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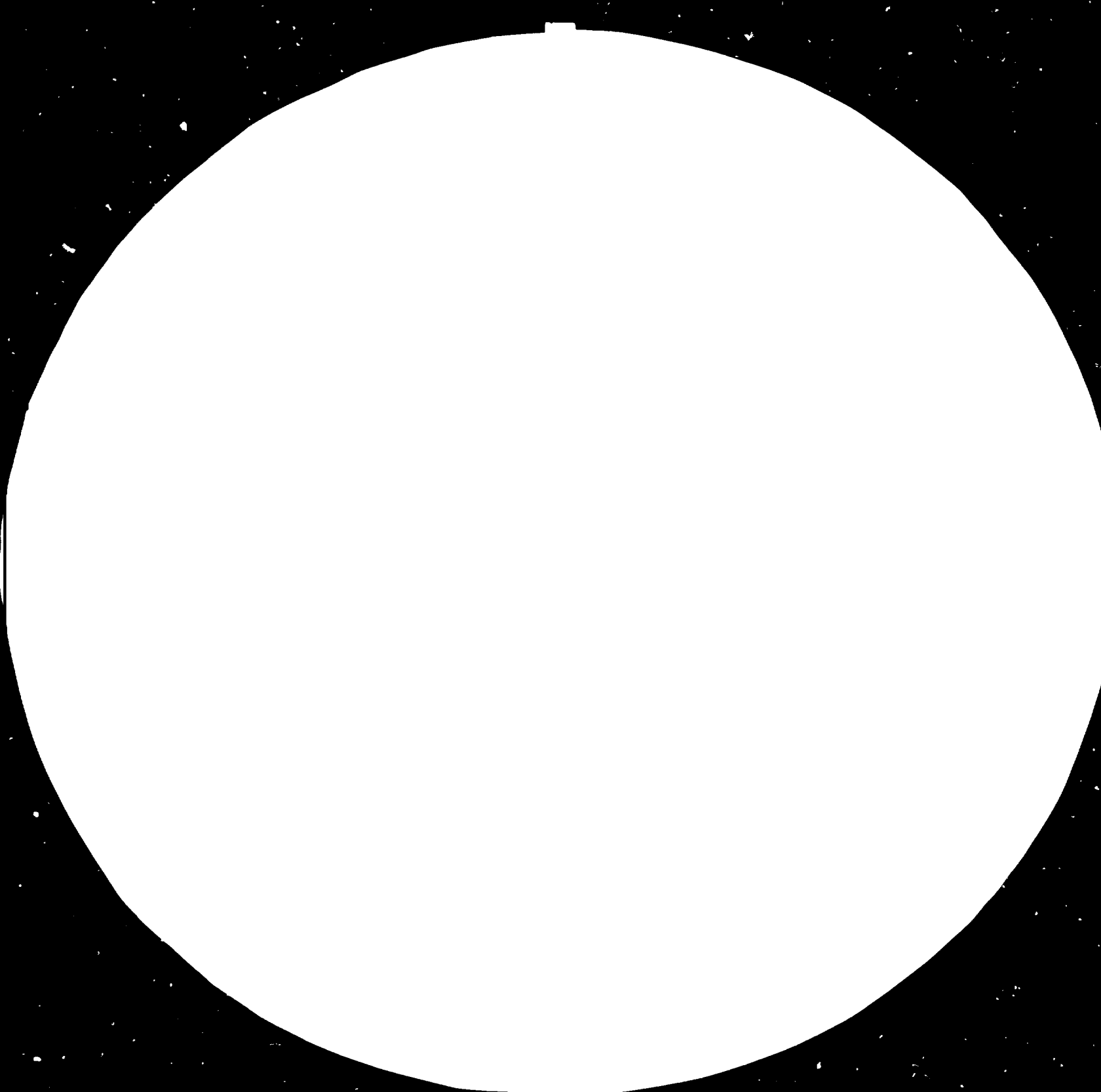
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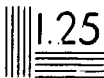
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Resolution test targets are used to determine the resolution of a system. The resolution is the ability of a system to distinguish between two points that are close together. The resolution is measured in line pairs per inch (LPI). The resolution of a system is determined by the number of line pairs that can be resolved per inch. The resolution of a system is determined by the number of line pairs that can be resolved per inch. The resolution of a system is determined by the number of line pairs that can be resolved per inch.

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RESTRICTED

21st December, 1983

English

P.D.R. Yemen.

TRAINING IN MANAGEMENT  
AND  
PERFORMANCE IMPROVEMENT OF INDUSTRIES.

DP/PDY/81/006

P.D.R.Y.

Terminal Report

Prepared for the Government of Peoples' Democratic Republic of Yemen by the United Nations Industrial Development Organisation, acting as executing agency for the United Nations Development Programme.

Based on the work of S.K. Desai, Team Leader

United Nations Industrial Development Organisation, Vienna

This report has not been cleared with the United Nations Industrial Development Organisation which does not, necessarily share the views presented.

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## Abstract

The project "Training in Management and Performance Improvement of Industries" DP/PDY/81/006 has been in preparatory assistance stage during the reporting period. The two purposes of the project are to provide direct assistance to the selected industries to improve their performance and through on-the-job and other forms of training to create trained cadre in the management.

The objectives of the project in line with its purpose are

- to carry out direct assistance assignments involving diagnosis, remedial recommendations and implementation stages,
- to develop and implement management systems in certain fields,
- to develop and implement a programme for upgrading skills,
- to strengthen the capacity of the Ministry to monitor performance of industries,
- to establish a national Performance Efficiency Unit which will independently serve the aforementioned purposes.

The project is likely to move to full operation stage of two years completing its preparatory phase covering two years. This report is for the first two years. It is prepared as the terminal report of the author.

The project has provided direct assistance to various industries both as planned and as required in addition. The performance of the assisted industries has improved and some nationals are trained.

It is recommended that the full fledged project should continue to work according to the work plan in the draft project document duly altered in light of the new concept of the project.

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As the project is to continue for a further period of two years, and this report is related to the preparatory stage only, it is not possible to make it strictly in accordance with the guidelines of the usual terminal report.

The purpose of this report is to be the terminal report of the author and to act as a guide to the project personnel.



INTRODUCTION

The industrial sector has two major obstacles in its rapid development; low productivity and less than adequately trained management. The capacities of industrial plants are not fully used due to technological problems such as lack of production management and maintenance and non technological deficiencies in fields like finance and marketing. The problems are completely interrelated; in some cases as the cause and the effect. The government in its Second Five Year Plan, (SFYP) conscious of the important role to be played by the industrial sector, decided to accord it a high priority and directed its efforts through this vehicle, to rehabilitation. The project was conceived to serve this objective set out in SFYP.

The immediately preceding project Industrial Advisory Unit, had provided direct assistance to some extent with very encouraging results.

As result, when the Government requested for the follow-up project based on the above needs, the preparatory assistance was approved by UNDP effective 1.1.1982.

For various reasons, the preparatory assistance phase has continued for the two years ~~two years~~ but the project undertook additional activities as if the full-scale project was operational. The full-scale project is at the time of writing this in drafting stage; the concept having been decided. This report covers the two year preparatory assistance phase ending 31.12.1983. UNIDC is the executing agency of the project.

The project budget as now agreed to is \$1,738,801 for the four year period ending 31.12.1985 and the finance is found from IPF. The adjustment has been made downwards from \$1,983,600 originally submitted due to the change in the modus operandi i.e. consultants on short term mission being provided instead of resident experts. The Government of PDRY contribution is YD57,500 (approx. US\$172.500).

The project objectivities have remained the same throughout the period reported upon as given below;

DEVELOPMENT (SECTORAL) OBJECTIVES

The development (sectoral) objectives of the project is to support the Government's overall development strategy of developing the industrial base of the country and of securing optimum utilization of the country's physical human and financial resources, as stated in the present Five Year Plan 1981-1985, achieving an increased value added in the industrial sector, improving the capacity utilization of the sector, increasing the technological basis of the country and improving technical self-reliance.

IMMEDIATE (PROJECT) OBJECTIVES

The overall immediate objectives of the project are to improve the performance of industries and management capabilities of the Ministry and industries through providing direct assistance in the management. Specifically, the objectives fall into the following areas:-

1. To provide through the international experts in cooperation with national counterparts (with a view to forming the nucleus of a future consultancy unit within the Ministry of Industry) direct assistance to at least twelve enterprises in different aspects of industrial management leading to their improved performance and skills at plant and Ministry levels through;
  - a) development and implementation of a programme of diagnostic and operational consultancy assignments followed by implementation assistance in 12 selected industries.

- b) development and implementation of specific management systems (e.g. production, financial, inventory control etc.) in the twelve selected enterprises.
  - c) development and implementation of a programme for upgrading management skills of Ministry and industries through vocational and on-the-job training in certain aspects of industrial management specified in Part II E.
2. To strengthen the capacity of the Ministry of Industry in monitoring the performance of industrial enterprises through development of criteria for estimation of the efficiency of enterprises and through upgrading the knowledge and training of personnel of the Ministry.
  3. To establish a Performance Efficiency Unit (PEU) within the Ministry of Industry with the help of international experts, to develop capability of the national members of the unit to serve the purposes mentioned in the objectives 1 and 2 above, independently at the expiry of the present project.

The outputs and activities of the two year period were in line with the needs of the objectives and it is hoped that they will continue to be so related for the balance period. The attainment of the objectives appear assured at this stage. The work of the two years already completed have shown that the objectives are being met in areas both of improved efficiency and training of nationals in management.

The major training element fellowships is programmed for the next two years. However, one fellowship and one study tour programmes are implemented during the first two years. The nationals work alongwith <sup>and</sup> internationals on permanent assignment basis from the Ministry and the

concerned industry, receiving informal on-the-job training. This form of training has graduated from nationals acting as observers to independently carrying out some items of work with supervision and guidance provided by internationals. This happy outcome is attributable to interest and zeal shown by nationals in learning and desiring to equip themselves to step into the shoes of expatriates.

Recommendations:

1. Many suggestions are made in respect of industrial development prospects (VI. 6.1).
2. Institution building is a serious and a time consuming work but it requires a good deal of planning (VI. 6.2).
3. The project document should be finalised soon and flexibility should be built in (VI. 6.3).
4. The financial constraints may be felt when the needs of the industry are considered. It may be useful to keep in view the need for time and other support. (VI. 6.4 and 6.14).
5. The unified accounting systems may need an innovative approach to have them well explained and implemented (VI. 6.5).
6. Management Information Systems should be developed jointly by all concerned disciplines, tried out, altered and implemented (VI. 6.6).
7. The factory problems both general and specific will require proper identification, projects preparation and approval, implementation. It is an ideal way to impart training. The training in any case should be looked into as a whole supported by a proper plan and execution (VI. 6.7, 6.8).
8. For evaluation of offers and studies, several practical recommendations are placed under VI. 6.9.
9. Proper utilisation of manpower resources, their training and enhancing productivity for long and short term needs are indicated. These are detailed in VI. 6.11, 6.12 and 6.13.

10. The need for integrated management of some enterprises is self evident and it will be economical and will lead to greater investment potential. (VI. 6.16).
11. Practical ways of using budgetting techniques are given in (VI.6.14).
12. The hand over/take over of the project is very crucial. It requires some action for financial arrangement also so that accounting and control are facilitated (VI. 6.15).

## I. OBJECTIVES AND LOGIC OF PROJECT

The sectoral objective is to develop industrial base of the country, secure optimum utilisation of its resources and capacities and improve self reliance.

Within the above framework, the immediate (Project) objectives are to provide direct assistance to some industrial enterprises in industrial management leading to their improved performance, up grade management skills strengthen performance monitoring capabilities and create institutionalised national capacities.

It is intended that through the realisation of the project immediate objectives the achievement of the sectoral development objective will be supported. In brief, the sectoral and project objectives are related as given below;-

### Sectoral Objectives

1. Develop the industrial base of the country.
2. Secure maximum utilisation of country's physical, human and financial resources.
3. Increase the technological base.

### Project Objectives

- a. Develop and implement a program of diagnostic and operational consultancy assignments and implementation assistance in twelve industries.
- b. Develop and implement specific management system in twelve factories.
- c. Strengthen the capacity of the Ministry in monitoring performance of enterprises through
  - (a) Development of criteria to estimate efficiency

4. Improve technical self reliance.
- d. Develop and implement a program for upgrading skills of Ministry and industries through vocational and on-the-job training in some aspects of industrial management.
- e. Establish Performance Efficiency Unit within the Ministry to develop capacity of national members of the Unit to serve the objectives a to c independently at the expense of the project.

While the overlap of objectives is inevitable and necessary attempt is made to relate them as far as possible.

The logic followed is to produce the outputs mentioned below:-

- ◆ Increased productivity through diagnostic and consultancy assignments.
- Manuals on various industrial management aspects.
- Implementation of the manuals and training of national staff in their use.
- Improved product design and quality and marketing techniques.
- Training of plant level staff through workshop/seminars fellowships, study tours, on-the-job training.
- Established and operational consultancy unit with at least ten national counterparts capable of providing consultancy and implementation services to the Ministry and Industrial establishments in industrial management fields.

Appropriate activities as given here-under were to be undertaken with the inputs as decided.

- 1) Assess the present situation and weakness of 12 selected industries.
- 2) Preparation of action plan
- 3) Implementation, review and followup of the programme.
- 4) Preparation of manuals in the following fields;-
  - Production Management, Financial Management, Marketing, Work Study, Material Management and Consultancy Services.
- 5) Implementation and follow-up of the manuals.
- 6) Training of the National staff at the Ministry and 12 selected industries for the implementation of the manuals.
- 7) Evaluation of the existing product design and quality control methods and procedures.
- 8) Proposals and recommendations for improvement of the product design and quality control and their implementation.
- 9) Survey of the existing market practices.
- 10) Recommendations for improved marketing practices.
- 11) Implementation and follow-up of recommendations for better marketing.
- 12) Preparation for materials and curriculum development for seminars and workshops.
- 13) Organizing workshops and seminars.



- 14) Study the existing Management Information Systems(MIS).
- 15) Preparation of Manuals on Management Information Systems (MIS).
- 16) Implementations and Training of the national staff and follow-up of the implementation of (MIS).
- 17) On the job training and inplant training in the following fields;-
  - Production Management
  - Financial Management and Cost Accounting,
  - Work Study, Marketing, Material Management and Quality Control.
- 18) Organising fellowships and study tours.
- 19) Setting up of the unit with organisational chart, modus operandi for providing services and job descriptions of the members.

For the half period of the project life, inputs were provided to a large extent as mentioned in the draft project document.

As can be seen from the above, the logic of the project is to achieve the immediate objectives in the framework of the development objective. The improvement of performance requires direct assistance in technical and managerial fields which when provided leads to improved efficiency. The training in management is provided through the use of direct assistance activities coupled with other forms of training. For the benefit of trainees in future, preparation of manuals is an important activity. As can be seen from the draft project document each output is related to appropriate activity and the activity to the workplan. The work plan when compared with the job descriptions of the inputs, the logic of the selection of the disciplines as has been done will be clear.

## II. ACTIVITIES AND OUTPUTS

For the purpose of this report the preparatory assistance project document for 1982 is used whilst for 1983 the draft project document which was in operation for that year's work and which is now being revised is the basis. The report is brief in view of the details having been provided in the half-yearly progress reports.

### 1982 1. Prepare a full scale project document and workplan

The project document was drafted several times in March 1982 and again revised by UNIDO field mission in May 1982. UNDP, New York on receiving an official request from the Government decided to have a Tripartite Review Meeting to study in depth the design of the project document vis-a-vis the country needs particularly in regard to the objectives, outputs and inputs. This meeting was held in April, 1983 and another draft project document was prepared during the UNDP consultants' stay in Aden. There were still a few points on which further alterations were considered necessary by UNDP, New York. The project in the meantime continued its activities based on the latest draft project document financed by advance authorisation. The Joint Programme Review was held in October 1983 as a result of which major changes in the inputs and budget were made. At the time of writing this report, the project document is being revised.

The workplan during 1983 was prepared and revised on the assumption that the draft project document at the time of its preparation or revision will be approved.

The frequent changes in the project document resulted in this activity being completed during its planned period but likely to be fruitfully concluded at the end of the second year of the four-year project.

2. Assess Organisation Structure of the Ministry, prepare organogram etc. for Performance Efficiency Unit, assist in their approval and administrative and legal procedures therefor.

The assessment led to the request from the Government for fresh proposals for the Ministry organisation structure, job descriptions etc. The purpose, activities, outputs organisation structure, job descriptions, methodology for the delivery of services and external and internal relationships of the Performance Efficiency Unit were also prepared in the first half of 1982. A ministerial resolution establishing the Unit took place on 6th May, 1982.

The promulgation of law for establishing the unit is under active consideration and it is expected that it will be available soon.

The appointments of the Assistant Deputy Minister as the National Director and a Senior staff member as the project coordinator were major positive factors in selecting the national staff for the unit, conduct of project activities and in making the project making greater impact.

3. Discuss the accounting systems prepared for industrial sector with Central Audit Bureau etc. for their approval and later on implement in three factories

Discussions were held but their approval was not available in 1982. It is ordered in late 1983 that instead of the systems prepared by the writer those designed by experts of Central Audit Bureau will be implemented. However, in 1982 as decided by the Ministry, the six staff members received full training for independent application of the systems.

In light of the order, an operating systems manual using as far as possible, the one prepared by the author and tried out in several factories successfully may be prepared. This will expedite implementation.

Cost accounting manual of first stage is being implemented.

4. Examine existing trade policies and prepare policy recommendations

The field work commenced after carefully preparing terms of reference and questionnaire. It was completed within the time planned. However follow up of answers (majority of those received being inaccurate or incomplete) would be helpful. The national staff have undertaken this activity enthusiastically. Three interim reports were prepared.

5. Obtain and analyse techno-economic and statistical data of selected industries and prepare project profiles

It is a continuous exercise; collection and analysis of data and preparation of project profiles continued almost parallel. Two profiles were prepared. The national staff have received the training required for doing this work independently.

6. Examine existing recording and reporting systems in the factories and the Ministry and develop recommendations

The examination has been made to a large extent. The field visits have been made. More follow up of answers to questionnaire left with the

factories will be required. Recommendations on standardisation are being tried out in financial information, inventory control, organisation structure work study approach, project profiles, market study etc. However after studying the experience in their implementation and developing models, they may be written down in the form of a manual to be updated periodically to make it a dynamic organisation.

- 7 (a) Examine plant layout for three factories prepare and implement recommendations
- (b) Work study of three factories

The activity was to be completed by October 1982, when the experts in fact arrived. ~~Yet,~~ the work study of one large unit was completed, of another conducted by the nationals. The association of more nationals with excellent potential contributed to the success in a very large measure.

8. Assist implementation of recommendations made by other UNIDO experts

In depth implementation assistance for UNIDO experts'/other consultants' recommendations was provided in form of technical comments, draft projects, terms of reference etc. for training requests, pharmaceuticals, assistance to Agricultural Implements Factory, survey of cotton based industries, edible oil, tomato paste, Martyrs' Garments, Day Care Centres, Industrial Information, Aluminium.

This work requires continuous assistance as UNDP/UNIDO have provided since 1973, a number of short-term projects.

For reports of other consultants comments are offered and advices on investment matters given on several occasions.

This activity is a natural and welcome corollary of the "Industrial Advisory Unit" project which ended on 31st December, 1981.

9. Two workshops; one on productivity and another on project accounts, were conducted.

10. Questionnaire on internal auditing function was prepared and submitted to ascertain the status in each factory.

11. Share valuation of four factories was made.

12. Paper on loan management was prepared for discussion with relevant national authorities.

In 1983, work in accordance with the workplan continued. The brief account of the project implementation is given below;--

- 1) Direct assistance and on-the-job training constituted the major work for each discipline. It included the study and recommendations on general organisation and job descriptions for leather shoes factory, directing national staff on work study assignments; advising on finalisation of accounts of Cigarette, Match factories and flour mill, recommending training programme for the textile; revising proposals on the use of computer and setting up Central Clearance and stores; rendering advice on financial aspects in various negotiations; indepth study of financial and cost systems, the preparation of a detailed case study and on-the-job training in work management in Leather Manufacturing Cooperative; commencing detailed implementation of better material management and inventory control practices in Leather Shoes factory, flour mill, tannery and leather cooperative; evaluation of studies on cotton-based industries, Dairy and Aluminium factories; identifying and compiling profile data on dry cell battery unit; advising on consultants for a glass industry; advising on investment opportunities in various economic aspects in setting up razor blades and fruits and juices industries; preparation of a scheme for setting up Day Care Centres and advising and assisting in possible projects for Agriculture Implements factory, mini steel plant and training in maintenance.

- ii) The manuals preparation is being undertaken in between direct assistance assignments. Organisation manual is completed and distributed, so also manuals on MIM and cost accounting manual. Manual on financial management, marketing, material management are being prepared and draft Guide Lines for Diagnosis of Industrial Enterprises is completed. Marketing and Material Management manual will be completed by the end of the year. In view of the new systems being ordered, financial management manual will be completed in 1984. A report on study of existing financial systems and proposals for improvement for Leather Cooperative was prepared. Also financial systems for a new Battery factory were prepared. Study of cost systems in Tannery and Leather Shoes Factory are in progress which is mainly being done by nationals with guidance and supervision of international staff.
  
- iii) Study of existing product designs with the help of consultants is being made for Agricultural Implements Factory, Textile Mills, Tomato Paste Factory, Dairy, Aluminium Factory and Wood Working industries. A project is suggested for Leather Cooperative.
  
- iv) Recommendations for better marketing practices have already been made. Specific recommendations are made for Agriculture Implements Factory and Tannery. Implementation is in progress.
  
- v) A task force is set up for demand survey and assessment. The national team is provided with questionnaire and explanations to carry out this work. On-the-job training is provided on a few assignments. The nationals are now independently carrying out this study.
  
- vi) Workshops were conducted on material management for accountants and stores personnel and on general aspects of management and marketing, finance, materials and production management for directors of selected factories. Two workshops on maintenance was conducted by consultants by a separate short term project.

A lecture was delivered in the University on industrial development for developing countries. Papers were prepared by each discipline and distributed to all participants. Two workshops; one on IIM and another on Marketing Management are planned for December 1983

- vii) The national staff participating in direct assistance assignments are being trained by demonstration, entrusting independent work with guidance from international staff, strengthening theoretical background through personal explanation and reading and study assignments etc. Work study at Tannery and Leather Shoes Factory is at present being conducted by the nationals.



### III. ACHIEVEMENT OF IMMEDIATE OBJECTIVES

While judging the effectiveness of the assistance already provided vis-a-vis the sectoral and project objectives, the constraints experienced may be kept in view. However, an overall assessment is that the project work is proceeding satisfactorily according to the plan; both in letter and spirit. It has contributed and is effective positively and handsomely and tangible benefits are felt by recipients. The project is the 'core' group.

The expert input for the year ended 31.12.83 was 48 man months. The original plan of 63 man months. The national input was 111 man months against the plan of 120 man months. There are 9 national staff members on full-time and 2 on part-time basis attached to the project.

More than 50 technical reports, papers etc. were prepared. Six workshops were held under the project auspices.

The outputs achieved (and therefore the related activities undertaken) mentioned in II represent the effectiveness of the assistance within the framework of the objectives.

The industrial base is developed through identification and examination of investment opportunities for new industries and for balancing, modernisation and replacement. The project provided direct assistance by preparing terms of references, preparation of project profiles, evaluation of studies.

participation in negotiations, assisting follow up etc. with a view to solving immediate problems but more so to create national capacities. In this area, the project has been effective. The number of such assignments to the project has been progressively reduced as the national staff are carrying out these activities independently. References are made seeking guidance on some specific points at times.

The cost consciousness, the application of reorganised criteria and methodology for the selection of investment projects, selection of appropriate technology, proper planning of manpower training and finance are some of the effects to which the project has contributed. Better investment portfolio, better project implementation in terms of time and costs and successful working of the establishments are evident.

The Second Five Year Plan emphasises consolidation of existing establishments which is as advised. Maximisation of capacity utilisation and optimum use of resources; better production, financial marketing and material management is on anvil. Improvements in terms of production volume, productivity, costs, sales and profits are already being realised in many factories. The recommended studies wherever indicated are either carried out or planned.

Use of Scientific Organisation Structure and job descriptions, recognition of marketing as an important function and use of appropriate marketing techniques, completion of annual accounts in proper form and expeditiously, better funds flow control, application of cost computation and appreciation, physical and financial control over inventories, use of work study techniques are some of the effects of direct assistance activities. They have resulted in improved performance.

Specific management systems, though still under development, are being introduced in stages and their utility has been favourably commented upon. Such systems are for Organisation, marketing, financial and interim cost accounting, inventory control. Studies of product diversification and of feasibility for reorganisation of some industries by other sources are being

undertaken. However, full-fledged systems have to be developed and practised over a reasonable period in many places and judgements of all concerned received in depth before full satisfaction can be claimed. At this stage it may be said that experiments on limited scale are encouraging.

The Ministry capabilities in monitoring are gradually being upgraded with some performance comparison guidelines now being available. The staff members of the Ministry (in addition to the regular counterparts) participate in all direct assistance activities and receive on-the-job training. Control cells have yet to be established and performance comparison methods put into use through direct assistance activities. In brief, considerable work has yet to be undertaken in this area.

Regarding improving self reliance, the greater technically satisfying and enthusiastic participation of counterparts in direct assistance and workshop activities are evident. However for giving greater practice and for reasons of diversity of problems, direct assistance will have to continue. The training being the major goal, they have to be carried out by the national and only guidance provided by internationals as far as possible. With this methodology put into practice, time requirement is more but more rewarding. The fellowship programme has yet to go into full swing and in this area, project has yet to implement its ideas on length and type of training and the number of trainees. However, this has led to counterparts being with internationals over an uninterrupted period which has resulted in greater on-the-job training and adjustments between them. The training for achieving self sufficiency has by necessity to be more involved.

The project can claim modest success in having the Performance Efficiency Unit established, staff members named and in position, modus operandi and law recommended. For such a unit to be able ultimately to work effectively and independently of external assistance, the project personnel's efforts of giving more assignments to nationals and providing guidance, encouraging quest for knowledge show promise of desired results.

#### IV. UTILISATION OF PROJECT RESULTS

The project results are extensively utilised as can be seen from the implementation of various recommendations made by project personnel.

For example in many places the organisation manual is implemented, better marketing practices are introduced, cost systems are practised investments for better productivity are made and inventory controls are exercised.

There is considerable work required to be performed by the project as also the results already achieved utilised in several places.

It is expected therefore that the project will proceed on both the fronts. The greater involvement of the national staff to be able to undertake implementation is a positive development affecting the effective utilisation of project results.

#### V. FINDINGS

During the two year period that the project is in operation, several technical reports have been prepared and distributed to all concerned. Besides as this project is a follow-up of the Industrial Advisory Unit project PDY/76/014, many of the findings and recommendations made therein are still valid. It is therefore felt that it is not necessary to repeat them in this report. Other observations are mentioned below in brief;

- 5.1. Preparatory assistance status of the project for about two years out of the total project period of four years is rather long. Though project activities were carried out with all efforts and on the assumption that the project will be approved as prepared certain uncertainty prevails which is not healthy and induces some unsettling effects.
- 5.2. The financial constraints have adversely affected both the timing and adequacy of inputs especially those which were forecasted to be financed from sources other than IPT. Urgent and unforeseen problems or those which were existing but not identified or yet others that

were identified but not attended to for various reasons have had to be postponed. The improvement of industries require attention to bottlenecks. They often require very specific specialisation by way of consultancy. It cannot be provided without funds and therefore the improvement cannot be brought about.

UNDP/UNIDO no doubt have responded quickly and positively but with the global problem, such assistance can not be provided on the scale desired.

- 5.3. The Second Five Year Plan (SFYP) and the project are related very closely. Any change in the structure or in actual delivery against the plan in the project will have corresponding effects on the achievements of SFYP. The project life may be found insufficient as the approved full fledged project may be operational for about two years only. It may also be found that after very careful diagnosis of the industries, the consultancy component is inadequate. The SFYP concentrates on rehabilitation of existing industries by optimising the use of existing capacities and resources. With insufficient technical and managerial capabilities the support required from the project may have to be massive. Non availability of the necessary assistance may affect realisation of planned targets.
- 5.4. Unified national accounting and statistical systems statutorily required to be implemented is not available in a manual form and lack of full information may pose problems in understanding the objectives and methodology of the system.
- 5.5. Management Information Systems (MIS) to be comprehensive (and to be taken a step further from the stage already proposed) will require information on the existing systems and their effectiveness, costs etc. The follow-up of questionnaires is required firstly to seek answers and ensure their accuracy and secondly to evolve practical and rational systems. More concerted efforts are required.

The systems require convergence of all disciplines of the project. This has to be provided.

- 5.6. Direct assistance assignments have dual purpose; to identify problem and provide their solution and to train national staff members. When these assignments are carried out by them, it may take longer time. However, it has proven to be a better way of imparting training. More time is also required when assignments are non repetitive.
- 5.7. The involvement of national staff is very encouraging. After observation in one or two instances, they undertake independent assignments with guidance being provided by international staff. They all participate in workshops by conducting some lectures themselves. The preparation of technical reports has also been attempted in some cases.
- 5.8. Integrated approach: In the initial stages of the project, it was felt that diagnosis will be made of all selected factories first and then an action plan will be drawn up. It was later on felt that better approach would be for all project staff. Working together in a factory at a time, diagnosing all related problems and assisting their solutions. This approach has proved to be more rewarding.
- 5.9. Institution Building: This is one of the major objectives of the project. It has therefore been arranged for three levels of contact parts working with every international staff member. Apart from on-the-job training, fellowships and a study tour are planned. Partial implementation has been made. Due to the delay in the implementation of fellowship programme as a result of the non approval of the project, time is lost and in the meantime costs may have also increased. It is hoped that there will be no reduction in time or number of fellowships. It is further hoped that the timing of fellowships execution will not adversely affect after diagnostic and consultancy activities.

2. The inter facing of university or other formal training institution with the industry is absent. This may result in curricula of various technical, vocational and management studies to be topsided and theoretical. The graduates may not be able to assimilate quickly and adequately in the industrial sector which is a national waste.

3. Institution building is a time taking but very essential activity. Any attempt to expedite may mar the quality.

4. It must be recognised that apart from the short-term training abroad, extended training in some disciplines and practical training in others is necessary. Financial Provision has to be made with a properly drawn out programme.

5.10. Major Problems in the factories: The technical and managerial problems are manifold and require immediate and long-term attention. The former type problems relate to industrial engineering including layout, maintenance, production planning, norms of consumption of man, material, machine etc. productivity of factors of production, safety, quality, wastages and value analysis. The managerial problems concern organisation and use of manpower, marketing material management, capital formation, financial control, method of payment of wages, money management etc.

5.11. Workstudy application is very relevant development in the case of PDRY and despite its time taking nature is of paramount importance. Its coupling with other industrial engineering applications will be required so that technical improvements will be available at the same time.

5.12. There are a number of technical assistance needs which have been identified and projects formulated for attending to them completed. However, fruitful conclusion many time is absent for reasons such as

the follow-up projects are not taken up, implementation decisions not taken or delayed, support activities like recruitment of competent national staff are not carried out. The expatriate assistance needs for technology transfer are not fully detailed.

- 5.13. Evaluation and control are two important management aspects which require strengthening both at enterprise and Ministry level. Areas such as cost (as a tool of control or of comparison of relative efficiency) management information and project accounting (as a tool for control function keeping track of time and costs) may be developed further.
- 5.14. Workshops/seminars: Several workshops/seminars were conducted with and without outside assistance. They were rated as successful by all concerned but to make them better a few suggestions are given below;
1. Case studies manuals, notes etc to be handed over to participants should be received in sufficient copies and in advance.
  2. Participants should be carefully selected with certain minimum requirements objectively decided and then strictly adhered to.
  3. Case studies should as far as possible be local or developed on conditions similar to those obtaining in the host country.
  4. Lectures, notes etc. should have more of practical and less of theoretical approach and content.
  5. The lecturers should have a short orientation stay in the host country.
  6. Attendance should be compulsory and uninterrupted.
  7. The length of the seminar/workshop number of lectures and the contents of each lecture should be based entirely on the consideration of the needs of the subject matter to be taught.
  8. Audio-visual aids should be used extensively.



9. Each seminar/workshop should not be ad hoc but should form a recognisable part of an exhaustive training scheme catering to specific short and/or long term objectives. The logic should be developed similar to that required for any project.
10. The participants should be examined by one method or the other not only to assess the success of the seminar/workshop but also to establish future steps required in respect of each to build up national capabilities.

## VI. RECOMMENDATIONS

The suggestions made in the previous project report in so far as they are relevant are also mentioned below in view of their importance.

### 6.1. Future Industrial Development:

1. The constraints of small local demand, scarcity of skilled manpower and comparatively low capital formation suggest that small scale industries based as far as possible on local raw materials with perhaps some degree of automation may be in order.
2. The existing industries call for greater stress on balancing, modernisation and replacement on a scale commensurate with its market share.
3. Systematic maintenance planning and management at all levels is required as a matter of urgency.
4. The management should be recognised as the most important input in all cases.
5. Measures should be taken to expand the market for industries especially those working on low capacity utilisation for want of demand. Regional and bilateral cooperation, based on product sharing may be worth consideration. Mutually exclusive plants may be set up. An outward looking industrialisation strategy which will sustain economically viable units may offer necessary means of widening and diversifying the export base.
6. Feasibility study in the form recommended in UNIDO manual should be insisted upon in all cases irrespective of the source of finance or agency of implementation.

7. Many Arab countries are relying greatly on domestic financing. The public sector plays leading role in financing Industrial projects; while individual sector saving are restricted to modest participation in light industries and other areas scattered here and there. If such savings are mobilised and channelised in proper investment in industry, they would constitute an important source of financing Industrial Development.

It is well known that important considerations to stimulate such investments are firstly the existence of right investment climate, secondly, existence and promotion of suitable investment opportunities, and thirdly existence of effective industry and attract capital thereto.

The investment climate could be created by economic, financial and administrative incentives that would reduce investment risks, by increasing the return or anticipated profits, like tax exemptions or reduction, increase in depreciation rates in respect of fixed assets, exemption or reduction of customs duties on imported capital goods and raw materials and suitable tariff protection.

To a large degree Law No. 23 of 1971 announced by PDRY Govt. offers many incentives and revisions are made. The law may be kept under constant review.

The creation of infra-structures and industrial zones that possess all utilities and services, having health and education facilities in these zones also constitute a vital necessity for fostering industrial development. Measures to train artisans skilled supervisory staff and production engineers to meet such requirements need no mention. This is the immediate necessity in PDRY.

Formulation of a clear industrial Licensing policy indicating the fields which are reserved exclusively for public sector, those for mixed and private sector respectively, will automatically induce individual sector savings to promote their respective share for the cause of national development.

8. The exploitation of solar, wind and wave power is indicated.
9. Comprehensive training programmes for the various cadres and increasing intake in the technical institutions, a system of incentives based on the principle of accountability and connecting the benefits with performance are worth consideration.
10. After the objective of utilising idle capacity and improvement of productivity has been realised to a satisfactory degree horizontal expansion may come back into vogue. For all them, it is essential to make an inventory of all studies made in the past on various projects and set <sup>it</sup> against resources survey and market survey to ensure that both the surveys are backed up by proper studies. Attention should also be paid to proper utilisation of all the studies with or without updating as considered necessary. For future, there should be study undertaken only if it is decided to implement the project within reasonable time if the study results are positive. Once the study has been conducted, it should be brought to the conclusion either by a time bound implementation programmes or rejection as far as possible.
11. The scope and nature of problems faced by various industries in regard to marketing be identified and proposals developed for remedial action on the level of individual enterprise as well as at the Ministry level.

6.2. Institution Building:

1. Comprehensive training programme based on the needs in terms of quantity, quality and time with identified nature and courses of training (time and place) should be drawn up and implemented. The available course should suit the need and it should not be made to suit.
2. Technical assistance projects should have specific provision for building up national capabilities which should be objectively satisfactory for the needs of the country and the scheme for its realisation should be pragmatic.
3. Consultants/experts when engaged for feasibility studies or for erection and putting a factory into operation or for any other trouble-shooting work, should ensure that local personnel in sufficient numbers are always associated with them and they are taught (and they assimilate) everything that is required and possible for the local personnel to take over the functions of the international staff. Similarly, the suppliers should always ensure training at their plants of senior technical personnel.
4. It is advisable to send out national personnel on initial training after a decision has been taken to go ahead with a particular project; this initial training is to familiarise them with the project. They should come back after such a training, before actual negotiations take place with the suppliers of plant and equipment. From then onwards, these persons will be attached to the project as counterparts to the expatriate personnel of the suppliers during implementation through various stages of site preparation, erection of equipment and services, trial production, etc. This way it is expected

that a cadre could be built of suitable personnel embracing different disciplines. Taking part in erection and trial run will be a very useful exercise in that they will become conversant not only with production technology but also maintenance procedures.

5. Some of the experienced personnel in the Ministry should be sent on periodical refresher training courses so that they keep abreast with the latest technology.
6. The factorywise suggestions made for training needs in specific fields should be implemented.
7. The short term experts of UNIDO on their part should continue to organise workshops and group discussions on various topics of interest and with particular reference to;-
  - i) Principles of market survey,
  - ii) Principles of Project construction Accounting, Accounting Costing and Budgetting system for productive units.
  - iii) The short term experts deputed by UNIDO for specialised fields (eg) maintenance of plant and equipment must as a rule include a workshop in their work plan for imparting training to national personnel. To this end, it is recommended that the job description prepared by UNIDO for such projects should include this item in the job description of the concerned expert.
8. The personnel attached to the international staff should be those who will ultimately take over the functions of the latter. They should be adequately qualified and motivated. Their status and functions should be very carefully worked out.

9. According to one study, the increased productivity and higher rate of women participation will require employment potential to grow at an average annual rate of 4% during 1980s. Apart from overall likely unemployment, the phenomena of scarcity of manpower in planning, administrative, management and technical cadre is actively felt. The training measures already taken will yield results but there may be some gaps. Higher and secondary education will have to be oriented more towards technical and vocational fields. Manpower planning for matching demand and supply of various skills is vital.
  
10. The training institutions in specific disciplines like accounting if started, there may be problems in finding sustained inflow of students and difficulties on their placement in positions of their choice or their aptitude. At the same time, all students for each specific disciplines cannot be sent abroad economically nor can institutions and courses be found for each discipline entirely matching with the national needs. Serious consideration may be given to either have regional institutions or to have those which after having sufficient batches trained adequately (and in the process creating a sizeable cadres of trainers) could cease functioning as a regular educational institution but act as a venue where required facilities be provided for short periods from time to time.

6.3. Status of the project document At the time of writing this, the draft project document has once again been revised and hopefully it will be finalised soon. Based on the assessment of the current needs, it may be assumed that the project has been properly formulated. Early approval will enable the project activities to be undertaken without reservations. Yearly evaluation should be programmed as a minimum in order to bring about changes found required. The shift to the utilisation of short-term consultants should be closely monitored to ensure that expected results

are achieved. The indepth diagnosis of selected industries when completed, may throw up problems which would require revision of priorities or/and additional inputs. Note should be taken of this likely development now.

The proper timing of the arrivals/departures of consultants and well defined job descriptions should be ensured so that the project activities are well coordinated.

6.4. The financial constraints may be more keenly felt when competing demands for consultancy grow in excess of the possible supply. The bilateral and multilateral sources will have to be tapped from now so that the agencies concerned are sounded well in advance. There are some problems which are common not only for all industries in this country but in the region as a whole. Some of these problems also require cooperative efforts from more than one executing agency of UN system. Some of the needs may be of managerial support or technical executive work requiring OPAS type of approach. Some policy decisions may have to be made in advance. Innovative solutions may have to be tried out.

Besides, the project life may have to be extended or further inputs required. It may be useful firstly to look at the need for assistance in totality and solution/s worked out comprehensively without considering the financial angle at that stage. Later on, its financing may be taken up. This will bring out the dimension of the problem and the extent to which it is attended subsequent implementation stages will then be easier.

6.5. Unified national accounting and statistical systems may be developed in a training manual form. It may be useful to study how far the systems designed for Ministry of Industry in 1976 can be adopted without affecting the concept or objective of the unified systems. The accountants who are already trained on the old systems have a good potential to be trainers and this source should be properly tapped to create a cadre of trainers.



6.6. Management Information Systems to be developed and implemented for trial purposes will require greater follow-up of the answers to the questionnaires already distributed. This is most important. Systems can be prepared only after these answers are studied in detail. Once the system proposals are prepared, they may have to be distributed to other concerned authorities like Ministries of Planning, Finance and Labour.

6.7. Direct Assistance The assistance should attempt achievement of two objectives; Solve the individual factory problems and impart training for achieving ultimately self reliance. It may be noted that this is the sure and time taking method. One possible way to reduce the time requirement and to impart training to a greater number of nationals will be to have input of United Nations Volunteers and to have several task force teams at factory level.

6.8. Factory problems There are several common problems which may be tackled by an approach of creating models.

1. Planning has to be introduced as a continuous exercise not only because it is a requirement and a feature of a rolling plan but also because knowledge of the event is taken care of earlier.
2. Capacity study results are given below;

ABSTRACT OF CAPACITY UTILISED AND UN-UTILISED

Amount  
(in YD)

SUB-SECTORS & PUBLIC SECTOR	TOTAL CAPACITY	%	UTILISED(*)	%	UN-UTILISED	%
A. Engineering Industries	1,240,897	100	768,066	61.89	472,831	38.10
B. Textiles	2,524,000	100	1,060,618	42.02	1,463,382	57.97
C. Chemicals	2,186,203	100	651,339	29.79	1,534,864	70.20
D. Leather & Shoes	1,045,445	100	794,560	76.28	250,885	23.99
E. Food & Beverages	15,955,404	100	7,193,736	45.08	8,761,668	54.91
F. Miscellaneous	475,010	100	400,200	82.25	74,810	15.74
Total Public Sector	23,426,959	100	1,086,519	46.39	12,558,440	53.60
Total Mixed sector	13,787,527	100	8,752,265	63.47	5,035,262	36.52
Grand total (Public & Mixed Sectors)	37,214,486	100	19,620,784	52.72	17,583,702	47.27

(\*) Maximum utilisation in any of the last three years (1979 to 1981)

Quantified reasons for deviations from possible capacities, analysis of these reasons between avoidable and unavoidable, and proposals for better utilisation should be worked out, implemented, reviewed.

3. In the new projects, the demand projections should be realistic and not dictated by economic size or otherwise nor should prices used arbitrarily to project acceptable levels of economic well being.
4. UNDP/UNIDO assistance may be sought especially in the field of exports, marketing institution and free zones.
5. The use of funds for investments or for imports should be tied up with the enterprise earnings.
6. Several projects which are in various stages should be brought to fruitful conclusion. Some of these are :-  
Safety and welfare, anti corrosion training, boiler maintenance training, post production losses, vocational training control of wastages, value analysis, standardisation and quality control, performance evaluation, a small factory to make spares of simple nature, creation of central stores of commonly used stores, central import clearance, centralised. Purchases of some stores, centralised repairs, combination of managements of factories in one industry etc. at sectoral level.

6.11. Employment There is no serious attempt made by many factories either to draw up or visualise the organisation and job specifications for each position. The result many times, is overemployment.

There is a clear case for having an agreed organisation framework implemented in all factories which have taken into consideration, the following:-

- Responsibility should be precise without any area repeated or deleted and there is no concentration in a few heads.
- There should be logical division of responsibility with clear line and staff relationships and delegation.
- There should be an organisation manual and rules and policies handbook supported by in plant training etc.
- There should be job rating for each operation correlated with the emoluments.
- There should be standard time set up for each operation and therefore the standard cost.
- Tie up with control section in the ministry.
- Ratios of workers in administration, factory (improductive) and selling and distribution to productive workers should be set in advance and vigorously followed. In this case, the experience of other countries may be useful to follow.

The training is an important element which requires very careful planning. The evaluation of needs and availabilities to establish the gap is of prime importance. The gap has to be closed with a bar chart programme of training. In this respect, the training possible through various means should be considered in such a manner that ;-

- Overall time required to train is base minimum
- The costs are not prohibitive
- The training is practical
- Personal development is possible for all

At this stage, the attention is directed to the suggestions made in the past regarding an institution for training etc. which may require a quick follow up. Those suggestions which are approved and are in pipe line

must be satisfactorily concluded.

The preparation of training manuals in each subject and their implementation are basic attributes of a well thought out scheme. No doubt they should be tested on a pilot basis but as new ideas come up, they should be collated for planned revisions at appropriate time.

The mobility of the labour has to be improved both in terms of geography and in job performance.

The inter factory transfer and later on between the ministry and factories should be considered.

6.12. Manpower The manpower under the heads of administration, production supervision, production services, production and sales is given in the approved plan. The budget may or may not contain the information on the same line. This must be tied up. The justification of additional staff requirement and identification of persons who may be considered to fill the vacancies should be asked.

The ratio of administration workers to production workers is almost always high. Even in absolute numbers, the staff levels are not justified from any point of view eg. of turnover, production processes, size of the factory, work standards etc.

The organisation chart and job description should be standardised as far as possible and implemented.

The cost of labour per dinar of total cost may be used to compare the factories.

6.13. Productivity Despite the fact that factories would tend to inflate the inputs, the idle time and perhaps lower production per manhour are present. In the absence of comparative data from other factories similarly placed, it is difficult to judge the levels. However, indirect evidence exists that with piece rates, the concerned factories have achieved better productivity. Therefore, one may conclude that there was scope for improvement in those cases. The data collected in Form 6 of the Five Year Plan exercise can and should be analysed for comparative study.

- Number of persons related to the sales value or cost of production.
- Salaries, wages and related perquisites related to the sales value or cost of production.
- Comparison between many years in the same organisation or between various organisation in the same year.
- Ratio of direct workers to indirect workers.
- Ratio of administration to Factory workers.

But before embarking on such an exercise on a regular basis it is preferable to establish the veracity of the data supplied by the factories. The statistical section may have checked the arithmetical accuracy but it may not have gone beyond and behind the figures. However, in the initial exercise, the defects and weaknesses will come to light which itself is its reward.

6.14. Profit Reconciliation and Material Balance Costing should become the back bone of production planning and budget. If this is done, the profit of the previous year and of the year for which forecasts are made could be reconciled by taking actuals of the last year as a start, altering it for each cause until the forecasted profit is arrived at. This will assist in learning of contribution of each factor to the profit and

may enhance cost consciousness to the level where the management may bring about reductions by itself without any prompting.

6.15. Completion of project The Central Bank stops making payment for a project perhaps on the basis of the budgeted handover of the project from investment to production department or on some such basis. However, in practice two situations are noticed;

- a) The project was commenced as Factory but project expenditure still continues and is paid by the Bank.
- b) The project expenditure ceases to be made by the Bank but the project is still incomplete. Payments are made from the Factory or Organisation to which it will ultimately be attached.

In either situation, the project accounts should reflect the entire expenditure irrespective of the paymaster. If the factory or organisation pays it, an account for the project should be opened by it as if the project is the debtor.

However, for practical reasons, it is necessary that :-

- a written confirmation should be obtained from the Bank that with effect from a specific date it will stop making the payment for the project.
- the project accountant should draw up a list of all outstanding payments
  - i) For those which were in the pipe line in form of payment vouchers or journal entries which the Bank will not honour.
  - ii) For those which were in pipeline and the Bank will honour.

iii) For those which are not get processed for sending to the Bank and will now have to be handed over to the factory or organisation to pay.

iv) The project accountant should be consulted if the Bank payment on advice from the Ministry of Industry or Ministry of Planning or the Ministry of Finance.

6.16. Integrated Management Two types of factories require special attention for management;

- a) Those which have intermittent production or seasonal production.
- b) Those which are not producing products and have serious management problems.

For those in (a) group, management by one group may be considered so that overall administration costs can be reduced.

For those in group (b), management on profit sharing basis may be arranged for a short period or bilateral or multilateral arrangements can be considered combined with training of cadre to take it over at the end of a definite period. In this respect, the management of public enterprise may be one aspect of the transfer of management skills limited initially to losing units and later extended to others.



Annex 1

International Staff

1. Expert in Financial Management/Cost Accountant  
Team Leader  
(S.K. Desai - Indian) Dec. 1983
2. Industrial Economist  
Expert in Feasibility Studies  
(Abdul Aziz - Pakistani) Dec. 1983
3. Expert in Production Management  
(Vega Bayon Eduardo - Chilean) Dec. 1985
4. Expert in Material Management/Inventory Control  
(A.S. Mourad - Egyptian) Dec. 1985

Annex 2

Senior Counterpart Staff

1. National Director (Abdul Rehman Daiban) Part time Jan. 83
2. Administrative Coordinator (Ahmed A.K. Al-Attar) Full time Jan. 83
3. Financial and Cost Accountant (Mutfi M. Ismail) Full time Jan. 83
4. Production Management Expert (Saqaf Al-Gunaid) Full time Jan. 83
5. Industrial Economist 1) Khalid M. Bawazeer Full time Jan. 83  
2) Fahmi Arasi Full time Jan. 83
6. Industrial Engineer 1) Moh'd Farag Full time Jan. 83  
2) Moh'd Yehia Nasher Full time Jan. 83  
3) Ahmed Ali Salem Part time Jan. 83  
4) Ismahan Hatem Part time Jan. 83
7. Material Management Expert (Hashla Moh'd Gaber) Full time Jan. 83

Fellowships Awarded

1. M.A. (Economics) Mr. Salem Basabrain (India) Jan. 83 - Jan. 84

Annex 4

Equipment

3 Peugeot cars	March 1983
3 Electronic Top Loading Balance PE 200	April 1983
1 Haematecrit Centrifuge Haemofuge.	
1 Haematocrit rotor	
1 Reader for accomodation of the cap.	
20 Packs of 100 Micro-Haematocrit cap.	
2 Boxes of capillary sealing wax.	
1 CCAN Colorimetric Chemical Analytical Methods Handbook.	
1 Universal Tintometer Model AF 900 "E".	
1 Digital PH/EM Meter Ph 191.	
1 PH combined electrode.	
1 Temperature sensor.	
1 Calibration and maintenance kit.	
1 Slide Projector Autofocus with timer.	
3 Crown stop-watch Model Amigo.	
3 Electronic Stop-watch Model Timophil.	
3 Scientific calculators.	

Equipment

- 1 Electronic printing calculator, Model 18-36
- 1 Calculator, Model PC-1802
- 2 "Sharp" Electronic Desk-Top calculators
- 1 Electric typewriter, Model editor 4
- 1 Monroe model 273 M electronic printint calculator
- 1 3M Model 107 manual dry copier
- 1 Gestetner hand + electric duplicator
- 1 Vehicle: VW Microbus, 9 seater
  - Chassis No. 25A0018234
  - Engine No. CZ000081
- 3 "CASIO" Calculator FX - 39
- 1 Max HD - 12A Stapling machine
- 1 Rex Rotary equipment set
- 1 Danza plain copier Model D4754
- 1 Mobile cabinet

Project Documentation

From 1.1.82 to 30.6.82

1. Comments on technical and economical study on Modernisation of textile mills (Industrial Economist and Financial Management Expert).

A study made by consultants was referred for comments and advice. They were provided.

2. Paper on standards for food processing industries (Team Leader).

For commencing standards on the most important industries group, guide lines were provided.

3. Terms of reference for Dairy (Industrial Economist).

Problems of the factory to be looked into by the consultants were detailed in form of job description.

4. Terms of reference for task forces and Questionnaire proforma for marketing (Industrial Economist).

A survey in marketing is planned for which framework of work involved was prepared.

5. Revised draft project document "Training in Management and Performance Improvement of Industries". (Team Leader)

The revised draft prepared after taking into consideration UNDP, New York remarks.

6. Terms of reference for techno economic study of Soap Factory (Industrial Economist).

The techno economic study is required for revitalising the soap industry. Terms of reference deal with this.

Project Documentation

From 1.1.82 to 30.6.82

7. Paper on creation of consultancy unit by law (Team Leader).

Draft legislation for creating a national unit under the UNDP assisted project.

8. Terms of reference for Soap and Detergents complex(Industrial Economis

As an alternative to reactivating soap factory, a complex was suggested to be looked into as a possibility.

9. Terms of reference and questionnaire for systems survey (Financial Management Expert).

Financial and other information systems were to be surveyed for which a framework was prepared.

10. Analysis of paper making plant offer (Industrial Economist).

A proposal for paper industry was commented upon.

11. Questionnaire for Investment Division of the Ministry(Team Leader).

The investment department was studied to solve its weaknesses. A survey was conducted including a questionnaire.

12. Potential for nine small scale industries (Industrial Economist).

Nine industries were proposed after taking into account demand, supply and technical angles of the country.

13. A paper on Incentives and Production(Financial/Cost Accounting Expert)

Production through better productivity was suggested with pecuniary benefits.

Project Documentation

From 1.1.82 to 30.6.82

14. Terms of reference for Technical Cooperation for Tomato Paste Factory  
(Industrial Economist)

The possibility of increasing production by cooperation with other agencies was studied.

15. Comments on draft material supply contract. (Team Leader).

A draft contract was available on which buyers' rights were not fully protected and were pointed out.

16. Memorandum on Investment Cooperative Programme - UNIDO (Industrial Economist).

A paper explaining the purpose and manner of using this programme.

17. Report on Investment Division of the Ministry of Industry (Team Leader)

Findings and recommendations for strengthening the investment department to shoulder its onerous responsibilities.

18. Comments on offer for Feasibility Study of Oil Seed Processing Industry  
(Industrial Economist).

An offer of consultants to make the study left out important issues which were pointed out.

19. Workplan and Requirements (Team Leader).

The project workplan was prepared and needs from recipients were set out against each item.

20. Organisation Chart and job description for Ministry of Industry  
(Team Leader and Industrial Economist).

The entire structure of the Ministry was studied in detail and its reorganisation recommended in detail.

Project Documentation

From 1.1.82 to 30.6.82

21. Follow up on Pharamaceutical Industry (Team Leader).

The study was made several years ago which was reactivated for implementation follow-up.

22. Memorandum on Day Care Centres (Industrial Economist).

The centres were to be set up to have greater women participation in industry for which follow-up suggestions were made.

From 1.7.82 to 31.12.82

1. Questionnaire for the Final Accounts (Financial Management Expert)

Pertinent points for evaluation of efficiency and performance of enterprises

2. Observations Memo on shortfalls of Survey Proforma from Factories. (Industrial Economist).

Analytical list of deficiencies in answers from factories on market survey.

3. Notes on some industrial investment proposals (Team Leader).

Some investment identification with background material and suggested course of action.

4. Two interim Reports on Marketing Survey by task force (Industrial Economist)

Findings and recommendations for better marketing of selected enterprises.

5. Project profile on Plywood Industry (Industrial Economist).

Techno economic data to promote the industry.

6. Notes on implementation and follow-up of various projects (Team Leader)

A position paper on various projects in different stages of realisation.

7. Note on preparation of project profiles (Industrial Economist).

A guide in simplified manner to teach the method of project profile preparation.

8. Terms of reference for techno-economic study for Tomato Paste Factory (Team Leader)

Background, justification and work to be done for a selected factory to be set up.



From 1.7.82 to 31.12.82

9. Project Document for assistance to Martyrs' Garment Factory  
(Team Leader)

A document for providing demonstration equipment for better productivity.

10. Enquires to plywood machine makers (Industrial Economist)

Enquiries to collect cost and technical data.

11. Correspondence with machinery suppliers/manufacturers (Industrial Economist)

Follow up correspondence for supply of data.

12. Draft law for joint venture proposals (Team Leader)

A draft of legislation to encourage joint ventures.

13. Job descriptions for officials of National Development Consultancy Council  
(Team Leader).

National Development Consultancy Council is programmed to be set up for which administrative wing set up was prepared.

14. Four Share valuations - Paint, Foam, Martyrs' Garment Factory, Women  
Cooperative (Financial Management Expert).

The present day values of business computed for new share holders.

15. Paper on Management of loans (Financial Management Expert)

Loans provided by the Central Bank require observance of rules which may require revision for better utilisation.

16. Feasibility Study on autospring leaves in PDRY (Industrial Economist).

For this new industry techno economic study was made for creating active interest.

From 1.7.82 to 31.12.82

17. Follow up note on Day Care Centres (Industrial Economist).

For expansion of the centres, various agencies' participation is required. A note dealt with this.

18. Note on establishing a regional industrial information centre (Industrial Economist).

As a follow up of the information centre serving local needs, a region centre was proposed.

19. Papers for Seminar on Productivity ( All ).

A Seminar was held for which each discipline contributed at least one paper.

20. Questionnaire for organisation and methods study (Expert in Production Management).

To diagnose the organisation problem, questions were prepared which formed the basis of interviews individually.

21. Notes for the proposed seminar on material management ( Expert in Material Management).

Lecture notes for a seminar to be conducted for theory and practice.

Project Documentation

1. Analysis of the Organisation of Leather Shoes and Leather Products Factory. (Expert in Production Management)

Organisation and job descriptions of all senior level positions.

2. Preparation of caricula for General Management Seminar (Expert in Production Management).

Details of lectures to be delivered by each discipline.

3. Classification and coding of stores of Leather Shoes and Leather Products Factory (Expert in Material Management).

Description of stores items duly analysed and numerically coded.

4. Workshop paper on Importance of Industrial Sector (Industrial Economist)  
Relationship of growth in economy with the growth of industries.

5. Workshop paper on General Management (Expert in Production Management)

Aspects of specialisations of which the general management should be aware in some detail.

6. Workshop paper on Marketing Management (Industrial Economist).

The importance of marketing function and what it involves.

7. Workshop papers on costs and finance management (Expert in Financial Management).

Two papers dealing with aspects of finance and cost management as required to be known by general manager.

Annex 5 (2)

8. Workshop paper on Management and Inventory Control (Expert in Material Management).

The importance of material management in the context of its contribution to well being of an industry.

9. Workshop papers on Production Management (Expert in Production Manager

Brief account of scope and contents of several important production management functions.

10. Papers for the workshop for Accountants and storekeepers (Expert in Material Management).

Theory and practice of material management for those directly involved in the function.

11. Two draft project proposals for Leather Manufacturing Cooperative (Expert in Financial Management).

Proposals for revamping the industry and direct training in a sensitive work item.

12. Comments on Aluminium Factory rehabilitation report (Team Leader).

Technical, economic and financial comments on a report prepared by consultants.

13. Systems Survey Report (Expert in Financial Management).

An interim report on findings and recommendations on systems of information and finance.

14. Analysis and solution of working capital problems of Cigarette and Match Factories (Expert in Financial Management).

Liquidity problem identified discussed and solution recommended on short and long term basis.

15. Joint venture Proposal for Dry cells (Industrial Economist).

Proposal to set up the small scale factory with foreign participation.

16. Draft job descriptions for

- a) Expert in Textile Design and Marketing
  - b) Flour Mill technologist
  - c) Expert for Tannery machinery-erection and training
- (Industrial Economist + Expert in Financial Management)

Job descriptions developed for short term consultants after the study of the existing situation and pinpointing weaknesses and needs.

17. Survey Proforma for female labour force needing Day Care Centres (Industrial Economist).

Questionnaire to collect important data for better women participation in industries.

18. Comments on market study (First phase of cotton based industries) (Industrial Economist).

An indepth study and comments on the utilisation of major agricultural raw material based on detailed study of local conditions.

19. Marketing Report on Improvement of marketing practices in Agricultural Implements Factory (Industrial Economist).

Specific recommendations for better marketing of a factory.

20. Paper on Bank loans for Public Sector (Expert in Financial Management)

Proposal for better utilisation of investment funds leading to speedier industrialisation.

21. Draft project document for assistance to wood working industry (Team Leader).

A follow up project prepared based on the detailed study made by an expert of entire wood working in the country.

Papers

1. Overall view of Marketing Management (Industrial Economist).  
Marketing Management in the country were generally gone into for the seminar.
2. Financail & Cost Accounting for general management (2) Expert in Financial Management)  
Financial and cost accounting management required for general managers was explained for the seminar.
3. Comments on Dairy. (Industrial Economist & Expert in Financial Management)  
A techno-economic study made for the Dairy was commented upon.
4. CPR paper (Team Leader).  
A background paper on achievements constraints and needs of the industry.
5. Expert in Textile (Team Leader).  
Textile factory problems to be tackled by the consultants were identified and job description prepared.
6. Biscuit and Sweet comments (Team Leader).  
Comments were prepared on a proposed project study taking into account the developments in the country.
7. ST. assistance from non IPF. <sup>sources.</sup> (Team Leader).  
The technical assistance needs with high priority to be met by various agencies were detailed.
8. Day care centres proposals (Industrial Economist).  
For the centres to be established; necessary inputs, possible outputs, costs, agencies etc were prepared.
9. Bakeries systems (Expert in Financial Management).  
The Bakery being a new factory required specific systems which were outlined.
10. Evaluation of Tomato paste study (Industrial Economist).  
The study was made on tomato paste factory needs which was evaluated.

Papers

11. MTM - (Expert in Production Management).  
A manual in industrial engineering is prepared which will be training manual and will be implemented.
12. Report on Leather Cooperative. (Expert in Financial Management).  
A systems study with recommendations for the cooperative based on exhaustive field work was prepared.
13. Marketing Management manual (Industrial Economist).  
A manual for training and implementation of marketing function is being prepared.
14. Organisation manual (Expert in Production Management).  
An organisation manual for implementation in Leather factory is prepared which can be used in other industries also with suitable alterations.
15. Material Management (Expert in Material Management).  
A manual for better material management and inventory control for training and implementation is prepared.
16. Accounting manual (Expert in Material Management).  
An accounting manual based on the new systems decided to be implemented in industrial sector is being prepared.
17. Comments on Textile report<sup>- part 2</sup> (Expert in Financial Management).  
Comments were made on the techno economic study made by consultants for the textile factory.



