification

2.4 Continued

of the two parts of Yemen has substantially delayed the promulgation of the law. This grants time for all parties involved to concisely decide on:

- License application format
- Documentation to be submitted with the license applications
- Exact future requirements and details of important data
- Computerization of the register and criteria
- CO-ordination between end users and feedback system
- Final Installation and Arabization of the projects personal computers

Though all above circumstances have delayed the introduction of a new registration system and consequently the period of trial for proper functioning and the training of the register personnel, the expert established a sound base for the register in the form of the draft licensing format. Once the pending matters are clarified, the complementary steps and/or revisions to its structures and implementation will be smoothly performed. It is advisable to combine the data-feed of the implemented project with field visits in order to get true and reliable information.

2.5 Assist in establishing an Industrial Information System

The Expert's contribution in establishing a technology and industrial Data bank was limited to the following:

- 2.5.1 Establish contacts to connect the Ministry with the technical data bank of UNIDO and other recommended industrial and technological data banks. The expert also indicated the installation requirements, and the incorporated agreements.
- 2.5.2 Finalizing the criteria of the preparation of a comprehensive list for the main manufacturers of capital goods and factory equipment in the industrialised countries. The list could be used upon completion as a base for the ministry's own data bank.

2.6 Establish reference documents and technical Materials

The expert established and encouraged the use of the technical reference material throughout the life of the project.

The expert collected a good collection of modern reference materials and relevant technical subjects; economical, legal and other relevant subjects needed for the preparation and appraisal of technical aspects of the projects. Some titles are indexed - other still to be received. Establishing the library is a continuous process.

2.7 Arranging of Study -Tours

The programme of the study tours was delayed for reasons beyond the expert's control. However, a seminar on the appraisal of feasibility studies was planned to be held at the National Planning Institute- Cairo -Egypt as from 15-1-91 until 14-2-91.

Unfortunately, UNDP Sana'a did not approve the tour on the grounds that the future of the project will be determined by the forth-coming project review and in-depth evaluation mission.

2.8 Arranging Various Seminars

The expert set the terms of reference for a seminar on the opportunities in petrochemical industries relevant to Yemen. The said terms of reference are still to be approved by the ministry. The importance of this seminar is originating from the high interest of the government to economically utilize the available natural gas.

Over and above, the foreseen seminar on the market analysis was not held, hence the government has not cleared any of the submitted candidates.

2.9 Duties of the Officer - in - charge

The extra duties of the OIC were undertaken by the expert in addition to his duties as expert in Industrial Engineering.

Details on the status of activities, training and reports are to be found in Annex 7, pages 47-58.

B. Conclusions

1. Achievement of immediate objectives

- 1.1 The expert has directly contributed to the adoption of methodology, criteria and manuals with guidelines and standards for the appraisal of the technical aspects of the investment projects. The expert actively participated in enlarging the pool of skills of the staff through the continual on-the-job-training, technical lectures and seminars in addition to the training course on the use of PC's and the COMFAR training course.
- 1.2 The expert has substantially contributed in the appraisal of the technical aspects of feasibility studies and reporting, through, the daily on the job training of the employees of the investors which resulted and will result in better quality feasibility studies.

The expert was active in identifying investment opportunities preparing relevant project profiles, as well as, simplified series on process and technology.

- 1.3 The expert established the basic skeleton of the industrial register based on the new license application format. Delay in realization, computerizing, functioning and up dating of the register was requested by the government until the ratification of the new investment law and final installation of the PC's.

The expert presented concrete proposals concerning linking of the Ministry with UNIDO technical data bank and other industrial, technological banks and also presented the criteria for the list of the main technology suppliers in the industrialised world which could be developed and adopted as a base for the Ministry's own industrial information bank.

- 1.4 The expert made available a sufficient collection of technical reference material.

2. Group of beneficiaries

- The staff of the Ministry who are learning to apply new techniques in project analysis and assessment.
- The private entrepreneurs who are receiving sound advice and appraisal regarding their prospective projects.

3. Importance of Maintaining this kind of Assistance

- The field of pre-investment work (subject of this project) is basic to the process of industrial development and expansion. Industrialization takes place through investment in

3. Continued

projects which in turn need to be studied for technical, economic and financial viability.

- No development plan could be successfully implemented at the microlevel unless a technical cadre is available, graduated and trained in such an institution building project.
- Institution building projects by definition take a long time to fulfill their objectives. Assessment of such a project after a short span of their life can only show perceptible results.

Chapter 3: Overview of obstacles to Investment in the ROY

1. Obstacles to Investment

Following are a number of legal, policy and administrative obstacles hindering investment.

- 1.1 The pervasive system of government controls over economic and financial life—namely, transactions through the Central Bank, interest rate limitations and price controls— all of which encourage smuggling, consumption and discourage productive investment.
- 1.2 The size of the Government's deficit and its financing through borrowing.
- 1.3 The concept prevalent in existing legislation and regulations that every investment project is prohibited unless it is specifically permitted and the resulting wasteful bureaucratic procedures and delays inherently in the existing system of licensing projects and then separately licensing every phase of their activities including their imports, exemptions and expansions.
- 1.4 Bureaucratic licensing procedures
- 1.5 Lack of an effective system of establishing clear title to land.
- 1.6 Lack of a clear and certain system for arbitrating disputes. Use of police by government officials and private parties to resolve civil and commercial disputes.
- 1.7 Lack of uniformity in the enforcement of the law and investors' rights.
- 1.8 Lack of clear judicial authority to reverse ministerial or governmental decisions which are contrary to clear provisions of the law or which have no authority in the law;
- 1.9 The drawback system on goods exported does not work because the drawback is often never paid and cannot be collected.
- 1.10 The rigid system of restricting customs exemptions to the latter and not allowing for reasonable variations in prices, delivery dates, nature of the item etc.
- 1.11 Delays in obtaining customs exemptions and in customs clearing procedures which lead to added costs to investors for demurrage and storage charges which sometimes render the customs exemptions almost worthless.
- 1.12 A Customs tariff which sometimes imposes heavier duties on raw materials used by local producers than on the finished equivalent imported product.
- 1.13 Long, costly and repetitive procedures to obtain work permits for foreign experts, managers and other employees.
- 1.14 Direct taxes on capital, including the proportionate stamp tax and zakat and the corresponding tax on foreigners.
- 1.15 Lack of a single organization with whom investors can deal which has sufficient authority and power to issue all needed licenses to establish and operate an investment project and which will support and assist the investor in relations with other

1.15 continued

government organizations.

- 1.16 Lack of a clear system for enforcing royalties, fees and other payments for transfer of technology.
- 1.17 Unnecessarily difficult procedures to form and operate shareholding and limited liability companies and excessive restrictions on company decisions.
- 1.18 Uncertainty as to which law prevails when another existing law conflicts with the Investment Law.
- 1.19 Lack of adequate physical infrastructure facilities, such as roads, deep water port facilities, industrial estates, and leading to high cost for transportation within the country.
- 1.20 Low literacy rate and low skilled labor force.
- 1.21 Lack of a well developed banking and savings system.

2. Advantages of Investing in the ROY

- 2,1 A highly strategic location at the juncture of the Red Sea, the Gulf Of Aden, and the Indian Ocean.
- 2.2 A good business location near the markets of oil-rich countries.
- 2.3 A very temperate , pleasant climate relative to surrounding countries.
- 2.4 The greatest area of arable land in the Arabian Peninsula with sufficient rainfall to grow seasonal fruits and vegetables for export to neighboring markets.
- 2.5 A relatively good financial position with a small international debt and significant cash liquidity which could be put to use in productive investments almost immediately.
- 2.6 Ample supplies of electricity for industry.
- 2.7 Substantial reserves of natural gas which can also supply energy to industry.
- 2.8 Significant oil resources.
- 2.9 A reasonable profits tax rate.
- 2,10A large and growing population to supply the labor market.

Chapter 4 Outlines of the proposed Draft Investment Law

The proposed draft of the investment law was prepared by the project in Sept/Oct. 1989 before the Unification of the two Yemens. It is expected a new investment law may be prepared to serve the interest of the United Country.

A. Main Features of the Draft Investment Law

1. Establish an independent investment promotion authority with a power to license projects and the task of promoting and facilitating investment in the country. Although this is the sole responsibility of the authority, the draft makes it the duty of every government body to facilitate the implementation and operation of all projects.
2. The projects original license will serve as its license to import project requirement.
3. Provide customs exemptions to projects on machinery, equipment, and materials required for their establishment.
4. Grant investment projects reduction of customs duties on productivity and production materials to the extent necessary to compete with equivalent finished imports.
5. The right to transfer abroad profits attributable to foreign invested capital using the projects foreign currency bank account. There are provisions for repatriation of foreign invested capital in various circumstances. All transfers must be funded by the project's own foreign currency, not by that of the government. The right to transfer profits and repatriate capital are fundamental to attracting foreign investment and are reflected in most investment laws.
6. Foreign invested capital is defined by nature and source not by the nationality of its contributor. Therefore, freedom of investment and equal treatment of investors are guaranteed with the idea that Yemeni investors should be treated equally like foreign and Arab investors to encourage them to invest their foreign capital in the country.
7. Establishing a streamlined licensing system which eliminates much of the existing duplication present in the existing system by leaving most projects to be licensed administratively and having only highly sensitive projects reviewed and approved by a high level government body. The philosophy implemented of the system will be to allow all viable projects to be implemented unless they are prohibited or clearly fail to conform to the development plan.
8. Investors will be responsible for providing their own foreign exchange.
9. Set of Guarantees for:
 - 9.1 Freedom from controls on salaries, prices except in the case of monopolies, price fixing and except under circumstances that are extra ordinary in the case of an essential good.
 - 9.2 Guarantees against economic discrimination

- 9.3 guarantees for the right to land ownership and a registration system to ensure clear title to land.
10. Project will receive interests on the full amount of their deposits regardless of reserve requirements.
 11. Establish performance-based tax and customs exemption incentives for projects which meet specified conditions and objectives. Exemptions to be granted upon proof of performance and not automatically with the license. Incentives provided will be in the form of exemptions and rights to encourage:
 - project expansion and up-grading
 - exports
 - high value added to the national economy by saving or earning foreign exchange and using local materials
 - Employment of Yemenies
 12. All projects to receive certain basic tax exemptions namely:
 - Exemption of capital from proportionate stamp tax and other direct taxes and levies on capital.
 - Exemption from proportionate stamp tax of all contracts relating to a projects establishments operation, expansion or up grading.
 - Exemption from the tax on foreign workers salaries, education grant, housing and transportation subsidies.
 - Exemption from the real estate transfer tax of all purchases and sales of real estates for project purposes and from profits tax interest on loans to finance investment cost and for three years on technology transfer fees.
 - Tax holiday to start from the date of project licensing rather than the date of operations in order to encourage quick implementation of the project.
 13. Simplified procedures to obtain work permits and visas for foreign experts, managers and employees.

 14. Provide a complete system of administrative appeals (binding arbitration and litigation)
 15. Facilitate the formation and operation of shareholding companies for investment projects as a mean to help mobilize capital.
 - 16, Provide for the establishment and operation of free zones for export industries.
 17. Provide grounds for license cancellation, guarantees against license cancellation, property seizure or nationalization without a court order based on a clear convincing evidence and a specific provision of law issued after a judicial hearing in which the project or the investor - as the case may be - has had an opportunity to participate.

B. LICENSING AND REGISTRATION PROCEDURES FOR PROJECTS

1. Licensing Procedures

The licensing procedures are characterised with bureaucratic procedures, strict administrative import controls, lack of transparent rules of project evaluation and approval.

Licenses are required for all industrial and investment projects. Project sponsors submit applications to the Project Department in the Ministry of Economy, Trade and Supply, later Ministry of Industry for evaluation. The applications should be accompanied by a pre-investment study for the project, but clear rules for preparation of these studies are not established. For small private projects the METS officials prepare an opportunity study themselves. The evaluation was rather superficial, not only because studies were very sketchy, but also no methodology for a comprehensive evaluation had been developed in METS. In making their recommendations the METS officials try to answer the question whether the project is good for the national economy. The criteria which are routinely applied are:

- Use of local raw materials, like marble, gypsum, salt and agricultural products;
- Export - oriented projects;
- Import-substitution projects.

Interesting enough, universal financial profitability criteria, like NPV or IRR are of much lesser importance. For instance, various discount rates are applied for different projects, which makes the economic evaluation very inconsistent. But projects with the IRR lower than 10% are normally rejected.

Small and medium scale projects with the initial investment value below US\$ 0.5 mln are approved by the the Committee for Industrial Licenses, headed by the Deputy Minister of Economy, Trade and Supply. Large Scale projects are submitted by the METS to the High Economic Committee attached to the Central Planning Organization which takes final decision on the basis of the METS recommendation. In case the decision is positive, the license is next issued by the METS.

Public sector projects are appraised by the Central Planning Organization (CPO). A number of various criteria are used in this process, like foreign exchange effect, backward and forward linkages, technology effect, use of local raw materials, food self-sufficiency, jobs creation, and man-power training. But again, no sound and consistent methodology is applied for project evaluation, and subjective judgements dominates over precise quantitative rules. Approved projects are included in the economic plan and are eligible for government financing. By contrast, private sector projects can be approved also outside the plan as they are normally financed with non-government funds. Foreign capital projects receive equal treatment as all private sector projects, the only exception refers to transfer of profits which is extensively controlled.

Licensing procedures are time-consuming and bureaucratic. IN the past they lasted 2-3 Months, but now they may extend over one or even two years period. Once the industrial license is granted, the project sponsor has to apply for a license for electricity and water. Finally, if the project requires imported machinery and equipment, an import license is needed and this again takes some time. These procedures are strongly critisized by private Yemeni investors not only because they are lengthy and rigid, but also that no clear policy rules are observed by METS in terms of well defined preferential areas, sectoral, and regional consistency leading to excessive investment in some areas. For instance, during the period 1982-1989, the METS issued licenses for 7 different soft drinks factories, 6 cooking oil factories and 4 cigarettes factories.

2. Analysis for the existing licensing system for projects:

- 2.1 The system requires government approval and licenses for every investment project and expansion or change in the project thereafter. Approved projects under the investment law receive certain privileges. The license of the project is only the beginning. Thereafter, investors must obtain separate licenses to form a company under the companies law 106/1976, and an import license to bring in each shipment of imported machinery, equipment and production materials which license must be validated by the Central Bank.
- 2.2 Even though a licensed project is theoretically entitled to customs exemption for imported requirements needed to establish the project, a separate application must be made to obtain the customs exemption for each shipment. This application is approved by the exemption committee established under Article 20 of the Investment Law 18/75. This latter procedure is time consuming because it is difficult to get the exemptions committee together for a meeting. The result is that investors often pay considerable fees for demurrage.
- 2.3 This system of separate applications and licenses imposes heavy costs in time and money for the investor in following up his investment application and also imposes heavy costs on the government which must commit scarce human resources to the task of processing each application and analysing feasibility studies and other data for each proposed project establishment or expansion. Analysing investment proposals and feasibility study requires expertise and experience rarely found among government employees. Hence, the main objective of the Project YEM/87/020 is to upgrade the METS capabilities. Because of lack of expertise and experience, government employees often delay decisions simply because they may fear making a mistake. Thus, the license system may create many opportunities for favoritism, corruption, and other abuses.
- 2.4 One of the unfortunate consequences of the licensing system is that those who receive approvals early find themselves in a monopoly or semi-monopoly position. They then become a highly motivated pressure group which may try to prevent subsequent applicants in the same field from receiving licenses so that

2.4 Continued

they can continue to monopolize or dominate the market and make easy profits. Even without such pressure groups, a long and costly approval process tends to create monopolies, semi-monopolies and highly profitable privileged positions for those who already have licenses.

3. Proposed Licensing System

3.1. System Outlines

- 3.1.1 The policy is to encourage investment, within the objectives of the development plan.
- 3.1.2 License application format(draft was submitted by the project for comment and testing since Feb. 1990) should be submitted along with a comprehensive feasibility studies except for small scale projects which require a simple opportunity study.
- 3.1.3 Licensing procedure should be governed by adequate and binding time table. Once the license is issued, the procedures are over as the licensed projects will be entitled by virtue of the license to exemptions and incentives and other rights as stipulated in the license form.
- 3.1.4 Additional exemptions and rights for some projects should be issued by means of a separate certificate for those eligible projects.
- 3.1.5 Government should not be responsible for allocating foreign exchange for the licensed projects.
- 3.1.6 Analysing investment proposals and feasibility studies should be handled by experienced personnel in the investment authority or department. There is at present a number of national staff trained under this project in the preparation and appraisal of technical aspects of feasibility studies, and in the applications of COMFAR.

3.2 Level of Authority to issue licenses

- 3.2.1 Only sensitive projects will be reviewed and approved by the high level investment authority including projects exceeding YR.30 Million in investment costs for new fixed assets which could prove costly to the national economy in terms of foreign currency outflows, or projects having less than 30% Yemeni participation or a high level proportion of foreign currency payments relative to Yemeni Riyals payments, or a high debt - equity ratio, or products with substantially higher prices than equivalent imports, or which require unusually large amounts of water.
- 3.2.2 All other projects will be licensed by the executive administration. The philosophy behind is that if a project is not specifically prohibited by the law or the development plan, then it should be permitted.

3.3 Form and legal effect of licenses

3.3.1 The objective is to eliminate wasteful procedures as the licensed projects are already entitled by virtue of the license for exemptions and other rights as set forth in the license form.

3.3.2 Certificate of exemptions should be issued for projects which prove that they have met the necessary conditions to qualify for additional rights and exemptions.

Chapter 5: Project Budget and Project Equipment

1. Project Budget

As it could be seen from the attached Budget Revision (F), Annex 8, Pages 59-61 dated 07-06-1990-

UNDP Input = US\$ 696,577
Government Contribution(in kind) = YR. 350,000

There are still budget allocations for the following major budget lines:

11-99	International Experts	28 m.m
13-99	Administrative Support Personnel	US\$ 13,000

2. Project Equipment

As it is clear from the attached record on non-expendable items, annex 9, pages 62-63.

All non-expendable equipment - other than project cars - are in the custody of the Ministry of Industry. The project car will be handed over to UNDP's custody prior to the departure of the expert.

Chapter 6: Follow-up and Specific priority areas of Action

1. There is no doubt that the government is interested in continuing this type of assistance over the next several years. Partly because the institution building projects require many years of persistent work in order to be fruitful and partly because the current project did not achieve all of its objectives.
2. Training was performed, repetition and going in depth into the subject is still warranted. The local staff need to be exposed to a wide range of experiences for them to absorb the technicalities of project preparation and appraisal. Moreover, they still require intensive training in the economic and financial aspects of pre-investment studies as well as COMFAR applications.
3. This project with similar objectives should be formulated for the next phase as it is obvious that an institution building project requires a long time to show adequate and acceptable results and should cover the needs of both parts of Yemen. The future project outlines should include following outputs:

3.1 Improved Quality of Feasibility Studies

Most of the problems which face industry originate early in the execution of the project and in particular during the feasibility study. Too large design capacity will always lead to unused capacity which lowers and some times destroys the profitability of the project. Over-estimating market demand is another feature of a poor-study. Under-estimating manpower, technology, as well as marketing needs for additional features which make such study a very poor base for the decision-making process. The expert recommends that the Ministry requires (and check out) a reasonable and realistic feasibility study before issuing licences for industries. This measure is in the best interest of the investor as well as the national economy at large. Details of the technical aspects presented are very limited and in most of the cases restricted to final offer from one of the main suppliers/manufacturers or agencies. Details about basic requirements, process requirements and other engineering details are rarely provided.

3.2 Improved Market Identification and Development

This is an area which requires serious attention. More often than none, the data concerning the size of markets are inaccurate and outdated to say the least. In many cases, such data do not exist. Under such circumstances, the planned capacities are usually exaggerated when compared to

3.2 (continued)
existing market demand.

This became quite clear from the various surveys of industry and our observations which showed that the design capacities in the industry are highly underutilised. Also, no accurate data or estimation is provided about smuggling which occupy considerable share especially in consumer goods and engineering industries.

In addition, exports represent a very small percentage of those products. Accurate data concerning the local, sub-regional and regional markets should be developed and up-dated promotional schemes for Yemeni products should be developed and implemented via Embassies in the respective countries and or periodical or permanent exhibitions of the Yemeni products in the target countries.

3.3 Technical Advise in Aquisition of Technology

This is the most problematic area in any industrial development anywhere unless those dealing with the acquisition of technology have a good understanding of the particular technology. They frequently get into unfavourable agreements. In addition, it should be ensured that acquisition of technology involves a transfer process and not a transport one. However, these two quite different terms mean one and the same thing to the layman who has no understanding of the technology involved. To avoid such unfavourable agreements, it is suggested that the area of technology must be studied by those who are experienced in the art and their recommendations should be taken into consideration when making such agreements. It should be remembered that good agreements are not enough to ensure the transfer of technology. The technology transfer is only ensured through the provision of Adequately Trained personnel and the suitable facilities.

3.4 Intensive training of Counterparts

In addition to the on-the-job training which was practiced by the expert, where counterparts have greatly benefitted from daily contacts, discussions, memos, reports, methodology of approach. Any future phases of the project should highly concentrate on the course of outlines activities, their attendance and prospective attendance. The training task has grown both in volume and complexity with the expansion of modern industry and advanced level of technology it uses. Recognition and incentives to the counterparts should be also considered in order to meet the deficiencies in the number of qualified counterparts.

3.4 Continued

and keep them motivated. Also training in the financial and economical aspects of pre-investment studies and COMFAR applications should be involved.

3.5 The Future Project Should Assist the Ministry in establishing Various Specialised Groups as Follows :

3.5.1 Research and Studies Group

To be attached to the office of H.E. the Deputy Minister to undertake analytical studies based on the statistical data and other sources of technical and economical nature in order to help the "Formulation of the development programme and policies.

3.5.2 Project Appraisal Group

From technical and project's departments best staff, representing all the industrial sub-sectors to deal with review, evaluation and market studies for small and medium scale industry, after being preliminarily evaluated by the appraisal officer. This group should perform with minimum expert assistance.

3.5.3 Investment Promotion Group

To be attached to the office of H.E. the Deputy Minister to identify immediate investment opportunities, prepare project outlines complete with technical details to promote them through seminars, workshops and joint committees.

3.6 Undertake Following Studies

3.6.1 Study to examine any obstacle to investment

3.6.2 Study to identify additional investment opportunities based on local resources.

3.6.3 Study on Industrial Integration - Imports Substitution

It is essential to conduct a comprehensive , in-depth study on the various industrial branches with special emphasis on up-stream, down-stream, feeding industries and industries based on utilization of local resources and spare parts local manufacturer. The study should include a survey and analysis of the idle production capacities and the productivity in the existing industrial units. This would lead to identifying immediate investment opportunities (eventually new products-curbing imports) and strengthen linkages within the industrial branch itself, and the other branches as well.

3.6.4 Study to establish technical workshops to design, manufacture and maintain precision tools , dies and spare parts.

3.6.5. Study on the Value and price of technology.

3.6.6 Study on inputs/outputs analysis of each industrial branch against the used technology and processes.

3.7 Manuals, publications on how to invest in Yemen to be distributed among the local and foreign investors.

3.8 Procedures of investment should be put in simple clear terms and distributed to prospective investors and Chambers of Commerce.

4. Speeding of Setting-up the Computerized Data System in the Ministry.

For linking with various data banks, suggested priority to be given to UNIDO Data Bank in order to utilize the wealth of new information on technology and industry.

It is also recommended to computerize and enlarge the scope of the list of prominent international manufacturers of the capital goods and factory equipment.

5. Programmes to Promote and Develop Micro (back-yard), Small Scale Industries

There appears to be urgent need for a national programme for assisting the development of small and medium scale industry, especially in the smaller towns.

Concentration on large scale projects creates a gap for assistance for the development of small scale industry sector. In view of the relative small size of the market for many products, well organized and mechanized small and medium scale industrial units offer good scope. This sector is of much interest to entrepreneurs who are otherwise well qualified to manage industry but have limitations on finance. Moreover, at this stage of industrial development, it is quite difficult to identify, by the small entrepreneurs of their own, the products which can be economically manufactured in the country.

6. Interaction and Coordination of Development Activities

It is felt that the industrial development will be helped if the activities of market investigation, surveys are coordinated by the Ministry and information passed at no cost to investors and entrepreneurs. Close coordination and interactions between the Ministry and various agencies is highly recommended.

6. Continued.

Coordinations including that with various international development projects could be enhanced and defined through high level contacts and mutual understanding between the senior staff in both the Ministry and concerned agencies. A Liaison Officer should be assigned- with a well defined terms of reference- to deal with the coordination activities.



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

JOB DESCRIPTION

DP/YEM/87/020/11-03/J12517

Post title Industrial Engineer

Duration One-year

Date required As soon as possible.

Duty station Sana'a, YAR

Purpose of project To strengthen the capacity and ability of the relevant Departments within the Ministry of Economy, Commerce and Supply to perform their functions in the appraisal and the registration of industrial investment projects.

Duties
 The expert will be a member of an international team and will work under the general supervision and guidance of the CTA and in close co-operation with the national counterpart. Within his field of competence, he will specifically be expected to:

1. Formulate technical criteria and guidelines for the appraisal, selection and ranking of industrial projects;
2. Prepare project appraisal reports for the licensing of projects;
3. Identify investment opportunities and participate in the preparation of opportunity studies, pre-feasibility studies and feasibility studies;
4. Establish reference documents and technological data required for the above activities;

.../..

Applications and communications regarding this Job Description should be sent to:
 Project Personnel Recruitment Branch, Department of Industrial Operations
 UNIDO, Vienna International Centre, P.O. Box 300, A-1400, Vienna, Austria

5. Within the framework of the established training programme, undertake training of national counterparts in the technical aspects of project preparation and appraisal, covering the following topics:
 - a) Introduction: Definition of Technology, cost of technology hardware and software, vertical and horizontal linkages.
 - b) Sales programme vs. production programme.
 - c) Product technical specification.
 - d) Flow diagram charts, process flow chart.
 - e) Material and energy balancing - relationship with financial measures inventories, work progress.
 - f) Inputs: materials and utilities.
 - g) Machinery and equipment; Schedules of costs, replacement, depreciation, salvage value.
 - h) Manpower estimates; direct and indirect labour needs, training needs, schedule of costs.
 - i) Plant Organization.
 - j) Plant location and site, civil works.
 - k) Implementation and scheduling.
 - l) Preparation of technical report for a feasibility study: communication with other experts (market analyst, financial analyst, etc.)
6. Participate in the formulation of terms of reference for short-term consultants.
7. Participate in the preparation of performance reports as required by UNDP and UNIDO procedures.

Qualifications: University degree in industrial engineering with extensive experience in the technical aspects of the preparation and appraisal of industrial feasibility studies; experience in training would be an asset.

Language: English essential, Arabic an advantage.

Annex .

PROJECT DP/YEM/87/020
Workplan for Industrial Engineering Expert
&
Short Term Consultants

Activity No.	DESCRIPTION	1989	1989	1990	1990	1990	1990	1990	1990	1990	1990
		11	12	1	2	3	4	5	6	7	8
1	Appraisal of ten feasibility studies		—	—	—	—	—	—	—	—	—
2	Daily on job training on appraisal of feasibility studies ^{Tech. Aspects.}	—	—	—	—	—	—	—	—	—	—
3	Training of selected group of counterparts on the technical aspects of feasibility studies, process technology - lectures/exercises - twice a week	—	—	—	—	—	—	—	—	—	—
4	Preparation of teaching material, case studies	—	—	—	—	—	—	—	—	—	—
5	Advise industrial investors on improving quality of technical aspects of the feasibility studies	—	—	—	—	—	—	—	—	—	—
6	Participate in the preparation of 5 pre-investment opportunity studies								—	—	—
7	Participate on seminar on opportunities in the petrochemical industries relevant to Yemen									—	—
8	Participate in examining industrial registration scheme. Advise on improvement							—	—	—	—
9	Establish technical reference material		—	—	—	—	—	—	—	—	—
10	Review of technical appraisal methodology adopted by MECS, YIB				—	—					
11	Participate in preparation format for licensing and licensing scheme								—	—	—

DESCRIPTION	1989	1989	1990	1990	1990	1990	1990	1990	1990	1990	1990
	11	12	1	2	3	4	5	6	7	8	9
Preparation of various papers - relevant to license applications					_____			_____			
Participate in the preparation of appraisal format								_____	_____		
Establish criteria & list of the most important manufacturers of capital equipment & machinery				_____	_____				_____	_____	
Seminar on the use of Personal computers					_____						
Seminar on Market Analysis						_____					
Seminar on Financial Analysis							_____				

Workplan for Industrial Engineering Expert
and
Technical team of (4) Counterparts

Status : 12.09.1990

Activity Serial No.	Description	1990				1991								
		9	10	11	12	1	2	3	4	5	6	7	8	9
1	Seminar on the technological - Technical Analysis of Feasibility Studies in developing Countries (for industrial projects).	—	—											
2	Seminar on the Appraisal and Evaluation Methodology of the Feasibility Studies of the industrial projects.		—											
3	Advanced training of the counterparts on the detailed technical aspects of feasibility studies and process technologies and technology transfer. Lectures/exercises- once per week			—	—	—	—	—	—	—	—	—	—	—
4	Preparation of teaching material case/studies.				—	—	—	—	—	—	—	—	—	—
5	Appraisal/assist on Appraisal of at least 20 feasibility studies with the technical team of counterparts through on-the-job training.		—	—	—	—	—	—	—	—	—	—	—	—
6	Advise industrial investors on the tech. aspects of their feasibility studies (this service could be organized and published by the Ministry.		—	—	—	—	—	—	—	—	—	—	—	—
7	Preparation of 10 pre-investment opportunity studies and their relevant industrial profiles.				—	—	—	—	—	—	—	—	—	—

annex 2a

Workplan for Industrial Engineering Expert
and
Technical team of (4) Counterparts

Status : 12.09.1990

Activity Serial No.	Description	1990				1991								
		9	10	11	12	1	2	3	4	5	6	7	8	9
8	Undertake one feasibility study or more for projects utilizing local resources or of special importance to Yemen, e.g.: <ul style="list-style-type: none"> . production of paper and pulp from agricultural residuals/waste recycling. . petrochemical industries . as may be requested or proposed by the Deputy Minister and Dir. of Investment 													
9	Organize study-tours for the counterparts on project evaluation and modern technological developments in some industrial sectors.													
10	Finalise and computerize the list of the most important manufacturers of capital equipment and machinery.													
11	Assist in connecting the Ministry with some industrial & technology Data-Banks.													
12	Participate in finalising the appraisal format.													
13	Participate in finalising the licensing format and licensing scheme - following the ratification of the new investment law.													
14	Participate in improving & computerizing the industrial registration scheme.													

Workplan for Industrial Engineering Expert
and
Technical team of (4) Counterparts

Status : 12.09.1990

Activity Serial No.	Description	1990				1991								
		9	10	11	12	1	2	3	4	5	6	7	8	9
15	Establish technical reference material													
16	Participate in a seminar on opportunities in the petrochemical industries relevant to Yemen.													
17	Assist the Investment Directorate through field visits (with the counterparts) to the newly implemented projects to match the installed machinery with those already exempted and to estimate the installed and nominal actual production capacity.													
18	Trouble-shooting Mission with counterparts to troubled implemented projects but still not in production as requested by the Deputy Minister													

Annex 3

LIST OF PARTICIPANTS IN TRAINING
COURSE ON THE USAGE OF PERSONAL COMPUTERS

1. Mohamed Ahmed Saleh
2. Ismail Ahmed Al-Mojahed
3. Yahia Al-Depuh
4. Kaed Shajia
5. Abdel-Razak Al-Srori
6. Ahmed Al- Ansy
7. Fathia Mohamed Elhaithamy
8. Naser Al-Qutiby
9. Abd-Allah Al-Hamidy

Annex 4

List of PARTICIPANTS IN
THE GROUP SEMINAR ON THE TECHNICAL ASPECTS OF
PREPARATION AND APPRAISAL OF FEASIBILITY STUDIES
FROM 10/1989 until 3/1990

1. Ismail Ahmed Al-Mojahed
2. Fathis Mohamed ElHaithamy
3. Ahmed Al-Ansy
4. Naser Al-Qutiby
5. Ali Al-Hamdy
6. Abdel-Razak Al-Srori
7. Abd-Allah Al-Hamidy

LIST OF PARTICIPANTS IN THE GROUP
SEMINAR ON THE TECHNICAL ASPECTS OF PREPARATION
& APPRAISAL OF FEASIBILITY STUDIES

FROM 9/ 1990 Until End Of Assignment

1. Ahmed Al-Quraity
2. Aly Abdul - Latif
3. Nasser Al-Cutiby
4. Fathia Mohamed ElHaithamy

Annex 5

Technical Training Courses Contents

The contents included in each and every module mentioned hereinafter incorporates 3 main categories/ levels elementary-medium-advanced.

1. Module Number 1

- 1.1 Methods of project monitoring and implementation.
(PERT by time and by cost and case studies)

2. Module Number 2

- 2.1 Methods of evaluating and measuring productivity.
- 2.2 Introduction to international units system.
- 2.3 Introduction to international classification of industrial activities
- 2.4 Factory design aspects (civil and architectural)
- 2.5 Quantities and specifications of required inputs in factory design.
- 2.6 Methods of work measurements, time and motion study

3. Module Number 3

Preparation of simplified comprehensive industrial profiles with special emphasis on technology and processes.

4. Module Number 4

Technical analysis, engineering and technological aspects of preparation of feasibility studies including:

- 4.1 Overview of technical analysis and aspects of feasibility studies.
- 4.2 Design stages, methods of design and calculation of plants with relation to process, cost estimation with extensive case studies in the branch of chemical engineering because it is characterised by intricate technical details.
- 4.3 Production schedule, plant capacity and technological alternatives
- 4.4 Developing of the production schedule
- 4.5 Material inputs and outputs.
- 4.6 Production process.
- 4.7 Construction of the process/Flow charts.
- 4.8 Determining the production equipment required and degree of mechanization
- 4.9 Evaluating alternative production equipment
- 4.10 Selection of technology/ technology transfer aspects.
- 4.11 Labour requirements, identifying and estimating of production/labour

- 4.12 Preliminary facilities layout and its construction
- 4.13 Location and site analysis
- 4.14 Evaluation of location using profit maximization and subjective factors
- 4.15 Building specifications and out-door work
- 4.16 Cost estimation
- 4.17 Safety Measures
- 4.18 Impact on environment and environmental protection.

5. Module Number 5

Detailed technical appraisal methodology for following investment projects at the micro-level.

- 5.1 Industrial
- 5.2 Agricultural
- 5.3 Tourism
- 5.4 Health care centres and hospitals
- 5.5 Services

6. Module Number 6

- 6.1 Preparation of technical papers adequate for the counterparts categories (elementary - medium- advanced- high levels)
- 6.2 Preparation of case studies comprising:
 - Pulp mill case study for :location and site analysis
;materials and inputs
;technical analysis
 - Case studies and various solved examples in chemical engineering projects
- 6.3 Re-Evaluation of the feasibility studies of some troubled implemented projects.
- 6.4 Projects under evaluation in the light of the new directives that all technical assessment should be reviewed by the expert.

7. Module Number 7

- 7.1 Preparation of the appraisal methodology and technical aspects of the evaluation of industrial projects as well as the appraisal format.

Annex 6

- Training Seminar on Technical-Technological Analysis of Feasibility Studies

Duration : September/October 1990

The contents of the training seminar on the technical & rechnological analysis and aspects of the preparation and evaluation of industrial investment projects:-

1.1 Overview

1.2 Production Programme

- 1.2.1 - Introduction
- 1.2.2 - Plant capacity
- 1.2.3 - Production technical specifications
- 1.2.4 - Sales programme
- 1.2.5 - Supply programme
- 1.2.6 - Production Schedule

1.3 Materials & Inputs

- 1.3.1 - Classification
- 1.3.2 - Characteristics
- 1.3.3 - Units costs
- 1.3.4 - Summary
- 1.3.5 - Example - Yeast Plant

1.4 Project Location - General

- 1.4.1 - Factors influencing location selection
- 1.4.2 - Factors influencing site selection
- 1.4.3 - Different location/site alternatives
- 1.4.4 - Case study: Analysis of location for a Paint Plant

1.5 Technology and Engineering

- 1.5.1 - Technology
 - 1.5.1.1 - Nature and market for technology
 - 1.5.1.2 - Technology alternatives and selection
 - 1.5.1.3 - Acquisition of Technology
 - 1.5.1.4 - Cost of technology
- 1.5.2 - Production process
 - 1.5.2.1 - Project charts and layouts
 - 1.5.2.2 - Material and energy balances
 - 1.5.2.3 - Production machinery and equipment (classification & characteristics)
 - 1.5.2.4 - Equipment alternative and selection
 - 1.5.2.5 - Case studies
 - Machinery and equipment selection - bakery
 - Machinery and equipment information for a Yeast Plant
- 1.5.3 - Civil engineering works
 - 1.5.3.1 - Final site selection, preparation and development
 - 1.5.3.2 - Buildings
 - 1.5.3.3 - Facilities and utilities layout, outdoor works
- 1.5.4 - Cost estimates for technology and engineering (with example)

1.6 Plant Organization and Overhead Cases

- 1.6.1 - Organizational considerations - cost centres
- 1.6.2 - Cost analysis

1.7 Labour/Manpower Requirements

- 1.7.1 - Manpower planning
- 1.7.2 - Types of manpower requirements
- 1.7.3 - Labour costs
- 1.7.4 - Training

1.8 Project Implementation Planning and Management

- 1.8.1 - Purpose and methods
- 1.8.2 - Stages in pre-operational (implementation) phase of a project
- 1.8.3 - Types of management and implementation schedules (with some comments on contracting)
- 1.8.4 - Cost estimate for project implementation
- 1.8.5 - Financial impact on bad planning and management

1.9 Cost Estimate Synthesis.

1.10 Various Considerations Related to Technical - Technological Analysis in Developing Countries

- 1.10.1 Role of transfer of technology in the industrialization of developing countries
- 1.10.2 Problems in the preparation of feasibility studies
- 1.10.3 Difference between new investment and rehabilitation projects

Status of activities

Activities scheduled in the project approved Work Plan	Original scheduled starting date	Original scheduled completion date	Actual or current estimated starting date	Actual or current estimated completion date	Comments (explain reasons for any major delays)
1. Assist in Appraisal of ten feasibility studies	1/12/89	31/8/90	11/89	31/8/90	Continual service. The contract of the expert was extended till 11/90.
2. Daily on the job training on appraisal of tech. aspects of feasibility studies	11/89	8/90	11/89	8/90	- ditto -
3. Training seminars on the tech. aspects of preparation of feasibility studies	11/89	8/90	11/89	8/90	- ditto -
4. Preparation of teaching material & case studies	11/89	8/90	11/89	8/90	- ditto -
5. Advise industrial investors on improving quality of tech. aspects in their feasibility studies	11/89	8/90	11/89	8/90	- ditto -
6. Participation in the preparation of 5 pre-investment opportunity studies	06/90	8/90	01/90	5/90	
7. Participate on seminar on opportunities in petrochemical industries relevant to Yemen	07/90	7/90	01/91	01/91	Terms of reference still to be approved by the Ministry
8. Participate in examining the industrial registration scheme	05/90	8/90	11/90	2/91	Delay upon government request awaiting the ratification of the new investment law.
9. Establish tech. ref. material	12/89	8/90	12/89	8/90	continual service - ditto as para 1 above
10. Review of tech. appraisal methodology of MECS/YIB	02/90	3/90	05/90	5/90	
11. Preparation of format for licensing & licensing scheme	06/90	8/90	05/90	5/90	
12. Preparation of various papers relevant to license application	03/90	7/90	03/90	8/90	
13. Participate in the preparation of appraisal format	06/90	7/90	03/90	3/90	

Status of activities

Activities scheduled in the project document*	Original scheduled starting date	Original scheduled completion date	Actual or current estimated starting date	Actual or current estimated completion date	Comments (explain reasons for any major delays)
14. Establish criteria of most important manufacturers of capital equipment and machinery	2/90	8/90	7/90	11/90	Awaiting indications from NECS concerning their immediate requirements and the limitations and facilities which has to be granted to use the first list.
15. Seminar on the use of personal computers	3/90	3/90	2/90	3/90	Government clearance for candidates is pending
16. Seminar on the market analysis	4/90	4/90	9/90	9/90	Delay due to the non-availability of expert and non-completion of computer room
17. Seminar on financial and economical analysis using COMFAR	5/90	5/90	6/90	6/90	Ad-hoc introduction to the newly assigned 4 engineers as counterparts.
18. Seminar on the technological - Technical Analysis of industrial investment projects.			9/90	10/90	
19. Seminar on the appraisal and evaluation of technical aspects of the feasibility studies of industrial projects using the established guidelines and criteria.			11/90	11/90	ditto as above (duration 14 days)

Training

Fellowship, training course, study tour or in-service training	Duration (months)	Name and sex of fellow(s). If training undertaken abroad indicate country and institution of study	Started (date)		Completed (date)	
			Sched.	Actual (est.)	Sched.	Actual (est.)
1. In service (on-the-job, training on the technical aspects of Appraisal of Feasibility Studies	Whole project duration	Extended to all employees of the investment Directorate and its sub-departments (Evaluation, Studies, Exemption)	July 1988	November 1989	July 1990	August 1991
2. Group seminar on the technical aspects of preparation and appraisal of feasibility Studies	ditto-	See attached list	July 1988	November 1989	July 1990	August 1991
3. Seminar on the use of personal computer	1	See attached list of participants	-	February 1990	-	March 1990
4. Seminar on Financial and Economical Analysis of Feasibility Studies and the application of 'COMFAR'.	1	See attached list of participants	-	June 1990	-	June 1990
5. Seminar on the technological and technical analysis of industrial invested projects.	1	see attached list of participants	-	September 1990	Oct. 1990	Oct. 1990
6. Seminar on the appraisal and evaluation of technical aspects of feasibility studies using the established guidelines and criteria.	0.5	- ditto -	October 1990	November 1990	October 1990	Nov. 1990

Reports

Title of report, paper etc.	Remarks
<p>Lectures on production planning, production control and management including extensive case studies on following :</p> <ul style="list-style-type: none">- plant location " Tangible and intangible factors and their applicability.- planning Hierarchy in production.- principal of production control.- planning and control during manufacturing using local charts, record charts and program process charts.- planning & control activities on the production processes.- production management with intensive case studies analysis.	<p>Technical lectures and working papers with extensive number of case studies from the actual practice- Arabic with all terminology in English .Draft to be distributed among the training group advanced level.</p> <p>Copy to be forwarded to Deputy Minister and Director of Investment Department. Most of the said lectures and case studies are typed and still to be copied.</p>

Reports
Investment promotion/Appraisal of projects

Title of report, paper etc.	Remarks
1) Draft of the new investment law	Investment policy - Arabic in collaboration with Mr. Shalaby, distributed to the Minister of Economy, Deputy Minister and Director of Investment Department
2) Export potential forms for the private sector enterprises	Technical/commercial - Arabic in collaboration with Mr. Shalaby, distributed to Deputy Minister of Economy and Director of Investment Department
3) Brazil experience in encouraging foreign investments "Foreign capital legislation and its current application in Brazil.	Investment policy - English - distributed to Deputy Minister of Economy and Director of Investment and Studies
4) Paper on the experience of Saudi Arabia and their incentives to foreign capital investments	- ditto as above - but in Arabic (Technical - Economical)
5) Report on the industrial investment opportunities in the A. R. of Yemen	Tech. - Arabic to be used by the Deputy Minister of Economy and Director of Investment Department - contents are briefly discussed with the trained team of counterparts to proceed with advising entrepreneurs on these opportunities
6) Guidelines to investors	Tech. - Arabic & English distributed to Deputy Minister of Economy and Director of Investment Department and counterparts
7) Guidelines for the evaluation of the industrial projects in Yemen	- ditto as above - but only in Arabic
8) List of the internationally recognised items for project appraisal	- ditto as above - Arabic
9) Preliminary form of project evaluation	- ditto as above - Arabic
10) Report on documentation for submission with application for industrial and investment project licenses	- ditto as above - English
11) Comprehensive industrial license application form	- ditto as above - Arabic (draft)

Evaluation & Appraisal of Projects

Reports

Title of report, paper etc.	Remarks
<p>1) Preliminary guidelines on the evaluation of technical aspects of industrial projects.</p>	<p>Tech. - Arabic - distributed to Deputy Minister of Economy and Director of Investment Department and counterparts.</p>
<p>2) Assist in technical evaluation of following projects:</p> <ul style="list-style-type: none"> . P.V.C. windows assembly projects and extension unit for profiles production (Sayed A. Sulem license 374/1989) . Electrical fitting & bulbs project in Yemen. . Rabbits farm. . Poultry equipment for Al-Youseffi farm. . Leather tanning. . Polypropylene sacks production. . Taiz General Hospital. . Stones crusher. . El Kanawes ice plant. . Electrical household appliances . El Baraka project for the production of wooden furniture. . Gypsum factory . Sam project for manufacturing leather shoes. . Al-Mohdar pharmaceutical project. . Calcium Carbonate production . Ceramic fabrication project . Pure oxygen gas production 	<p>Assist in the technical evaluation of the said projects as a part of the daily on-the-job-training. Mainly technical reports are produced by the counterparts in Arabic.</p>
<p>3) Assist in determination of the required production line to the Exemption Dept.</p> <ul style="list-style-type: none"> . Saada'a furniture factory . Al-Hudaiedah detergent factory . Schemach's factory for leather production 	<p>Assist in the determination of the required production line and matching the specification of the final offers with the specifications of the licensed production line. Mainly tech. reports are produced by the counterpart from the Exemption Department in Arabic.</p>
<p>4) Field visits to monitor implementation of the licensed project: Al-Karamani: wall to wall factory & velvets - Beet Azran, Sana'a.</p>	<p>Tech. - Arabic - to Deputy Minister & Director of Investment Department.</p>

Reports

Title of report, paper etc.	Remarks
<p>1- Industrial profiles on the following:</p> <ul style="list-style-type: none"> . shoe making . plywood fabrication . crown cap making plant . manufacture of vinegar from fresh grapes . preliminary study on the possibility of establishing a factory of stationary (pins + clips) and another for hinges for furniture 	<p>Technical - Arabic - distributed to the Deputy Minister of Economy, Director of Investment Department and training group.</p>
<p>2- Small and medium scale industries adequate to Yemen Arab Republic (provided with ISIC classification)</p>	<p>Technical - Arabic and English distributed to the Deputy Minister & Director of Investment Department.</p>
<p>3- Listing of items, products suitable for small and medium scale projects</p>	<p>- ditto as above -</p>
<p>4- List of main products which could be produced through small scale industries</p>	<p>- ditto as above - but only in Arabic</p>
<p>5- Comprehensive report on small scale industries</p>	<p>Technical - Arabic with all profiles and annexes in English distributed to the Deputy Minister of Economy & Director of Investment Department.</p>
<p>6- Handicraft and cottage industries (in particular backyard and micro-industries including a comprehensive small scale industrial profile on the processing of shell and other naturally renewable raw materials into buttons and jewellery in A.R. of Yemen.</p>	
<p>7-Report on handicrafts in Yemen</p>	<p>- ditto as above - but in Arabic</p>
<p>8- Report on the natural resources in Yemen</p>	<p>- ditto as above - but in Arabic</p>
<p>9- Proposal on the establishment of a small scale projects complex adequate for Yemen</p>	<p>- ditto as above - but in Arabic</p>
<p>10- Assist in preparing a paper on the situation of small scale industries in Yemen and future prospects.</p>	<p>Technical - Advice was given to prepare the Ministry's paper to a specialised conference in Kuwait.</p>

Reports
Working papers/training and technical material Module I

Title of report, paper etc.	Remarks
1) P.E.R.T. by time and cost	Technical-working paper- Arabic - final version distributed to the Deputy Minister of Economy, Director of Investment and training group.
2. Requirements of factory design and the most common structural design errors	- ditto as above -
3. Introduction of "ISIC" classification in Arabic/English with the internationally recognised units	- ditto as above - Arabic/English
4. Introduction of the international system of units "SI"	- ditto as above -
5. Paper on common industrial definitions	- ditto as above - English
6. Technology for under developed countries	- ditto as above - Arabic
7. Measurements of performance and productivity of industrial units	" "
8. Paper on the engineering and technical feasibility study of the project	" "
9) Production program/materials and inputs	" English
10) Location and site selection and case study in location analysis	" "
11) Paper on optimal selection of the site	" Arabic
12) Paper on the selection of location for industrial projects in Arab countries	" "
13) Paper on technology selection	" Arabic
14) Paper in consulting services	" "
15) Paper on technology selections and aspects ought to be avoided	" "

Reports:

Title of report, paper etc.	Remarks
16. Paper on available alternative of technology selection	- ditto - Arabic

Reports

MODULE II TECHNICAL ANALYSIS

Title of report, paper etc.	Remarks
<ol style="list-style-type: none"> 1. Overview of Technical Analysis 2. production schedule, plant capacity & technological alternatives 3. developing the production schedule 4. Technical of pulp mill 5. Materials and inputs 6. Materials and inputs for a pulp mill 7. production processes 8. constructing the process/flow chartt 9. determining the production equipment requirements 10. evaluating alternative production equipment 11. selecting of technology 12. labour requirements 13. identifying and estimating production labour 14. preliminary facilities layout 15. constructing a preliminary facilities layout 16. location and site analysis 17. location and site analysis for a pulp mill 18. building specifications and outdoor works 19. cost estimates 	<p>[Technical outlines for training on [technical analysis in English and [partly in Arabic complete with case [studies.</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p> <p>[</p>
<ol style="list-style-type: none"> 20. Various stages of factory planning and selection of adequate materials handling equipment. 21. Course on technical and technological Analysis of industrial investment project in devloping countries. 	<p>Tech. - comprehensive - Arabic with case studies distributed to Deputy Minister of Economy, Director of Investment Department and trainees.</p> <p>Technical - English - but seminar on overhead foils is explained in Arabic - working papers are distributed regularly - on daily basis - among participants.</p>

Reports

Title of report, paper etc.	Remarks
<p>Comprehensive series of lectures on the techno-economical aspects of the industrial projects & factory design with special emphasis on chemical and mechanical engineering including:</p> <ol style="list-style-type: none"> 1. Overall design consideration <ol style="list-style-type: none"> 1.1 development of design process 1.2 overall design considerations 1.3 optimum design 1.4 design approach 2. Process design development <ol style="list-style-type: none"> 2.1 quick estimate design 2.2 detailed estimate design 2.3 firm process design 3. General design considerations <ol style="list-style-type: none"> 3.1 location 3.2 layout 3.3 measurements & control 3.4 maintenance 3.5 foundations 3.6 storages 3.7 material handling 3.8 waste disposal & pollution 3.9 patents 4. Cost estimation <ol style="list-style-type: none"> 4.1 factors affecting investment and production cost 4.2 capital investment and estimation methods <ul style="list-style-type: none"> . order of magnitude estimate . factor estimate . preliminary estimate . definitive estimate . detailed or contractor estimate . cost index 4.3 engineering details of various cost centres 4.4 Analytical methods for estimating capital investment <ul style="list-style-type: none"> . Detailed items estimate method . unit cost estimate method . percentage of delivered equipment costs . Lang approximation method . power factor apply to plant capacity 	<p>Technical lectures and working papers with extensive number of case studies from the actual practice - Arabic with all terminology in English. Distributed and will be distributed among the training group - advanced level.</p> <p>Copies are forwarded/still to be forwarded to the Deputy Minister of Industry (Technical Affairs) and Director of Investment Department.</p>

Reports

Title of report, paper etc.	Remarks
<ul style="list-style-type: none"> . investment cost per unit capacity . turnover ratio method <p>4.5 Estimate of the total product cost</p> <p>5. Interest and investment cost</p> <ul style="list-style-type: none"> 5.1 Types of interest 5.2 present worth and discount 5.3 annuities 5.4 relationship between continuous cash-flow and continuous interest of importance for profitability analysis of industrial projects <p>6. Depreciation</p> <ul style="list-style-type: none"> 6.1 value - types of depreciation 6.2 methods of determination <ul style="list-style-type: none"> . straight line method . declining balance method . sinking fund method <p>7. Optimum designs</p> <ul style="list-style-type: none"> 7.1 optimum conditions 7.2 procedure with one variable 7.3 " " two or more variables 7.4 optimum production rate for minimum cost and maximum profit per unit 7.5 optimum conditions in cyclic operations <p>8. Profitability standards & alternative investments - investment comparison for required operation with limited number of choices.</p> <p>All lectures include intensive number of solved case studies.</p>	

UNITED NATIONS DEVELOPMENT PROGRAMME
MANDATORY REVISION

COUNTRY : REPUBLIC OF YEMEN
TITLE : IMPROVING THE REGISTRATION CAPABILITIES OF THE
MINISTRY OF ECONOMY, SUPPLY AND TRADE (MEST)
PROJECT NUMBER : YEM/87/020/F/01/37
LAST REVISION DATE : 07 JUN 1990

The purpose of this revision is to reflect actual expenditures for the year 1989 as reported by UNIDO; application of pro-forma costs for all BLs; extension of CTA's post for 6m/m to cover one year contract for the replacement of former CTA; and 3m/m extension of expert under BL 11.003.

Previous UNDP input - Project budget code (E)	\$640,035 (line 999 total)
Revised UNDP input - Project budget code (F)	\$696,577 (line 999 total)
UNDP input - increase	\$56,542

Agreed on behalf of the Government

Date

Agreed on behalf of the Executing Agency

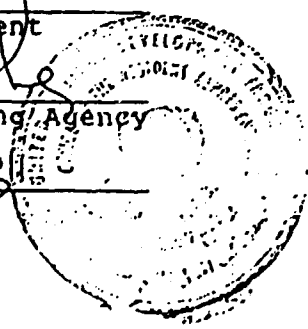
Date

Agreed on behalf of UNDP

Date

9/6/90

9/6/90



COUNTRY : REPUBLIC OF YEMEN | DATE PRINTED: 07/06/90 | PAGE 1 |
 PROJECT NUMBER : YEM/07/020/F/01/37 | LAST REV: 07/06/90 |
 PROJECT TITLE : IMPROVING THE REGISTRATION CAPABILITIES OF THE
 MINISTRY OF ECONOMY, SUPPLY AND TRADE (MEST)
 PROJECT BUDGET COVERING UNDP CONTRIBUTION (in U.S. dollars)

PROJECT COMPONENTS	TOTAL AMT	1988 AMT	1989 AMT	1990 AMT	1991 AMT
	M/M	M/M	M/M	M/M	M/M
010 PROJECT PERSONNEL					
A1- Experts:					
011-001 Industrial Economist (CTA)	259,020	50,214	72,506	30,300	106,000
	30.0	5.3	11.7	3.0	10.0
011-002 Financial Analyst	125,700			30,300	95,400
	12.0			3.0	9.0
011-003 Industrial Engineer	131,196		33,196	98,000	
	15.0		4.0	11.0	
011-009 Consultants	30,300			30,300	
	3.0			3.0	
11-99 Subtotal (*)	546,216	50,214	105,702	188,900	201,400
	60.0	5.3	15.7	20.0	19.0
A13 Admin support personnel:					
013-000 Admin Support Personnel	34,310		810	20,000	13,500
13-99 Subtotal (*)	34,310		810	20,000	13,500
A15 Official travel:					
015-000 Official Travel	4,362	1,000	862	500	2,000
15-99 Subtotal (*)	4,362	1,000	862	500	2,000
A16 Mission costs:					
016-000 Mission Costs	15,898	1,233	7,665	7,000	
16-99 Subtotal (*)	15,898	1,233	7,665	7,000	
A18 Prior years adjustments:					
018-000 Prior Years Obligations	-226		-226		
18-99 Subtotal (*)	-226		-226		
C15 COMPONENT TOTAL (**)	600,560	52,447	114,613	216,400	216,900
	60.0	5.3	15.7	20.0	19.0

COUNTRY : REPUBLIC OF YEMEN | DATE PRINTED: 07/06/90 | PAGE 2 |

PROJECT NUMBER : YEM/67/020/F/01/37 | LAST REV: 07/06/90 |

PROJECT TITLE : IMPROVING THE REGISTRATION CAPABILITIES OF THE
MINISTRY OF ECONOMY, SUPPLY AND TRADE (MEST)

PROJECT BUDGET COVERING UNDP CONTRIBUTION (in U.S. dollars)

PROJECT COMPONENTS	TOTAL AMT	1988 AMT	1989 AMT	1990 AMT	1991 AMT
	M/M	M/M	M/M	M/M	M/M
030 TRAINING					
032 000 Study Tours	36,000			36,000	
033 000 Seminars	3,000			3,000	
039 COMPONENT TOTAL (**)	39,000			39,000	
040 EQUIPMENT					
041 000 Expendable Equipment	8,000	509	150	7,341	
042 000 Non-Expendable Equipment	39,892	20,301	14,591	5,000	
049 COMPONENT TOTAL (**)	47,892	20,810	14,741	12,341	
050 MISCELLANEOUS					
051 000 Miscellaneous	9,410	2,346	1,914	-3,650	1,500
056 000 Prior Years Obligations	-285		-285		
059 COMPONENT TOTAL (**)	9,125	2,346	1,629	3,650	1,500
099 BUDGET TYPE TOTAL (***)	696,577	75,603	131,183	271,391	218,400
	60.0	5.3	15.7	20.0	19.0
090 UNDP TOTAL (***)	696,577	75,603	131,183	271,391	218,400
	60.0	5.3	15.7	20.0	19.0

Subject Number

YEM/87/020

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
NON-EXPENDABLE PROPERTY CONTROL RECORD

Page No. : 1

Period Ending : DECEMBER-89

: YEMEN

Project Title : STRENGTHENING APPRAISAL AND REGISTRATION CAPACITY OF MEST

Purchase Order Number	Item No.	Description	Qty. Ord.	US Dollar Equivalent	Received			Cond.	Qty On Hand	Remarks
					Qty.	M	Y			
15-8-00379	1	TOYOTA COROLLA 1300 SEDAN MODEL EE90L-AEKRS WITH AIRCONDITIONING. CHASSIS NUMBER ==> EE90-0085697 ENGINE NUMBER ==> 2E-1262981 REGISTRATION NO. => ????? 4132	1	7,288.00	1	-	88	good	1	Car was subject to an traffic accident while parking
15-8-00467	1	IBM PERSONAL SYSTEM 2 MOD. 30-021-8086 MICROPROCESSOR (8MHZ) PERMANENT MEMORY ROM 64KB STANDARD MEMORY RAM 640 KB, COMPL. # 4006708 & 4006715.	2	4,727.00	1	7	89	brand new	1	Not yet in operation for lack of space & earthing
15-8-00467	2	IBM PS/2 MONO DISPLAY 8503 # 0276437 & 0276443.	2	534.00	1	7	89	"	1	- ditto -
15-8-00467	3	PROMAS PE-502A 500VA UPS.	2	820.00	1	2	90	"	1	
15-8-00467	4	EPSON EX 1000 PRINTER # 0304782, 03016360.	2	1,472.00	2	2	90	"	2	Not yet tested
15-8-00467	5	PC DOS 3.3.	2	259.00	1	7	90	"	2	" " "
15-8-01168	1	OVERHEAD PROJECTOR MODEL 2180.	1	817.00	1	7	89	good	2	The first one without disk.
19-9-08792	1	IBM TYPEWRITER 6781 (ARABIC-ENGLISH).	1	2,400.00	1	9	89	good	-	(Not) received June 90

Project Number
DP/YEM/87/020

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
NON-EXPENDABLE PROPERTY CONTROL RECORD

Page No. : 2

Period Ending : DECEMBER-89

Country : YEMEN

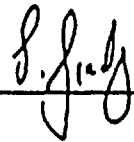
Project Title : STRENGTHENING APPRAISAL AND REGISTRATION CAPACITY OF MEST

We certify that the quantities of non-expendable equipment received, less the quantities of non-expendable equipment written-off, reflect the physical count of the items on hand.

Unido project manager
or
Resident representative

SAMIR GINDY

signature



officer in charge
since 1.2.90

Date 20.3.90

Government counterpart

M. A. SALEH

signature



Date 21/3/90