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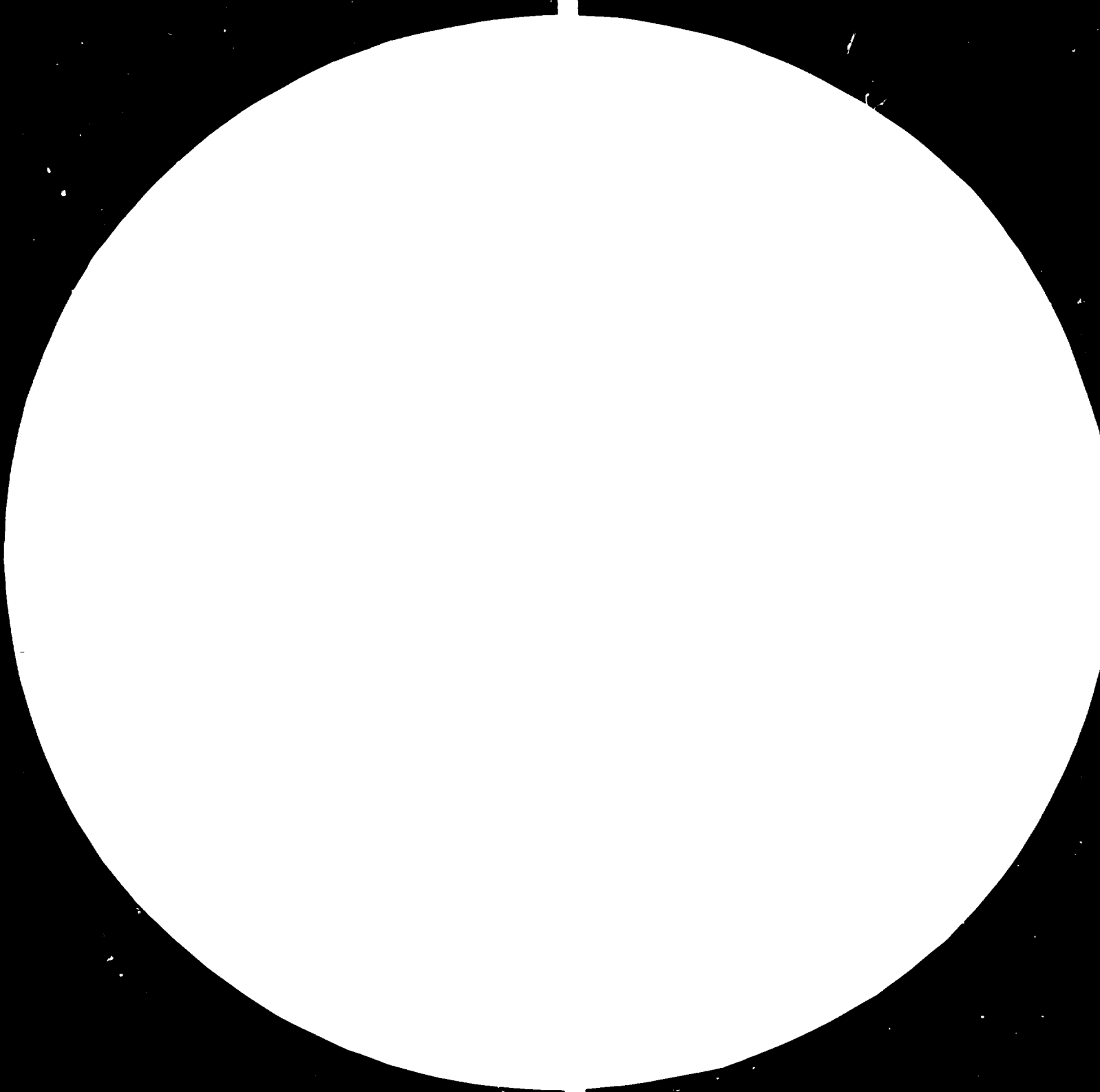
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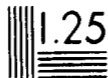
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Resolution Test Chart (NBS 1963-A)

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ASSISTANCE TO
THE MINISTRY OF DEVELOPMENT AND INDUSTRY
Small Scale Industry and Industrial Estate Development
Bahrain : BAH/73/012 (OPAS)

TERMINAL REPORT

Prepared by

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Expert of the United Nations Industrial Development Organization

Acting as Executing Agency for

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This report has not been cleared
with the United Nations Industrial
Development Organization, which
does not therefore necessarily
share the view presented.

JANUARY 1980

W. G. Mudd

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(Stating the objectives of the Project).
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PART O
SUMMARY.

0.1 BACKGROUND INFORMATION IN CONNECTION WITH THIS REPORT

This report has been prepared on request from UNDP contained in a letter addressed to me dated 21 March 1979 and a memorandum dated 3 June 1979.

Guidelines were prepared for me for the preparation of the Terminal Report for this Project (BAH/73/012 OPAS). The guidelines were copied to UNIDO, Vienna, but not the Government.

Therefore, a photocopy of the Guidelines is shown in Appendix 1 of this report.

The report is prepared strictly according to the given Guidelines.

Under the terms of the OPAS agreement, this report has been prepared and submitted with the concurrence of the Government.

0.2 GENERAL INFORMATION ABOUT THE PROJECT

The project became operational in July 1975 with Mr. Eric Adams, O.B.E., as adviser. When Mr. Adams retired in 1977, the present adviser, Mr. Johan A. Elevae took over. Total duration of the project has been 4½ years, the last 1½ years as an OPAS project.

Further details are contained in section 1.1, page 10.

0.3 BACKGROUND INFORMATION IN CONNECTION WITH PROJECT OBJECTIVES

The long term objectives of the project aim at assisting the Country in diversifying its economy from its dependence on oil. (For details please refer to section 1.2).

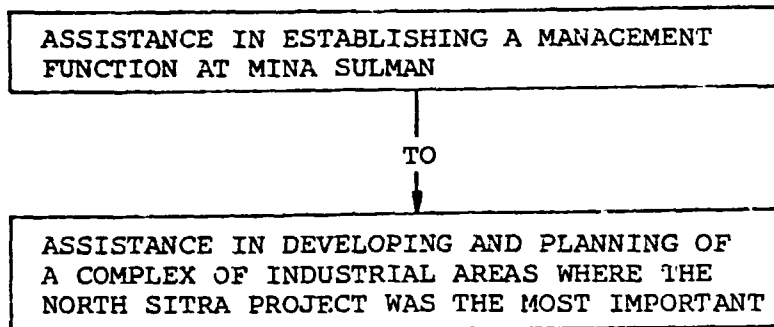
The institutional framework for the project is discussed in section 1.3.

Originally, the project was meant to be connected to the Department of Commerce and Industry. The only industrial estate under this Department was the Mina Sulman Industrial Estate and the project was defined on that basis.

Note: In order to avoid possible misunderstandings it should be noted that this Estate has got nothing to do with the Mina Sulman Port. They are two different areas. Also, the Port is managed by the Port Authorities under the Ministry of Finance and NOT the Ministry of Industry.

In 1976 the Department of Commerce and Industry was reorganized into the Ministry of Development and Industry. The new Ministry took over the responsibility not only of the Mina Sulman Estate, but a complex of a total of 9 Industrial Areas, including the ongoing North Sitra Project.

These changes in the "Institutional Framework" and the corresponding changes in workload and responsibility - also for the Project - resulted in the emphasis being moved by the Government from:



(This was reported by Mr. Adams as well as by myself. The changes however were never reflected in the Project Document - not even when the Project was extended. (Revisions included budgets only). It must be assumed however that the changes had the approval of UNDP as well as from UNIDO since no comments were made.)

In section 1.5 page 13 is given a list of immediate objectives as they may be expressed assuming that the immediate objectives as set out in the Project Document are maintained and at the same time reflecting the changes which have taken place.

While the immediate objectives of the project in effect have been expanded, a corresponding increase in resources was not made.

(Please note that attempts were made by Mr. Adams to expand the project. Also - as far as I know - it was also agreed upon. For different reasons, however, the expansion never took place.)

Hence - priorities were given BY THE GOVERNMENT for the project as follows:

1. To assist in planning the development of the NORTH SITRA PROJECT.
2. To assist in obtaining external and internal financing for the NORTH SITRA PROJECT.

Note: Even if priorities were given as stated above, the other objectives were not neglected. This report also refers to achievements towards these objectives even if they are the results of work done by the Ministry with little or no assistance from this project.

0.4 BRIEF DESCRIPTION OF THE BACKGROUND OF THE NORTH SITRA PROJECT

Based on the statistics which are contained in the World Bank Report dated 28 June 1978, it is documented that Bahrain during the years 1973 to 1977 made considerable progress in diversifying its economy from its dependence on oil through industrialisation.

This was the result of a vigorous Government policy and in this connection the small/medium scale industries are playing an increasingly important part.

As this policy started to show results a shortage of industrial land was experienced, in particular land suitable for light industries. For this reason the Government decided to reclaim a large area at North Sitra. Reclamation started in August 1975 and was completed in February, 1979. A total area of 191 hectares has become available as industrial land.

The area is mainly designated for location of light industries, but the possibility also that large scale industries may find North Sitra suitable is not at all ruled out.

Even if North Sitra is only one of the industrial areas which are under the management of the Ministry of Development and Industry, it is hardly an exaggeration to state that the North Sitra Project is ONE of the important preconditions for continuous progress of industrialisation.

Further details of the background of the North Sitra Project are contained in section 1.7 : the logic of the project. This section also includes an indication of the magnitude of the operations of the Ministry of Development and Industry. The amount of money which is directly involved has been used as the main criterium.

The only possible conclusion is:

- The magnitude (or scale) of the operations of the Ministry of Development and Industry is indeed formidable.

(This fact is of course also reflected in the workload and responsibility of the project.)

0.5 ACTIVITIES CARRIED OUT AND OUTPUT PRODUCED

Part 2 of this report contains the details on this subject.

It should be emphasised that most of the work done has been carried out in the form of team work. This is NOT according to instructions laid down by the Ministry, but it is the way the adviser (or perhaps rather the present adviser) has preferred to work and which (I believe) has been appreciated by the Ministry.

As a result the project has been able to draw on the thinking and the ideas of several highly qualified persons. The "team" has mainly consisted of:

- Mr. Aziz Mirza - Director of Industry.
- Mr. Yousuf Al-Khaja - Superintendent of Small Scale Industries and Industrial Estates (recently promoted to Director).
- Dr. Jassim Al-Mannai - Head of Industrial Development Unit.

As a result, the project adviser cannot claim credit for all of the contents of the different reports, papers, etc. which have been submitted, even if they are worded by the adviser. (He has, of course, to assume full responsibility.)

Sections 2.1 to 2.8 in this report describe in detail the work done ("Project Activities") and the results achieved. It mainly concentrates on the activities during the last 2½ years (under the present adviser), but also mentions the most important during the previous years. For details in this connection, however, reference is made to Terminal Report and Addendum prepared by Mr. E. Adams, submitted in 1976 and 1977 respectively.

In order to make the report as comprehensive as possible, achievements by the Ministry have also been included (with reference to the appropriate immediate objective as described in this report) even if little or no assistance has been given by this project. (In order to avoid the possibility of misunderstandings in this connection, the project adviser of course does NOT claim any credit for such achievements.)

Section 2.8 contains a summary of part 2 in the form of a table which in a schematic form shows the major areas where the project has been directly involved. For easy reference, the table is also shown below: (No details are included).

Year	Project Year No.	Area of major activities	Adviser
1975	1	{ In connection with Mina Sulman Industrial Estate. (According to Project Document).	E. Adams
1976			
1977	2	{ Planning of industrial areas in general. Preliminary planning of North Sitra.	E. Adams
1978	3	{ Detailed planning of North Sitra.	J.A. Elvenaes
1979	4	{ Detailed planning of North Sitra.	J.A. Elvenaes
		{ Assistance in obtaining finance.	
		{ Assistance in obtaining finance.	J.A. ELvenaes

Main output of project activities include:

- Reference is made to the table 2, section 1.3 page 12 listing the industrial areas under the control of the Ministry. Please notice that out of the 6 areas (or estates) presently in operation, 5 became operational in 1975 or later. These areas, containing a total area of 226 hectares have been planned and infrastructure constructed under the management of the Ministry of Development and Industry. (Also, major parts of the available areas have already been leased.) This has been achieved with little or no assistance from the project.

- For two of the areas which are not yet operational, (North Sitra and Umm Al-Hassam) complete Master Plans exist which are approved as far as required (possible) at this stage. The plans include detailed layouts with all the co-ordinates required for setting out the plots, preliminary technical specifications of all infrastructure components, detailed cost estimates, etc.

- For the large area South of Hidd, which is scheduled for development during the mid or late 1980's, plans, including layouts, are made as far as is practicable at this stage.

- Financing of the important North Sitra Project has been arranged. (Please notice that this project is basically financed as a commercial enterprise, with only a minor contribution over the ordinary budgets.)

Hence:

- For the North Sitra Project, all preparations, including financing are completed.

- The implementation programme, which is indeed formidable, and includes the construction of all the infrastructure, is about to start.

In connection with the management aspect, the following DECISIONS have been made:

- A "Board of Directors" (not yet named) is to be created. The members of the Board are to be selected from officials at high levels from other Ministries and Authorities concerned. Under the chairmanship of the Ministry of Development and Industry, the Board will assume the overall responsibility for the implementation of the Investment Programme for the infrastructure at North Sitra.

- A new Directorate is to be created. The Directorate will take the responsibility of all aspects of management of all the industrial areas under the Ministry of Development and Industry, including North Sitra.

(In effect, the new Directorate will function as an Industrial Development corporation but with the exception that it will not be an autonomous body.)

0.6 UTILISATION OF PROJECT RESULTS

It will appear that the project has advised the Ministry at high levels. Most of the reports, papers, etc. which have been prepared in close co-operation with the "team" mentioned, have been submitted to the Ministry for consideration and decisions.

Although the contents of the papers in general have been discussed and agreed upon at the "working" level of the team, it seems obvious to me, that at TOP levels of the Ministry considerations may have been taken which may include factors which are beyond the scope of the project.

Therefore, it is impossible for the project to know to what extent considerations taken by the Ministry have been influenced by reports, etc. which have been submitted by the project. (Even if decisions are as advised by the project).

My conclusion is:

- The degree of utilisation of the project results is known ONLY BY THE MINISTRY.

An indication of how the Ministry may have APPRECIATED the project, however, may appear from the following:

- Originally being defined as a one year project, through successive requests for one year extensions of the "services of the adviser(s)" the project has been in operation for a total period of 4½ years.

- For the last half year, the Government has had to pay 100% of the costs of the project since the UNDP did not include the project in the Country's programme, in spite of strong pressure from the Ministry of Development and Industry through the Ministry of Foreign Affairs.

- After the last request for an extension of the services of the adviser and when UNDP maintained its decision of NOT including the project in the Country's Programme, the Government offered the adviser DIRECT employment. (Please note that this was done AFTER the UNDP had refused the request for an extension.)

(As a result, the adviser is presently (January 1980) continuing the project, but not as a UN project.)

It should be emphasised that the reasons for the requests for extensions were NOT because the objectives were not achieved. From this report, as well as from the progress reports, it appears that as the project progressed, the scope of the project was widened and emphasis was put on other objectives (which however were not included in the Project Document).

The facts which are recorded above should indicate a most successful project!

0.7 FINDINGS (Part 5 of the report)

These are mainly in connection with the North Sitra Project and include:

1. All the preliminary planning has been completed and financing has been arranged. Implementation of the construction of the infrastructure is about to start.
2. The organisational set-up, which is necessary for the management of the industrial areas, including the implementation of the construction programme of North Sitra, has been decided.
 - . For the moment, however, (December 1979) key posts in the new Directorate are vacant, and the indications are that it may be difficult to find suitable candidates to fill the posts.
3. The economy of the North Sitra Project is extremely sensitive to delays which result in delays in collecting the rent from the leasing of land.

In this connection it should be taken into account that the Project is basically financed as a commercial enterprise.

4. In connection with the implementation of the North Sitra Project it has been decided to utilise consultants to a great extent. This is also reflected in the cost estimates of the project.
5. As a further complication of the management of the construction programme, it should be mentioned that several other Ministries and Authorities are involved, where the Ministry of Development and Industry can only exercise limited control. (Hence the creation of the "Board of Directors").

0.8 RECOMMENDATIONS

The following recommendations have been made:

1. To engage consultants to prepare a detailed but flexible work plan for the construction of the infrastructure at North Sitra.
2. To recruit two expatriate advisers:

One Civil Engineer
One Management Accountant.

At least one of the advisers should also be qualified to advise in the field of general management.

It has been pointed out that since time now has become a precious commodity, an early decision is most important.

Further details including the reasons for the recommendations are contained in Part 6, pages 48 and 49.

PART 1
OBJECTIVES AND LOGIC OF PROJECT.

1.1 GENERAL INFORMATION ABOUT THE PROJECT

The Project Document was signed 2.11.1974 defining a one year project. The Project became operational in July 1975 on the arrival of the expert.

On requests from the Government, the project was extended 4 times to cover a total period of 4½ years up to 29.12.1979, the last 1½ years under an OPAS agreement.

The first incumbent in the post, Mr. Eric Adams, O.B.E. retired after 2 years and as of July, 1977, the post was taken over by the present incumbent, Mr. Johan A. Elvenaes.

Progress reports were submitted to UNDP each 6 months covering the period up to 30.6.1978. The progress report covering the period January through April 1976 was included in a Terminal Report dated 16th April, 1976 which, together with an Addendum dated 27th May, 1977, covers the first 2 years of the project from July 1975 through June 1977. (Both reports were prepared by Mr. Eric Adams.)

Progress report covering the first year of the OPAS assignment from July 1978 through June 1979 was prepared on the request from the UNDP and submitted 8th July, 1979.

The present report is prepared on the request from UNDP contained in a letter dated 21st March, 1979 addressed to me and copied to UNIDO, Vienna and UNDP, New York (but not to the Government) and in accordance with guidelines for preparation of Terminal Report for project BAH/73/012 (OPAS) contained in a memorandum from UNDP addressed to me dated 22nd March, 1979 and copied to UNIDO, Vienna. Since the memorandum is also not copied to the Government, a photocopy is contained in this report in Appendix 1.

1.2. GENERAL INFORMATION ABOUT BAHRAIN

Ever since oil was discovered in Bahrain in the early 1930's oil has been the mainstay of its economy.

In the mid-1960's the Government started a vigorous policy of economic diversification which has contributed to rapid expansion of the non-oil sector.

The overall results of this policy may appear from table 1 below: (In millions of BD at current market prices.)

	<u>1970</u>	<u>1973</u>	<u>1977</u>
Total Gross Domestic Product	115.4	147.1	655.3
Out of which:			
Oil (Mining)	30.1	43.7	193.0
Oil refining	57.4	13.4	32.2
<hr/>			
Total for the oil sector	87.5	57.3	225.2
By % of total GDP.	75.8%	39.0%	34.4%
<hr/>			

It appears that even with the quadrupling of oil prices after 1973, the oil sector's relative importance of the total gross domestic product is steadily decreasing.

Sources: For 1970 Report dated 28th December, 1973, International Bank for Reconstruction and Development.

For 1973 and 1977 Report dated 28th June, 1978, from World Bank table 2.1.

As for the future, the on-shore oil production is expected to continue its decline which, under the most favourable circumstances, will be compensated by an increase from the off-shore field which Bahrain jointly operates with Saudi Arabia.

Therefore, continuous growth of the economy of Bahrain depends on a further acceleration of the economic diversification.

Additional information about Bahrain will appear from the "Country Data" included in Appendix 2 (extracted from the World Bank Report dated 28th June, 1978).

1.3 INSTITUTIONAL FRAMEWORK FOR THE PROJECT

At the time when the Project Document was signed, 11th November, 1974, the project was meant to be connected to the Department of Commerce and Industry of the Ministry of Finance and National Economy.

The only industrial area under the responsibility of this Department was the Mina Sulman Industrial Estate and the immediate objectives of the project were defined on that basis.

Later, in 1975, the Ministry of Development and Industry was created and took over the responsibility of all the industrial areas including the development of North Sitra. (The other areas were taken over from the then existing Ministry of Municipality and Agriculture.)

Table 2 below lists the areas which were put under the control of the Ministry of Development and Industry. Also the year when they became - or are scheduled to become - operational is given together with the type of activity for which each area is designated.

Area	Size in Hectares	Type of Activity	Year Operational	Map ref
Mina Sulman Industrial Estate	75	Factories and Warehousing	1966	-
Kasserat	84	Heavy Industry (Stone crushing)	1975	H
Dawar Sitra	10	Warehousing	1976	F
Maamer	71	Mixed Heavy and light Industry	1976	D
South Alba	33	Heavy Industry	1977	G
North of Refinery	28	Warehousing	1977	E
Umm Al-Hassam	10	Light Industry	1980*	A
North Sitra	191	General Industry and Warehousing	1980*	B
South of Hidd	800	General Industry	Late 1980's	C

* According to schedules.

A map sketch is included in Appendix 7.

1.4 LONG RANGE OBJECTIVES OF THE PROJECT

The long range objectives of the project are expressed in the Project Document as follows:-

Quote:

"Long-range objectives

At present, the national economy of Bahrain is heavily dependent on crude oil and natural gas, although estimated oil resources of Bahrain are limited. A diversification of the economy through industry will help reduce the dependence on oil and natural gas and will, at the same time, create employment opportunities. The Project will assist the Government in realizing this long-range project."

Unquote

1.5 IMMEDIATE OBJECTIVES OF THE PROJECT

The changes in the "Institutional Framework" and the corresponding increase in workload and responsibility for the Ministry and hence also for the project resulted in the emphasis being moved - by the Government - from

a.

Establishing a management function at Mina Sulman

to

b.

Assisting in development and planning of a complex of industrial areas (listed in table 2) where the North Sitra Project was the most important.

This was reported by Mr. Adams as well as by myself. The changes however were never reflected in the Project Document - not even when the project was extended. (Revisions included budgets only.) It must be assumed, however, that the changes had the approval of UNDP as well as UNIDO since no comments were made.

In a memorandum from me dated 25th April, 1979 addressed to Mr. Butaev, Director of Industrial Operations Divisions, UNIDO, Vienna and copied to the Government and to UNDP, Bahrain, I included the following:

If the immediate objectives contained in the original Project Document were generally maintained, and at the same time reflecting the changes which have actually been made, I believe the immediate objectives of the project should be expressed as follows:

1. To assist in planning the development of the industrial areas controlled by the Ministry of Development and Industry. The ongoing project at North Sitra is to be given priority.
2. Assist in obtaining external and internal financing as required.
3. Assist in promoting small/medium scale industries to become established and also formulating recommendations on appropriate policies and programmes for the promotion of small/medium scale industries.
4. Assist the Government in managing and operating the industrial areas under the control of the Ministry of Development and Industry, including the Mina Sulman area.
5. Training of national staff by on-the-job training.
6. Identifying any further technical assistance requirements.

For easy reference and comparison, a photocopy of page 6 of the original Project Document containing the Immediate Objectives of the project is included as Appendix 3.

Comment

It appears that the immediate objectives as expressed above represent a considerable expansion and broadening of the immediate objectives as compared with those contained in the original project document.

The main additions are:

- a. Assistance in planning and developing a complex of industrial areas, including assistance in obtaining external and internal financing, and where North Sitra is the most important.

- b. Assistance in "Managing and Operating" has been expanded from the Mina Sulman Industrial Area only to include a total of nine industrial areas. (Including the 'new' areas North Sitra, Umm Al-Hassam and South of Hidd.)
- c. The training component is highly effective.
(Discussion in detail is contained in section 2.7 page 32).

1.6 RESOURCES, PRIORITIES

While the immediate objectives of the project in effect have been expanded, a corresponding increase in the resources available has not been made.

This applies to "Government input" as well as "UNDP input" (as they are described in the project document).

The section within the Ministry of Development and Industry dealing directly with small scale industries and industrial estates has always been very small. For most of the duration of the project it has contained 4 people only, the superintendent and 2-3 estate inspectors.

In addition to this, however, the Ministry has engaged consultants. (In this connection assistance from UNIDO was proposed and also considered.)

Also an adviser from US-AID was engaged for a period of 2 years, up to early 1979. (Also this post was originally proposed and accepted as an enlarging and strengthening of the project. Eventually, however, the Ministry accepted an offer from US-AID as being much cheaper - and quicker - than from the UNDP.)

The adviser from US-AID took over from the project the responsibility of achieving "objective No. 3", as described above, while priority for the project was given by the Government as follows:

1. To assist in the planning and development of the North Sitra Project.
2. To assist in obtaining external and internal financing for the North Sitra Project.

1.7 THE LOGIC OF THE PROJECT

1.7.1 Industrial Land in Bahrain

The capital intensive industries (such as BAPCO, ASRY, ALBA and the new Power Station) are usually located according to the strict requirements of the industry, each of which has reserved land for their own expansion.

On the privately owned market there is very little land available for purchase or immediate rental for people wishing to set up new enterprises or for the expansion of existing enterprises.

This was the reason for the Government to acquire the areas listed in table 2, which are reserved for industrial use only.

The following should be noted: (Please refer to table 2)

With the exception of Mina Sulman (where no more land is available) none of the listed areas which are operational today are:

- designated (or suitable) for location of light or medium industries.
- designated (or suitable) for industrial free zones.

In addition to North Sitra, the following areas are planned for future industrial use:

Umm Al-Hassam

The area is scheduled to be ready for leasing of plots in early 1980.

Note: The working conditions of many of the small workshops and industries presently located in the Suk (the market area) are far from satisfactory. They are often without possibility for expansion and are therefore crowded. Access is often difficult and creates traffic problems. The Government has, therefore, decided to try to encourage these industries to relocate. Umm Al-Hassam is earmarked for this and priority will be given therefore to industries which are now located in the Suk.

South of Hidd

This area is planned for future expansion of industrial areas (possibly in the late 1980's). No major activity is scheduled to take place during the next few years.

1.7.2 Brief description of the background of the North Sitra Project

When the policy of promoting your own industry and encouraging foreign companies to become established in Bahrain started to give results (in the early 1960's) it also created a need for industrial land, in particular by the offshore companies, export oriented companies and other companies who required easy access to port facilities and/or in combination with an industrial free zone.

To meet this demand, in the early 1960's, the Government allocated an area of shallow water at Mina Sulman as an Industrial Area. The tenant, however, would not only have to reclaim his own land but also part of the land required for the roads. In spite of this, by the late 1960's there was no more "land" available at Mina Sulman.

The result met (and perhaps even surpassed) expectations.

The arrangement where the tenants reclaimed their own land gave considerable advantages in connection with the financing of the project.

However, it also followed that, on his own area, the tenant, to a great extent, would control his own activities and could - within given limits - proceed according to plans and schedules which would first of all take his own requirements into account. Obviously, such a situation represented an additional difficulty when it came to maintaining the overall control of the project.

In the early 1970's (when no more land was available at Mina Sulman) the causeway to Sitra Island had been opened giving easy access to Manama, and reclaiming of part of an area of shallow water located at the norther part of the island was in progress. (The area was reserved for the Power Station.)

The remaining part of this area would provide the same advantages for an industrial area as that of Mina Sulman. It was therefore decided to expand the reclamation in order to provide additional industrial land. At the same time, it was also decided (based on previous experience) that the Government should carry the cost of the reclamation and provide the infrastructure.

Further indications of the important of the North Sitra Project are given in section 3.2.4.

1.7.3 Indications of the scale (or magnitude) of the industrial operations of the Ministry of Development and Industry

a) Industrial areas which are controlled and managed by the Ministry.

From table 2 page 12, which lists the areas presently controlled by the Ministry it appears that:

- Six industrial areas are operational at present. These areas contain a total of about 300 hectares of land.
- Two additional areas with a total of about 200 hectares are scheduled to become operational during 1980.
- One area containing about 800 hectares is scheduled for development during the (late) 1980's.

The Ministry has the full responsibility for all of the areas, including all aspects of management and control. Hence also:

- Responsibility for the initial planning of the areas, including layouts, roads, water and power distribution, sewers, etc. The Ministry also has the overall responsibility for the construction of all the infrastructure elements.
- Responsibility for all activities in connection with the leasing of land including the legal aspects, land surveying of the plots to be leased, invoicing and control of payments, etc.
- Maintenance (including budgeting for maintenance).
- The day to day running of the Estates.

b) Income from the Industrial Estates.

The amount of money involved in an operation is usually considered as a good indication of its magnitude.

In this case indications are:

At the industrial areas which are operation today, land corresponding to an annual income of about BD 400,000 (U.S.\$ 1.05 million) has already been leased, out of which about BD 300,000 (U.S.\$ 790,000) is expected to be collected in 1980. (Infrastructure is not yet available to all of the plots.)

During the next 10 to 11 years the income from the industrial areas is expected to increase to more than BD 3 million per year (U.S.\$ 7.9 million).

c) Investments.

During the next 2 to 3 years a total of more than BD 12 million (U.S.\$ 36.1 million) is earmarked for investment in infrastructure at the industrial areas controlled by the Ministry.

d) Loans.

Financing of the North Sitra Proj ct has, to a great extent, been arranged by loans.

The total loans (including interest) is expected to reach a maximum of BD 16 million (U.S.\$ 42.1 million).

The loans have been arranged by the Ministry who are also responsible for the management of the loans, including installments for repayments.

Conclusion:

From the indications which have been given, it should appear clearly that the scale of industrial operations of the Ministry of Development and Industry is indeed formidable.

Since this also reflects the workload, responsibility and quality of work required from the adviser, it should be kept in mind when evaluating the project.

1.8 COMMENT IN CONNECTION WITH APPLICATION OF THE GIVEN GUIDELINES FOR REPORTING ON THIS PROJECT

Reference is made to the guidelines for preparing the Terminal Report for this Project (BAH/73/012 OFAS) which are contained in a memorandum addressed to the project adviser from UNDP dated 22nd March, 1979. (Please refer to Appendix 1.)

Note: The time limit given in the memorandum is no more up to date since the project was later extended by half a year.

According to the guidelines the Terminal Report should be prepared in such a way that it is always linked to the Project Document.

For example, the guidelines indicate that:

- Project activities are to be compared against schedules established in the Work Plan "or the latest revision thereof".
- Project results should be compared with immediate objectives as stated in the Project Document.

This report follows the given guidelines as closely as possible. It must be taken into account, however, that:

- The project document for this project is NOT up to date and has not been up to date for the last 3½ years or so.

- For this reason, the immediate objectives referred to are those given in this report in section 1.5 and also in section 1.6 where the objectives which the Government gave the project priority are stated.

The long range objective as set out in the Project Document (to assist the Government in diversifying the economy of the country by industrialisation) is, of course, valid.

PART 2
ACTIVITIES CARRIED OUT AND OUTPUT PRODUCED.

2.0 BRIEF DESCRIPTION OF THE GENERAL WORKING PROCEDURES WHICH HAVE BEEN ADOPTED

It is obvious that for a project advising the Government on high levels where large investments are involved, guidelines for the project come from top levels in the Ministry.

Consequently, requests for studies, reports, etc. in many cases have come directly from H.E. Yousuf Shirawi, Minister for Development and Industry or from the Assistant Under-Secretary, Sheikh Khalifa bin Sulman Al-Khalifa.

More common however, the initiative has been taken by the Director of Industry, the Superintendent of Small Scale Industries and Industrial Estates or by the project itself. (According to the work plan as given in Progress Reports.)

Co-operation with the Ministry has been very close at all levels. In particular should be mentioned the following:

Mr. Aziz Mirza, Director of Industry.
Mr. Yousuf Al-Khaja, Superintendent of Small Scale Industries and Industrial Estates.
Dr. Jassim Al-Mannai, Head of Industrial Development Unit.

The work to be done has usually been discussed informally with the "team" mentioned above. Also reports, memoranda, etc. have in general been presented as more or less informal drafts before the final work has been completed and submitted.

The co-operation, although very close, has been very informal. Therefore, the working procedures indicated above are not at all guidelines which have been laid down by the Ministry. It is the way the adviser (or rather perhaps the way the present adviser) has preferred to work and which, I believe, has been appreciated by the Ministry.

From the adviser's point of view, this teamwork has proved extremely useful. Among the benefits should be mentioned:

- In carrying out the work, it has been possible to draw on the thinking and the ideas from several highly qualified people in high positions.
- It has given an assurance that the work which has been presented has been in line with the general policies of the Government and that it conforms with local conditions and customs. (None of which a foreign adviser may always be aware of fully.)
- In most cases the points of view which have been presented in the different reports, papers, etc. are well known in advance, and usually accepted by the "team" before they are submitted.

It should be emphasised that the general procedures indicated have not prevented the adviser from expressing his own point of view even if they have not been "sold" in advance, in cases where it has been felt that it should have been done.

From this follows that two important reservations should be taken into consideration in order to avoid misunderstandings:

1. The adviser can NOT claim credit for the contents of the different papers, reports, etc. which have been submitted, since they are a result of teamwork. He can only claim the responsibility.

2. Important decisions are, of course, taken at the highest level of the Ministry. It should be emphasised that even if decisions confirm the advice given by the "project" the decisions have NOT necessarily been influenced by the work done by the "project". (If so, it is known only to the Ministry.)

2.1 ASSISTANCE IN PLANNING THE DEVELOPMENT OF THE NORTH SITRA INDUSTRIAL ESTATE

Please note:

1. This objective was not included in the original Project Document.
2. The task was given the highest priority by the Government.

Project Activities

A total of more than 45 papers in the form of memoranda, studies, reports, etc. have been prepared by the project and submitted to the Ministry in connection with the North Sitra project. (Several of these papers are indeed substantial and comprehensive works.) Project activities have included:

In late 1975 the project submitted a proposal for revision of the then existing layout together with cash flow projections. This was preliminary work based on such information as was available at that time. The proposal was accepted in principle.

In September, 1977 a memorandum was submitted strongly recommending the assignment of consultants to prepare a master plan for the area.

After it was decided to employ consultants, the project participated in drafting terms of reference, making an assessment of the proposals from the different consulting companies, recommending a shortlist of companies, redrafting terms of reference, interviewing the consultants and writing a report to the Ministry recommending the company to carry out the work. (Dar Al-Handasah Consultants, Beirut, were selected, having been strongly recommended by the Ministry of Housing.)

The consultants started work in early 1978. The Draft Final Report dated April, 1978 was the result of 39 man months of professional staff, (including architects, civil engineers, specialists in water distribution, sewers, harbour engineering, power engineers, economists and accountants, financial experts, etc.) and in addition to this secretarial staff, draftsmen, access to computers, etc.

(Obviously a one man project from UNIDO could not have undertaken this job.)

During the consultants' field work, the project participated heavily, particularly as a connecting link between the Ministry and the consultants. In addition should be mentioned participation in several large meetings conducted by H.E. Yousuf Shirawi, the Minister, or the Under-Secretary, Sheikh Khalifa. The meetings consisted of representatives from other Ministries and Authorities concerned at high levels. At the meetings not only were points of view expressed, but far reaching decisions were made. The project was entrusted with the task of preparing minutes

and reports from the meetings. It was, of course, of utmost importance that points of view expressed at such high levels (Ministers and Under-Secretaries, also from other Ministries) were correctly expressed and in particular that decisions were precisely recorded.

After the consultants' draft final report was received, the project prepared a report giving an assessment of the report, including specifying the remaining work to be done by the Consultants - according to the terms of reference.

Parts of the work done by the consultants were not considered to be up to standard. Therefore the project laid down a considerable amount of effort to correct and complete the work done by the consultants. (When the final report was received in March, 1979 large parts of the draft report had been changed. The changes very much reflected the points of view and comments made by the project. This is also stated in the consultants' report.)

Before the consultants' final report was received, however, Finance Institutions insisted that the work done by Dar Al-Handasah Consultants should be reviewed by other consultants. (Please see below under "Factors which significantly impeded the implementation".)

The project followed up the dredging/reclaiming all the time. It participated in numerous meetings and prepared several papers and memoranda in this connection. When the dredging was completed, the project prepared a "Final Report". (It was mainly based on maps in large scale from the quantity surveyors, certificates issued each month of the amount of land reclaimed and preliminary results from hydrographical surveying.)

When the Government decided that the existing Mina Sulman Port should be expanded and that it should also include RO-RO facilities instead of at North Sitra as originally anticipated, the plans for development of the port at North Sitra came into a completely different light. It would be reasonable to assume that the port at North Sitra would be limited to serve the tenant at North Sitra only. The project submitted a strong memorandum suggesting NOT to make ANY investments in port facilities until the need had been proved or could be clearly foreseen. (At a meeting shortly afterwards H.E. The Minister stated that the Government had decided that for the time being no investments should be made in port facilities but that a plot with seafront should be reserved for the purpose.)

The project also submitted a memorandum advising the engagement of consultants to prepare technical specifications for a dock wall. The idea was to include the specifications in the lease agreement for the tenants leasing the land with seafront. (Quotations from consultants were obtained.)

Factors which significantly impeded the implementation

a) Landsurveying

Until the national grid system was established in Bahrain, the different land surveying companies used different grid systems for their co-ordinates. Land surveying at North Sitra had been done by different companies and the resulting maps were erroneous.

The project was fully aware of this, and proper mapping was included as the first task in the terms of reference for the consultants. Dar Al-Handasah, however, never carried out this task.

The fact that Dar Al-Handasah based all their work on maps which often contained large errors influenced almost all of their results.

The project pointed this out strongly, verbally as well as in writing, but to no effect.

The project therefore had to carry out a considerable amount of trigonometrical calculations. (Which are always very time consuming.) This resulted in corrections to the layout and hence also to the area available for leasing (which is the basis for the income side of all economical considerations.) Also the lengths of roads, sewers, waterpipes, etc. had to be corrected (which again resulted in corrections in the cost estimates).

b) Predictions for demands for land

The results of the demand analysis for land contained in Dar Al-Handasah's report could not be accepted by the Ministry. This was mainly based on a practical, but thorough knowledge of local conditions and likely demands for land.

This resulted in a critical and thorough examination of the basic material contained in the report. This combined with additional information resulted in revised estimates for demands for land. (Which, of course, resulted in a different schedule for the estimates for income and hence the requirements for financing.)

c) Conclusion

It will appear that major parts of the consultant's report had to be changed.

As a result, the Financial Studies prepared by the project (please refer to section 2.2) often contained major differences as compared to the report prepared by the consultants.

It was therefore understandable that Finance Institutions insisted that Dar Al-Handasah's report should be reviewed.

Note: When the results of the review were received, it appeared that the corrections made by the project were confirmed almost to the letter. (Although sometimes based on different criteria and additional information.)

Results (The Present Situation)

Reclaiming of the area, which started in August, 1975, was completed (nearly on schedule) in February, 1979. A total area of 19.5 million sq. ft. of land was reclaimed. This

together with areas previously reclaimed made a total area of 191 hectares of land available for industrial development.

The revised Master Plan, which is approved as far as CAN be approved at this stage, contains as the main items:

- Site layout with road and traffic network, plans for power and water distribution (including the transformers and pumping stations) sewers, etc. and also the limits for the custom free zone.
- Sketches and preliminary technical specifications for all infrastructure components, including diameters and specifications for pipes for water and sewage, capacities of the pumping stations, for the transformers, cross sections of the roads, sketches of the buildings for administration (fire, customs, office, canteen, medical, etc.)
- Economic and financial analyses based on thorough demand analyses and cost estimates which take the preliminary technical specifications into account.
- Complete setting out plans where all the co-ordinates are given in the National Grid System. (Director of Industry decided to employ consultants to get the work done rather than waiting for the National Survey Directorate.)
- Complete hydrographical survey of all approach channels and maps for navigation.

Several plots have been leased, including one plot with seafront. A jetty has been constructed at this plot and ocean going ships are received regularly.

As a whole, however, the North Sitra Project IS by now behind schedule (in December, 1979).

2.2 ASSISTANCE IN OBTAINING EXTERNAL AND INTERNAL FINANCING FOR NORTH SITRA

General Background Information

North Sitra is in a very special situation since most of the costs of reclamation and on-site infrastructure are NOT financed from the State Budgets.

It is basically financed as a commercial enterprise by loans taken up by the Ministry of Development and Industry, with relatively minor contributions from the State Budgets.

Costs of off-site infrastructure are - or will be - included in the ordinary budgets.

At the time when the project became involved in the financing of North Sitra, the following arrangements had been made (in 1977):

The Ministry of Development and Industry had established an overdraft with The National Bank of Bahrain (NBB). The invoices from the dredging company were charged to this account.

No arrangements had been made for the financing of the infrastructure.

Work Done

Out of the total of more than 45 papers submitted by the project to the Ministry in connection with North Sitra, about 20 are dealing directly with financing. Out of those, two were submitted by Mr. Adams. Of the remaining 18, 14 were submitted after the post was changed into an OPAS post.

Papers in connection with financing submitted in 1976 and 1977 may be considered as mainly preliminary cash flow projections, based on such approximate data as was available at that time. They were to a great extent utilised in connection with the follow-up from The National Bank of Bahrain.

The economic analysis contained in the consultants' report mainly concentrated on estimating the "internal rate of return" of investments which are charged to the North Sitra Project - and which (at that time) were not always clearly defined.

If the internal rate of return was higher than the cost of borrowing money, the project was considered as being profitable.

Since further conditions in connection with financing were not known, this was as far as the consultants COULD go.

The conclusion, also confirmed by the review, was that except for the most pessimistic alternatives, the North Sitra Project was considered as being profitable.

When the time came to provide financing for the infrastructure (which of course had to be co-ordinated with the existing arrangements for financing the reclamation work) the work done by the consultants was certainly useful, but far from sufficient. More extensive studies were required.

This work included:

- The work done by the consultants had to be corrected. (Please refer to section 2.1 under the heading "Factors which significantly impeded the implementation").
- Guidelines were received from the Government. These included:
 - Lists of those cost elements which should be carried out by the North Sitra Project (i.e. on-site infrastructure).
 - Assumptions for conditions for the loans, i.e. interest rates as well as conditions for repayment.

From these and other assumptions the future requirements for financing were calculated on a time basis, together with the corresponding cash flow projections.

With different assumptions for how the loans could be arranged, and as better data became available, the financial studies had to be revised.

In addition, precise summaries containing only the most essential information as well as the conclusions, were prepared on the request of H.E. The Minister of Development and Industry.

Also in connection with assistance for arranging financing a separate study was prepared by the project aiming at finding indications of the future impact of the North Sitra Project on the overall economy of Bahrain. The study was mainly based on statistics contained in the World Bank Report dated 28th June, 1978.

The studies were utilised by the Ministry in connection with negotiations with the National Bank of Bahrain as well as with different Finance Institutions.

The project participated in several meetings at "working level" with representatives from the National Bank of Bahrain and with representatives of Finance Institutions. The task of keeping the minutes and also preparing reports from the meeting was usually entrusted to the project.

Results

Agreements have been reached with the National Bank of Bahrain and the Kuwaiti Fund of financing of the North Sitra Project. Funds will also become available over the ordinary budgets.

The details of the arrangements are contained in other papers submitted to the Ministry and will not be included in this report. In order to give some indications of the amount of financing required, however, the following figures may be of interest:

The total development costs are estimated by the consultants as BD 43 million (U.S.\$ 113.2). This includes on-site as well as off-site infrastructure and is to be spread over 10 to 15 years. (Given in 1977 year prices).

The cost estimates for those cost elements which are to be carried by the North Sitra Project and for which financing has been found are:

Cost of reclaiming	BD	8.0 million	(U.S.\$	21.1 million)
Cost of infrastructure	BD	9.4 million	(U.S.\$	24.7 million)
<hr/>				
Total		BD 17.4 million	(U.S.\$	45.8 million)

Note: The cost estimates given above include the cost of borrowing money. They are inflated for 10% annual inflation.

2.3 ASSISTANCE IN PLANNING THE DEVELOPMENT OF OTHER INDUSTRIAL AREAS UNDER THE CONTROL OF THE MINISTRY OF DEVELOPMENT AND INDUSTRY

Comment

Reference is made to table 2 page 12 where all the industrial areas under the control of the Ministry are listed.

Work done, results (the present situation)

Umm Al-Hassam

Master Plan for the area was included in the terms of reference for the consultants.

After minor revisions, the plan was accepted by the Ministry as well as by other Authorities concerned.

Construction of infrastructure has started.

Note: Leasing of land has not yet started. The reason is that the Ministry would like to encourage the small scale industries presently located in the Suk (the market area) to relocate to Umm Al-Hassam. These industries are to be given priority for available plots.

South of Hidd

With the exception of the area occupied by the causeway to the Dry Dock (ASRY) and a cement plant, this large area of about 800 hectares is not yet reclaimed.

The area is first of all designated for development during the mid or late 1980's.

It has been anticipated, however, that companies may wish to become established in Bahrain, but that available land (e.g. at North Sitra) may not be suitable. If so, the Ministry may allow them to be located at the South of Hidd but they will have to reclaim the required area themselves. In that case allocation and reclamation will have to be done according to plan.

In order to keep this option open, initial planning of the area, mainly including the layout, was included in the terms of reference given to the consultants.

Mina Sulman Industrial Estate

As will appear from table 2, this Estate became operational in 1966, long before this project was even considered. Immediate objectives of the project according to the original Project Document, however, were mainly related to this Estate.

The first incumbent in the post, Mr. E. Adams, prepared a full report on this Estate, including suggestions for road and traffic plans, limits of the custom free zone with positions for fences, the management aspect, etc.

By today (December, 1979) the fence has been erected and large parts of the traffic plan implemented.

South Alba Estate

A plan for the layout together with cash flow projections were submitted by Mr. Adams.

The plan for the layout was accepted and has been implemented. The Estate became operational in 1977.

Other Industrial Areas

These are Kassarat, Dawar Sitra, Maamer and North of the Refinery. They have all been planned by the Public Works Department.

Note: The Askar Road Estate was planned by Mr. Adams. Initially the plans were accepted. Later, however, it was decided not to develop this area as an Industrial Area. (As far as I know, this was also recommended by Mr. Adams.)

2.4 ASSISTANCE AIMING AT ESTABLISHING A MANAGEMENT FUNCTION AT MINA SULMAN, LATER EXPANDED TO INCLUDE ASSISTING IN ESTABLISHING MANAGEMENT CONTROL OF ALL THE INDUSTRIAL AREAS UNDER THE MINISTRY

Project Activities - Results - The present situation

During 1975 and 1976, several papers were submitted by the project making suggestions in connection with establishing a management function at Mina Sulman. The papers included a report entitled "Management of Mina Sulman Estate". (This was spelled out as one of the immediate objectives in the original Project Document.)

As suggested, in 1977 a manager's office was established at the Estate, but the manager resigned after a few months in office.

At that time however, the aspect of management control was not just restricted to management of the Mina Sulman Estate only, but included the complex of industrial areas listed in table 2.

As a practical, but temporary solution, the Ministry decided to carry out the management of all the industrial areas through the Superintendent of Small Scale Industries and Industrial Estates, assisted by two or three "Estate Inspectors".

In another development, Mr. Adams wrote several papers strongly recommending the creation of an Industrial Development Corporation. He saw such an autonomous body, not only as the solution to the management aspect, but also as a necessary "vehicle" for creating and implementing policies for development of small and medium scale industries.

(For details please refer to Mr. Adams' Terminal Report and Addendum, submitted in 1976 and 1977.)

Apparently, at the beginning, it was anticipated that the Corporation would be created.

(In this connection, Mr. Adams in co-operation with the Ministry and UNDP (SIDFA) made preparations for enlarging and expanding the UNDP project to include three experts. The main objectives would be to assist in getting the Corporation started and to train Bahraini Nationals to take over. This would also include training abroad.)

Eventually, however, it was decided NOT to create the Corporation, at least not for the time being.

(Hence, also the idea of expanding the project had to be postponed for the time being.)

Every progress report since July 1977 mentions the management aspect. (More important, however, I knew that the Ministry was as much, or more, aware of the management aspect than I was.)

As soon as the financing of the North Sitra Project was arranged, the Ministry took two important steps which have been approved:

1. A "Board of Directors" is to be appointed. (The members of the Board have not yet been named.) It will assume the overall responsibility for the implementation of the investment programme of North Sitra. The Board will consist of representatives at high levels from the other Ministries and Authorities concerned under the chairmanship of the Ministry of Development and Industry.
2. The section for Small Scale Industries and Industrial Estates is to be reorganised as a Directorate. The present Superintendent has been appointed as the Director and several new posts have been approved, including a technical unit and accounting department. The new Directorate will assume the responsibility of all aspects of management and control of all of the industrial areas.

A photocopy of the approved organisation chart is included in Appendix 4.

Note: According to my information, the idea of an Industrial Development Corporation may still not be given up. I have understood that in case the need is still felt, and if it is believed to be practical, the new Directorate may be reorganised again to form the nucleus of the Corporation.

2.5 ASSISTANCE IN PROMOTING SMALL/MEDIUM SCALE INDUSTRIES

From the Progress reports, it will appear that Mr. Adams submitted several papers in this connection. (During 1975 and 1976).

Also the present adviser has contributed, but mainly during the first half year in the post, and mainly by assessing and giving comments on applications from enterprises applying for a licence to become established.

As the North Sitra project has to be given more and more attention, the adviser from U.S. AID took over this part of the assignment.

(As mentioned, this post was originally meant as an expansion of the project.)

The project, however, at all times had very close relations with the U.S. adviser and participated on an informal basis, mainly in connection with the technical aspects.

The Ministry also assigned international consultants who prepared extensive feasibility studies for different alternatives for several types of industries.

Hence the direct contribution from the projects to this objective is relatively modest, in particular considering the total efforts from the Ministry in this field.

During the period that the project has been operational a large number of small/medium scale industries have been established and existing industries have expanded.

Since the contribution of the project has been relatively modest I have not obtained any lists indicating the actual number and types of industries which have become established. In section 3.2 however, I have given indications of how far the Country has reached towards its objective of diversifying its economy from its dependence on oil.

2.6 GENERAL ASSISTANCE REQUESTED BY THE MINISTRY
ALSO INCLUDED RESULTS ACHIEVED BY THE MINISTRY WITH LITTLE
OR NO ASSISTANCE FROM THE PROJECT

Project Activities - Results - The present situation

INDUSTRIAL INFORMATION RECORDS

In Bahrain - like most countries which have recently started industrialisation - lack of reliable industrial records and statistics represent a serious handicap to industrial planning, policy decisions, etc.

A card system for recording the information contained in the application together with other information from different sources was suggested by Mr. Adams. The suggestion was accepted. The necessary cards (translated into Arabic) were printed and the cabinets were bought. Unfortunately, due to lack of personnel, the system was never followed up.

Mr. Adams also produced an Industrial Directory listing as far as was known all the industrial enterprises established in Bahrain together with available information about products, employees, etc. The Directory was published in an Arabic as well as an English version.

In another development, the Ministry accepted an offer from UNIDO to assist in creating an Industrial Information System. The assistance was offered in the form of a short term assignment. So far, none of the proposed candidates for the post have been accepted by the Government.

LEGAL DOCUMENTS

The application forms for allocation of land as well as for permission to start an industrial enterprise, were initially drafted by the project. They were later revised, also by the project, in close co-operation with the Ministry and submitted to the Legal Section for approval. The forms have been translated into Arabic and are presently in use.

METRIFICATION

A paper entitled "Metrification Study & Prog:Planning" was submitted by Mr. Adams. He also assisted the Ministry in recruiting an adviser.

Apart from the modest assistance indicated above, the programme and its implementation has been conducted by the Director of Industry. Step by step Bahrain has "gone metric" and at the end of 1979 very few units (if any) remain for metrification.

ASSAY OFFICE

Also the Assay Office has been established without assistance from the project. Under the direction of the Director of Industry the office was established, personnel recruited and trained (abroad).

Today, the Office is organised under the Ministry of Development and Industry and is fully operational.

SILTING OF THE INTAKE CHANNELS FOR COOLING WATER FOR THE (LARGE) POWER/DESALINATION PLANT AT NORTH SITRA

Silting of the intake channels has been a problem for years, and the Power Plant claimed that this was caused by the dredging activities in connection with the reclaiming of the area at North Sitra and for which the Ministry of Development and Industry was responsible.

The project has prepared numerous papers in this connection (several of which are highly technical) and participated in several meetings. Also, after the post became an OPAS post, the project represented the Ministry on a committee which was set up to solve the problem.

The final result was that the channels were redredged. Equally important perhaps from the Ministry's point of view, it was acknowledged that the Ministry could not be held responsible for the silting problems.

POLLUTION PROBLEMS

The large petroleum refinery in Bahrain (BAPCO) submitted a complaint to the Ministry about pollution caused by plants producing asphalt. (They were located not so far from the refinery.)

The asphalt companies were interviewed and the information received included technical specifications for the machinery and equipment. From this, the amount of pollution which was released through the chimneys in the form of dust and products of combustion was estimated (calculated). The results were presented in a report.

Note: The calculation of the amount of pollution was never meant as anything but a rough estimate in order to get an idea of the magnitude of the problem. Actual measurements, which were later carried out by BAPCO, showed that the amount estimated by the project was surprisingly accurate.

The report prepared by the project - together with additional data and information supplied by BAPCO - was discussed at a meeting where the project participated.

Later, a committee was established to deal with the problem. The project did not have time to participate and was never requested to do so.

2.7 COMMENTS IN CONNECTION WITH IMPLEMENTATION OF THE TRAINING COMPONENT INCLUDED AS ONE OF THE IMMEDIATE OBJECTIVES IN THE ORIGINAL PROJECT DOCUMENT

The following is an excerpt from a memorandum from me to UNDP dated 11th April, 1979 on the subject "Points of view on the justification of extension of the project No. BAH/73/012".

Quote:

On several occasions the UNDP has expressed its concern for the training component which is contained in the immediate objectives of the project document.

Therefore, I feel that some comments could be useful.

- a) Immediate objective iii) calls for training of national staff on the management and operation of industrial areas.

But when the Government moved the emphasis of the project from the establishment of a management function at Mina Sulman to assistance in development of an industrial complex comprising several Industrial Estates, then also the training aspect had to be affected.

It would suggest that training then also should be moved from management of Mina Sulman into training in developing the industrial complex.

This, however, is indeed quite another task!

- b) It should be emphasised that by changing the priorities as mentioned above, a very important change in the position of the project followed:

- From handling matters mainly of interest on "middle management level" the project started working on top levels in the Ministry.

- c) For training on management and operation of an industrial area like Mina Sulman, counterparts for example just graduating from technical college would be suitable.

This however was not the case when the project started working on top levels in the Ministry.

In order to benefit from "on the job training" the project would require a counterpart with a broad background at senior management level.

Such people however are not readily available.

Therefore, I can only agree with the Ministry when they insist that through the very close co-operation with top level officials in the Ministry, the training aspect has been taken care of as far as is possible in practice.

Unquote.

As a further indication of what may be the views of the Ministry in this connection, I would like to include the following: (Also and excerpt from one of the papers submitted to the Ministry.)

Quote:

During the visit of a representative from a Finance Institution (3-9 October 1979) the practical implementation of the construction phase of the North Sitra Project was discussed. In this connection my notes included the following:

- H.E. The Minister of Development and Industry stated that professional at senior levels were scarce in Bahrain.

Therefore, for the time being Bahrain depends to a great extent on expatriates for such posts.

He also stated that for the construction phase of the North Sitra Project it was easier to utilize expatriate professionals than in many other positions. The reason is that when the construction phase is completed, the expatriates are automatically phased out.

Unquote.

Although this was expressed in connection with the construction phase (where large amounts of money are directly involved) it would be reasonable to assume that it applies ever more to the planning phase.

Hence indications are that when the Ministry has not emphasised the training component of the project more than is mentioned above, it seems to be the result of a deliberate policy from the Ministry's side.

Within these limits however, and in connection with "on the job training" please refer to section 2.0 "Brief description of the general working procedures which have been adopted".

(Note: If the other members of the team have learned as much from me as I have learned from them, I would state that the "on the job training" has been most efficient.)

2.8 SUMMARY OF MAJOR ACTIVITIES WHERE THE PROJECT HAS MADE DIRECT CONTRIBUTION

The table below shows in a schematic way and without any details the areas where the project has made its major contributions. It is meant as a summary only:

Year	Project Year No.	Area of Major Activities	Adviser
1975			
1976	1	In connection with Mina Sulman Industrial Estate. (According to project document).	E. Adams
1977	2	Planning of industrial areas in general. Preliminary planning of North Sitra.	E. Adams
1978	3	Detailed planning of North Sitra	J.A. Elvenaes
1979	4	Detailed planning of North Sitra Assistance in obtaining finance	J.A. Elvenaes
		Assistance in obtaining finance.	J.A. Elvenaes

PART 3
ACHIEVEMENT OF OBJECTIVES

7-2-2

3.1 ACHIEVEMENT OF IMMEDIATE OBJECTIVES

3.1.1 Reservations

In accordance with the guidelines prepared by UNDP for me for the Terminal Report for this project, part 3 of the report should state achievement of objectives. It is therefore given below.

This should NOT be taken as an indication that the "Project" claims the credit for those achievements.

(A comment in this connection is contained in part 4.)

The immediate objectives referred to are those contained in section 1.5 of this report (page 13) and NOT in the original Project Document.

3.1.2 Achievements

- a) Reference is made to section 1.6 (page 14) where it is stated that the Government gave priority to the following two objectives:
- i) To assist in planning the development of the North Sitra Project.
 - ii) To assist in obtaining external and internal financing for the North Sitra Project.

Both of these objectives have been achieved.

Details are given in sections 2.1 and 2.2 respectively.

- b) Assistance in developing the other Industrial Areas under the Ministry of Development and Industry.

Reference is made to the list of Industrial Areas under the the Ministry contained in section 1.3 (page 12). It will appear that out of a total of 9 industrial areas:

- 5 industrial areas - Kassarat, Dawar Sitra, Maamer, South Alba and North Refinery, with a total area of 226 hectares - became operational during the period 1975 to 1977.
- 2 areas - North Sitra and Umm Al-Hassam with a total area of 201 hectares - are planned in detail and are scheduled to become operational during 1980.
- 1 area - South of Hidd with a total area of about 800 hectares - is scheduled for development during the mid-late 1980's. It is planned as far as is possible at this stage.
- 1 area - the Mina Sulman Industrial Estate with an area of 75 hectares - was operational in 1966. Considerable improvements have been made to this area during the last few years.

Hence also this objective has been achieved.

Details are given in section 2.3.

- c) Assistance aiming at establishing a management function at Mina Sulman Industrial Estate, later expanded to include assistance in establishing management control of all of the industrial areas under the Ministry of Development and Industry.

It should be emphasised that during the period the project has been operational (July 1975 through 1979) the Ministry of Development and Industry has taken over a complex of industrial areas for management.

It should also be emphasised that out of a total of 6 areas which are operational today, 5 areas became operational in 1975 or later.

This should be sufficient indication to state:

- Management of the industrial areas under the control of the Ministry has been carried out satisfactorily, despite the small organisation.

As for the future however, the present organisation will not be sufficient. In this connection please refer to PART 5: FINDINGS and PART 6: RECOMMENDATIONS.

- d) Training of National staff by on-the-job training.

Reference is made to section 2.0 where the working procedures in the form of team-work are described, and also to section 2.7 which gives comments in connection with the training component of the project.

May I please repeat the main conclusion:

"Therefore, I can only agree with the Ministry when they insist that through the very close co-operation with top level officials in the Ministry, the training aspect has been taken care of as far as is possible in practice."

May I also repeat my note:

"If the members of the team have learned as much from me as I have learned from them, I would state that the on-the-job training has been most efficient."

- e) Identifying any further technical assistance requirements.

Reference is made to PART 5: FINDINGS and PART 6: RECOMMENDATIONS.

3.2 Indications of achievement of Long Rang Objective

3.2.1 Introduction

The guidelines received from UNDP for the Terminal Report from this Project, do not require any considerations on this topic.

Since the project has been in operation for 4½ years however, it is felt that it may be of interest to see indications of how far the Country has progressed towards the long range objective which is given in the Project Document, namely to diversify the economy from its dependence on oil.

Note 1: This study is mainly extractions from the study mentioned in section 2.1, "Indications of the future contribution of the NORTH SITRA PROJECT to the overall economy of Bahrain." (3 April, 1979).

Note 2: On request, the original study has been submitted to UNDP who are therefore also in possession of the details.

3.2.2 Indications of results achieved during the period 1973 - 1977

Reference is made to Appendix 5 (Page 1 and 2).

Page 1 contains an analysis of the contribution from the manufacturing Sector to the Gross Domestic Product (GDP) during the period 1973 to 1977. (Source - the World Bank Report dated 28 June 1978.) Graphical representations of the tables are shown in page 2 of Appendix 5.

Bearing in mind that the project is NOT involved in the large capital intensive industries such as Oil Refining, Aluminium, Ship Repairing (including ASRY), the group "Other Manufacturing" (in the table referred to) is of particular interest since the type of industries mentioned above are not included. Hence, "Other Manufacturing" represents mainly small/medium scale industries.

From the table it appears that the group "Other Manufacturing":

- Increased its contribution to the GDP from BD 13.2 million in 1973 to BD 59.9 million in 1977.
- Counted for 27.2% of the total contribution of the manufacturing sector in 1973, increasing to 52.0% in 1977.
- Increased its share of the total GDP from 3.04% in 1973 to 9.14% in 1977.

The conclusion is:

- The group "Other Manufacturing" (i.e. mainly small/medium scale industries) is playing an increasingly important part in achieving the long range objective of diversifying the Country's dependence on oil and natural gas.

(The figures given in Dinars are in constant 1977 Market Prices.)

3.2.3 Potential for future contribution from small/medium scale industries to the overall economy

In the study referred to the trends for the GDP and the Manufacturing Sector (including the sub sector Other Manufacturing) from the period 1973 to 1977 have been extrapolated into 1985.

Different alternatives for how to interpret the trends have been analysed. A graphical representation of the analysis (but not the text) has been extracted from the study and included in Appendix 6.

The analysis shows that, based on extrapolation of the trends for the period 1973 to 1977, indications are that the potential for contribution to the GDP from the small/medium scale industries is:

- Order of magnitude of the GDP in 1985 may be in the range of BD 1,300 million to BD 1,400 million, possibly closer to BD 1,300 million.
- The contribution of the Manufacturing sector may be in the range of BD 450 million or around 35% of the GDP.

- The contribution of the sub-sector "Other Manufacturing" (i.e. mainly small/medium scale industries) may be in the range of BD 140 million which would count for about 70% of the contribution of the Manufacturing Sector or about 24% of the total GDP. (As compared to 9.14% by 1977.)

(Note: If the growth rate for "Other Manufacturing" should continue to be the same from 1977 to 1985 as it was from 1973 to 1977, i.e. 45.95% as the average annual growth rate, then by 1985, the contribution of "Other Manufacturing" to the GDP would be about BD 1,233.5 million, which is in the range of the estimate of the total GDP for that year!)

The conclusion is:

- The small/medium scale industries have a potential for a substantial contribution towards achieving the long range objective of diversifying the Country's dependence on oil and natural gas.

(The figures are given in Dinars in constant 1977 Market Prices.)

3.2.4 The importance of the North Sitra Project as one of the preconditions for continuous growth of the small/medium scale industries

It should be emphasised that the rapid development of the Manufacturing Sector is the result of a deliberate and active Government policy.

As was foreseen, however, this policy would also result in a demand for industrial land, in particular land suitable for the location of small/medium scale industries and land with easy access to port facilities and a free zone.

The North Sitra Project was designed to meet this demand.

Note: In 1977 the amount of land available for light/medium industries was estimated as in the range of about 150 hectares. North Sitra will add a net area of about 125 hectares to this, mainly designated for leasing to this category of industry.

It is therefore hardly an exaggeration to state that the North Sitra Project is one of the most important preconditions for continuous expansion of the light to medium industries and hence for achieving the indicated future share of the Gross Domestic Product which is wanted and for which the potential exists.

This will also explain why the Government has insisted that the North Sitra Project should be given the highest priority.

PART 4
UTILISATION OF PROJECT RESULTS.

4.0 RESERVATION

Also this part of the report has been included in accordance with the guidelines from UNDP for the Terminal Report for this project.

4.1 COMMENTS IN CONNECTION WITH RESULTS FROM THE MAJOR CONTRIBUTION FROM THE PROJECT

As stated before, the main contributions of this project (at least during the last 2½ years) have been in connection with the planning and with the financing of North Sitra.

Most of what has been produced by the project has been submitted to the Ministry for approval and (or) decisions.

Because of the large amounts of money which have been involved in both of the areas where the project has contributed most, approvals have been made at top levels in the Ministry.

It is obvious that at this level considerations have been made which include factors far beyond the scope of this project.

Therefore, even if approvals or decisions are as suggested by the project, it is impossible for the project to know to what extent results presented by the project have been taken into account or if they have influenced decisions.

My conclusion, therefore, is:

- The degree of utilisation of project results is known ONLY BY THE MINISTRY.

4.2 INDICATIONS OF HOW THE MINISTRY MAY HAVE EVALUATED THE PROJECT

Having stated that the degree of utilisation of project results - at least within those areas where the project has contributed most - is known only by the Ministry, it may be of interest to consider such factors as may give an indication of the opinion of the Ministry.

In this connection I would like to record the following facts:

- The project was originally defined as a one year project, the first year of operation from July 1975 through June 1976.
- A one year extension was requested, from July 1976 through June 1977.
- When Mr. Adams left the project to retire, a further one year extension from July 1977 through June 1978 had been requested and the present incumbent in the post took over.
- Again the Ministry requested extension of "the services of Mr. Elvenaes" from July 1978 through June 1979. At the initiative from the UNDP however, the post was then changed into an OPAS Post.
- Early 1979, the Ministry requested extension again, from July 1979 through June 1980. The UNDP however found that the post could NOT be included in the country's programme. As a result the Government had to pay 100% of the costs. For budgetary reasons the project could only be extended by 6 months, i.e. through December, 1979.

- Therefore, in September/October 1979 the Ministry requested the project extended. UNDP however maintained its decision of NOT including the project in the Country's programme.

This resulted in the Government offering the adviser direct employment outside the UN.

(The adviser is presently (January 1980) continuing the project, directly employed by the Government.)

It should be emphasised that the reasons for the requests for extensions were NOT because the objectives of the project were NOT achieved.

From this report (and also from the progress reports) it will appear that as the project progressed, the scope of the project was widened and emphasis was put on other objectives. (Which, however, were not included in the Project Document.)

This is possibly the best indication of a successful project.

4.3 FINAL REMARKS

My conclusion stated above that the degree of utilisation of project results is known only by the Ministry applies, of course, first of all (or mainly) to decisions or approvals which are important (usually where large amounts of money are influenced).

This however, has been the field where the main efforts and the main contribution of the project has been made.

Therefore, I can see no point in trying to assess to what extent minor contributions of the project have been utilised.

PART 5
FINDINGS.

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5.0 INTRODUCTION

As stated previously, this report contains hardly anything which has not been already documented (often much more detailed) in the form of internal papers, memoranda, etc. submitted to the Ministry.

This part of the report is no exception, and its main content is based on a paper which was submitted to the Ministry at the end of November 1979.

5.1 INDICATIONS OF THE MAGNITUDE OF SOME OF THE MAJOR TASKS FACING THE MINISTRY IN THE NEAR FUTURE

- During the next 2 to 3 years a total of some BD 12 million (U.S.\$ 31.6 million) is to be invested in infrastructure at the industrial areas under the control of the Ministry, including North Sitra.
- Within the next few years, the income from leasing of land is expected to increase from about BD 300,000 in 1978 (U.S.\$ 790,000) to a total of about BD 1 million (U.S.\$ 2.6 million) in 1980 and to reach more than BD 4 million (U.S.\$ 10.5 million) during the next 10 to 11 years. (Approximate estimates for the total from all of the industrial areas.)
- Financing of North Sitra is to a great extent done by means of loans taken up by the Ministry and for which the Ministry is responsible. The total loans at the end of 1981 is expected to reach about BD 16 million (U.S.\$ 42.1 million).

The conclusion: In terms of money - which is considered as a good indicator - the tasks facing the Ministry are indeed formidable.

5.2 SENSITIVITY OF THE NORTH SITRA PROJECT

The planning phase of the North Sitra Project is completed and implementation is about to start.

A rough estimate has been made in this connection, aiming at finding indications of the consequences should implementation be delayed. (The sensitivity.)

It has been made by comparing the latest revised cash flow projections (November, 1979) with a projection where it has been assumed that the income from leasing of land has been delayed by one year as compared to the present schedules - while all other assumptions have been maintained.

The result is:

- A comfortable surplus in the projected cash flow had been changed into a deficit, starting in 1985 and reaching a maximum deficit in 1987 of nearly BD 700,000. The negative cash flow lasts until 1993 and becomes positive after that.

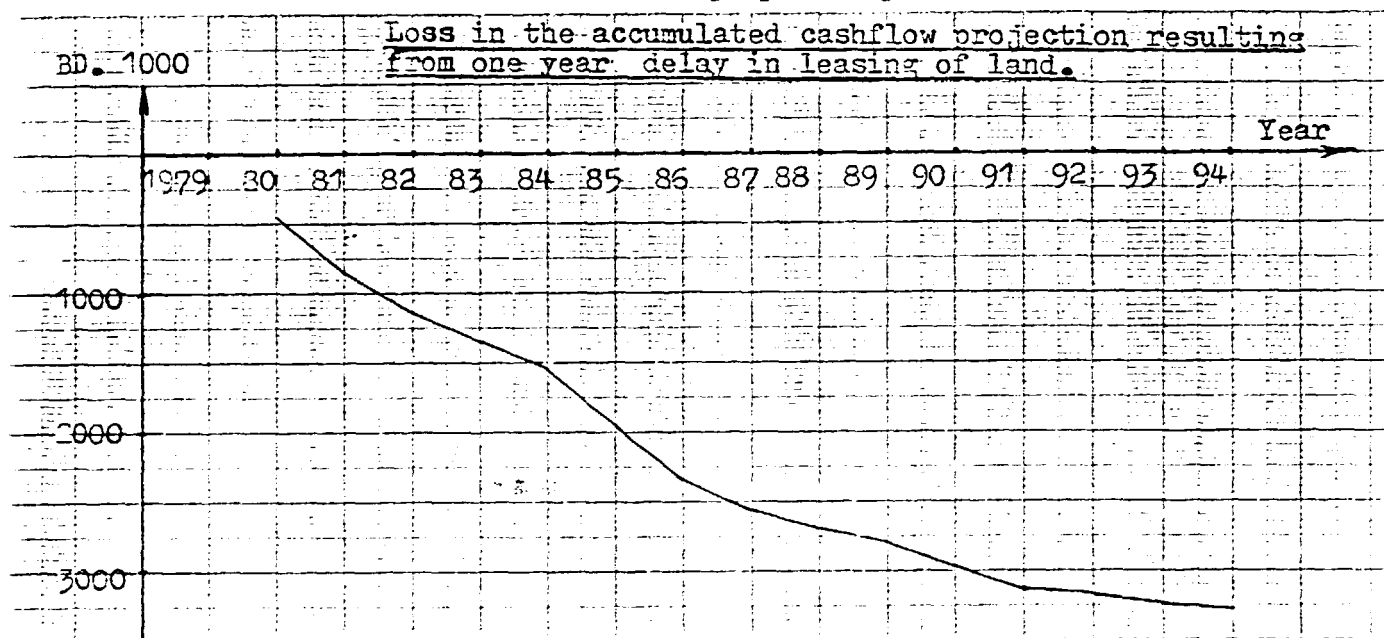
Note: The details of the calculations as well as a graphical representation are contained in the paper submitted to the Ministry, but not included in this report.

As a further illustration of the serious consequences of a delay in collecting the rent, the following reasoning has been made:

- Suppose the cumulative cash flow projection as given in the latest cash flow projections is taken as a target for what should be achieved.
- Suppose the leasing of land is delayed by one year.

Then the difference between the cumulative cash flow which has been achieved and the accumulative cash flow which should have been achieved may be considered as a "loss".

Based on the assumptions given above, the difference (or loss) has been calculated and shown graphically below:



Hence it appears that based on the given assumptions, a delay of one year in collecting the rent from leasing of land may result in:

- A comfortable surplus in the cumulative cash flow projection is changed into a serious deficit. This deficit is projected to start in 1985 and it will take some 8 years or until 1993 before it is turned into a positive cash flow again.
- The accumulated "loss" as compared to the original schedule for leasing of land is estimated to amount to more than BD 3 million during the period up to 1994.

The conclusion is:

- The overall economy of the project is extremely sensitive to delays which result in delays in collecting the rent from leasing of land.

Note: Details of the assumptions for the cash flows, etc. are contained in "Revised Cashflow Projections dated November 1979". (Not contained in this report.)

5.3 THE PRESENT SITUATION

a) In connection with the Cash flow projections

It should be stated that due to delays in obtaining financing, at present the North Sitra Project is behind schedule.

However, I do not think that this will result in as much as one year's delay in collecting the rent.

Therefore, it seems reasonable to assume that what CAN be achieved today is a cash flow projection which may be somewhere between the two alternatives indicated above.

b) In connection with the organisational set-up

In order to maintain a clear picture of the present situation as far as the management side is concerned, the main decisions are repeated:

- A "Board of Directors" will be appointed. The Board will assume the overall responsibility of the implementation of the investment programme of the North Sitra Project.
- A new Directorate will be created with the responsibility of all aspects of management of all the industrial areas, including North Sitra.

For the moment, however, the new Directorate exists mainly on "paper" since several key posts are vacant.

5.4 GUIDELINES WHICH ARE LAID DOWN FOR THE IMPLEMENTATION OF THE NORTH SITRA PROJECT (DISTRIBUTION OF WORK)

In general, the work in connection with construction of the main parts of the infrastructure is expected to be distributed as follow. :

Item	Design Tech.Specs. Tender Documents etc.	Construction	Supervision
Roads	Consultants		P.W.D.
Water Distribution	Water Supply Dir.	Private	Water Supply Dir
Power Distribution	B.S.E.D.	Contractors	B.S.E.D.
Sewer	Consultants		P.W.D.
Buildings	Consultants		P.W.D.

P.W.D. - Public Works Department
B.S.E.D. - Bahrain State Electricity Department

It should be noted that it is expected that consultants will be utilised to a great extent, also in connection with the overall supervision of the construction works. This is reflected in the cost estimates for the project.

5.5 SUMMARY OF THE MAIN FINDINGS

These are mainly in connection with the North Sitra Project and include:

1. All the preliminary planning has been completed and financing has been arranged. Implementation of the construction of all the infrastructure is about to start.
2. The organisational set-up which is necessary for the management of the industrial areas, including the implementation of the construction programme of North Sitra, has been decided.

For the moment however, (December, 1979) key posts in the new Directorate are vacant, and indications are that it may be difficult to find suitable candidates to fill the posts.

3. The economy of the North Sitra Project is extremely sensitive to delays which result in delays in collecting the rent from the leasing of land.

In this connection it should be taken into account that the Project is basically financed as a commercial enterprise.

4. In connection with the implementation of the North Sitra Project it has been decided to utilise consultants to a great extent. This is also reflected in the cost estimates for the project.
5. As a further complication of the management of the construction programme it should be mentioned that several other Ministries and Authorities are involved, where the Ministry of Development and Industry can only exercise limited control. (Hence the creation of the "Board of Directors".)

PART 6
RECOMMENDATIONS.

6.1 TO ENGAGE CONSULTANTS TO PREPARE WORK PLAN FOR NORTH
SITRA PROJECT

I would strongly recommend the Ministry to engage consultants to prepare a detailed, but flexible work plan.

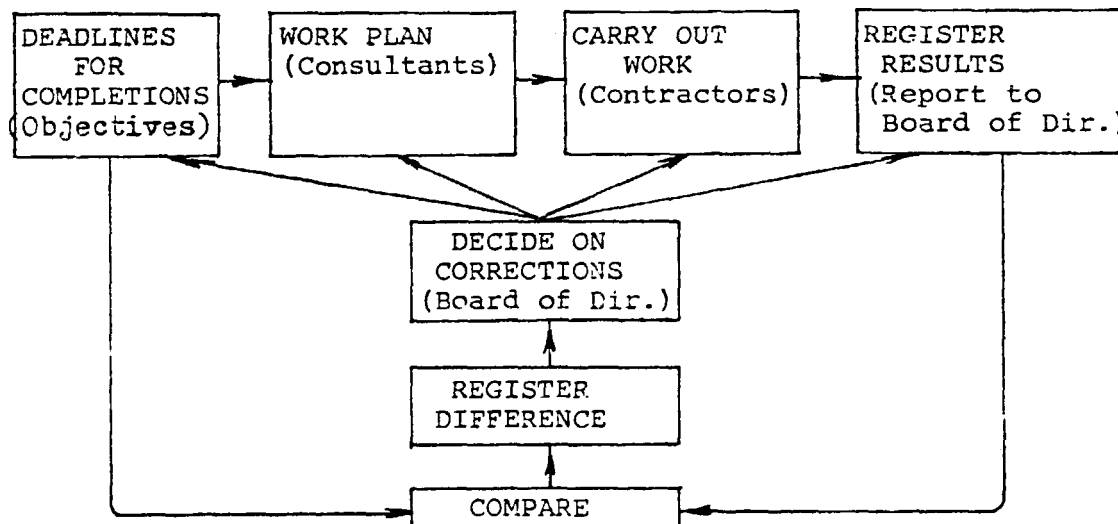
In this case, it is particularly important that the project is well planned. My main reasons are:

1. The project is extremely sensitive to delays which result in delay in collecting the rent.
2. The management of the implementation is complicated by several other Ministries and Authorities involved.

Note: All activities in connection with the construction have to be co-ordinated. For example, digging in connection with the roads should be co-ordinated with digging for the pipes for water distribution and sewers in order to reduce costs.

The preparation of a plan like this has to be done by highly qualified and experienced people. Even for a (from consultants point of view) straight forward project like this, a technique called "Network Planning" (or "Critical Path Planning") will most likely be utilised. After the Network Plan has been made up however, the plan is "translated" into the usual timecharts. (Otherwise a detailed knowledge of "Network Planning" would be required in order to understand the plan.)

The management aspect of proper planning may appear from the diagram shown below:



The essence of the diagram is:

- When the Board of Directors receives reports of the progress of the project, also the difference (if any) between what HAS been achieved and what SHOULD HAVE been achieved relative to the plan, is also registered.
- The consequences of the difference (if any) may be estimated.
- Based on this, the Board may decide on such CORRECTIONS as are appropriate. These may apply to any or all of:

- . The deadlines themselves may have to be adjusted.
- . The work plan may have to be changed or amended.
- . The implementation (contractors) may be affected.
- . Or perhaps the Board may disagree in the results as they are report

6.2 RECOMMENDATION TO RECRUIT TWO EXPATRIATE ADVISERS

I would recommend that the Ministry, as soon as possible, takes the necessary steps to recruit two expatriate advisers:

- a) One senior Civil Engineer.
- b) One senior Management Accountant.

Note: At least one of the advisers should also be fully qualified to advise in the field of GENERAL MANAGEMENT.

My main reasons include:

1. Even if a new Directorate of the Ministry is going to be created, I believe it will be very difficult for the Ministry to employ senior staff.
2. During the implementation period, the two posts mentioned above are going to be key positions.

Without their own senior staff, the Ministry will become far too dependent on the consultants.
3. Referring to H.E. The Minister's statement at the meeting with the KUWAITI FUND, it does not appear that there are any principal objections to employing expatriate professionals in such positions.
4. There should be no pro lem financing the two posts mentioned. The allocation in the cost estimates for "supervision" is ample and cost of expatriate advisers in those posts should be a direct saving on the fees to the consultants.

I feel the following should be pointed out:

- Since time by now is a precious commodity, an early decision is very important.
- In any case, a decision on the two posts mentioned has to be made before the terms of reference for consultants in connection with supervision are made up. For the obvious reason, if the expatriate posts are not filled, and if staff at senior levels are not available in the Ministry, the job has to be done entirely by consultants.

APPENDIXES



UNITED NATIONS DEVELOPMENT PROGRAMME

برنامج الأمم المتحدة الإنمائي

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تليفون : ٢٤٥٠٤٠

برقيا : يوندفيرو البحرين

تليكس : ٨٣٣٧ بي.ان

DATE22 March 1979.....

OUR REF: ELVENAES, J.....

To : Mr. J. Elvenaes (UNIDO Adviser on Small Scale Industries)

From : P. Dalal (UNDP) *Dalal*

Subject: Terminal Report

Further to our letter of 21 March 1979, I have prepared for your information, guidelines for the preparation of the Terminal Report of the project BAH/73/012 Adviser on Small Scale Industry and Industrial Estates.

TERMINAL REPORTA. Definition:

A Terminal Report describes the activities and outputs of the project and the extent of the achievement of the project's objectives, and makes recommendations for the future. It is prepared when field work is nearing completion.

B. PolicyRequirement of a Terminal Report

A Terminal Report is required for each project except where it is agreed in advance by the parties concerned that other documentation to be produced by the project will serve the same purpose.

Responsibility

A Terminal Report will be prepared by the project's Management for consideration.

C. Contents

The Terminal Report should present an analysis of the project's implementation and results, not an historical narrative.

cc: Mr. Koenz, UNIDO, Vienna



UNITED NATIONS DEVELOPMENT PR. GRAMME

برنامج الأمم المتحدة الإنمائي

MANAMA, BAHRAIN.

المنامة - البحرين

- 2 -

The report should:

- a) State the project's immediate and development objectives
- b) Describe as succinctly as possible the major activities carried out and the outputs produced, compare these against the schedules and targets established in the Work Plan, or the latest revision thereof, and identify those factors which significantly facilitated or impeded the implementation of the project.
- c) State the extent to which the immediate objectives were achieved and provide quantitative and qualitative data and information in support of this statement. The results should be compared with what was expected to be achieved by the project.
- d) Indicate how and to what extent the results of the project have already been utilised, or will likely be utilised, towards the realization of the related development objective and identify the factors which have affected or which might affect effective utilisation.
- e) State as findings significant conclusions that have been drawn as a result of observation, or of knowledge and experience gained from the project.
- f) Conclude with recommendations, as appropriate, concerning future steps for the consolidation, further development and utilisation of the results.

Thus the Report may structured in six parts:

1. Objectives and Logic of Project
2. Activities Carried out and Outputs Produced
3. Achievement of Immediate Objectives
4. Utilisation of Project Results
5. Findings
6. Recommendations

We hope that the above points will clarify and assist you in formulating your Terminal Report. We would like to stress that the complete draft should reach our office by the Firstweek of May 1979 at the latest.

COUNTRY DATA - BAHRAIN

AREA	POPULATION	DENSITY (1977)
674 km ²	343,000 (1977) Rate of Growth: 3.5% (from 1971-1977) ^{1/}	510 per square km 5,650 per square km of arable land

POPULATION CHARACTERISTICS (1975)

Crude Birth Rate (per 1,000)	46
Crude Death Rate (per 1,000)	10

HEALTH (1976)

Population per physician	1,600
Population per hospital bed	350

ACCESS TO PIPED WATER (1977)

Occupied dwellings without piped water (%)	2-5
--	-----

ACCESS TO ELECTRICITY (1977)

% of population - total	98
-------------------------	----

EDUCATION (1977)

Adult literacy rate %	47
Primary school enrollment %	74

GNP PER CAPITA IN 1977^{2/}: US\$3,795

GROSS NATIONAL PRODUCT IN 1977^{3/}

	US \$ Min.	%
GNP at Market Prices	1,387	100.0
Gross Domestic Investment	..	..
Gross National Saving	..	..
Current Account Balance	-135	-9.7
Exports of Goods, NFS	857	61.8
Imports of Goods, NFS	1,126	81.2

ANNUAL RATE OF GROWTH (% constant prices)

1974-77 1977

GNP at Market Prices	5.3	1.1
Gross Domestic Investment	..	..
Gross National Saving	..	..
Current Account Balance	..	..
Exports of Goods, NFS	..	..
Imports of Goods, NFS	..	..

OUTPUT, LABOR FORCE AND PRODUCTIVITY IN 1976

	Value Added		Employment ^{7/}		V.A. Per Worker	
	US \$ Min.	%	No.	%	US \$	%
Agriculture ^{4/}	24.0	1.4	5,289	5.0	4,538	35
Industry ^{5/}	948.0	57.2	42,503	40.0	22,304	173
Services ^{6/}	686.0	41.4	58,406	55.0	11,745	91
Total/Average	1,658.0	100.0	106,198	100.0	12,862	100

GOVERNMENT FINANCE (1972-77)
(BD million)

	Actual					Prov.
	1972	1973	1974	1975	1976	Actual-- 1977
Current Receipts	33.0	45.1	121.5	135.0	191.1	230.1
Current Expenditure	24.4	34.5	44.4	67.8	88.3	115.1
Current Deficit (surplus)	8.6	10.6	77.1	67.4	102.8	115.0
Capital Expenditures	8.3	7.6	33.5	54.2	114.9	141.1

^{1/} For Bahraini population only.

^{2/} The Per Capita GNP estimate is calculated by the same conversion technique as the World Bank Atlas (1973-77 basis). See World Bank Atlas, 1976. All other conversions to dollars in this table are at the average exchange rate prevailing during the period covered. The Per Capita GNP estimate shown here is not comparable with previous World Bank estimates as it is based on more up-to-date data compiled by the mission. The estimate for 1977 GNP is preliminary (see Table 2.1 of Statistical Appendix).

^{3/} Preliminary estimate.

^{4/} Agriculture and fisheries.

^{5/} Mining, manufacturing, electricity and water, and construction.

^{6/} The remaining sectors of the economy.

^{7/} In view of the inadequacy of the employment data, the "unallocated" portion of employment is prorated over the three major sectors mentioned.

.. not available
.. not applicable

COUNTRY DATA - BAHRAIN

		-----December 31-----						
<u>MONEY, CREDIT and PRICES</u>		<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	
		(BD million outstanding end period)						
Money and Quasi Money		87.9	99.7	145.8	184.2	303.8	353.3	
Bank Credit to Government Sector (net)		-4.6	-8.4	-30.8	-50.9	-70.3	-44.4	
Bank Credit to Private Sector		44.0	73.5	120.7	160.8	267.9	310.6	
		(Percentage or Index Numbers)						
Money and Quasi Money as % of GNP			75.0	31.0	42.2	56.0	64.4	
General Price Index (1970 = 100)		111.2	127.3	158.2	183.7	201.3	223.9	
Annual percentage changes in:								
General Price Index		5.1	14.5	24.2	16.1	9.6	11.1	
Bank Credit to Government Sector		-54.5	82.6	266.7	65.3	38.1	-36.8	
Bank Credit to Private Sector		23.2	67.0	64.2	33.2	66.6	15.9	
<u>BALANCE OF PAYMENTS</u>		<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>MERCHANDISE EXPORTS (AVERAGE 1974-77)</u>		
		(Millions US\$)						
Exports of Goods, NFS		443.0	493.1	741.3	856.9			
Imports of Goods, NFS		445.3	589.2	980.6	1126.4	US\$ Mln.	%	
Resource Gap (deficit = -)		-2.3	-96.1	-239.3	-269.5	Refined Oil	244.0	68.4
Other Invisibles (net)		59.7	74.1	118.4	134.6	Others (including re-exports)	112.5	31.6
Balance on Current Account		57.4	-22.0	-120.9	-134.9	Total	356.5	100.0
Direct Investment		15.2	53.1	138.9	50.4	<u>EXTERNAL DEBT, December 31, 1977</u>		
Loans & Grants (net)		9.9	11.9	32.1	102.8	Total Outstanding and Disbursed of which disbursed	153.6	
Other Items ^{1/}		29.3	82.2	3.5	-13.6		65.0	
Increase in Reserves (+)		111.8	125.2	53.6	4.7	<u>NET DEBT SERVICE RATIO FOR 1977^{2/}</u>		
Net Reserves (end year)		231.7	357.0	415.9	420.5	Total outstanding and Disbursed		0.78
<u>RATE OF EXCHANGE</u>								
1971-72	BD1 = US\$2.10 US\$1 = BDO.48							
1973-77	BD1 = US\$2.53 US\$1 = BDO.395							
Since January 28, 1978	BD1 = US\$2.579 US\$1 = BDO.388							

1/ Includes errors and omissions

2/ Rates of Debt Service to Exports of goods and services

II. OBJECTIVES OF THE PROJECT

This project is included in the Country Programme for Bahrain and will be financed against the IPF.

The Government is pursuing policies aiming at the promotion of industrial development and this project will assist the Government in implementing such policies.

A. Long-range objectives

At present, the national economy of Bahrain is heavily dependent on crude oil and natural gas, although estimated oil resources of Bahrain are limited. The diversification of the economy through industry will help reduce the dependence on oil and natural gas and will, at the same time, create employment opportunities. The project will assist the Government in realizing this long-range objective.

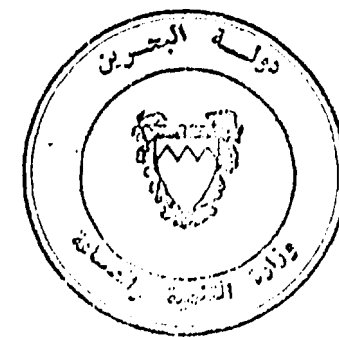
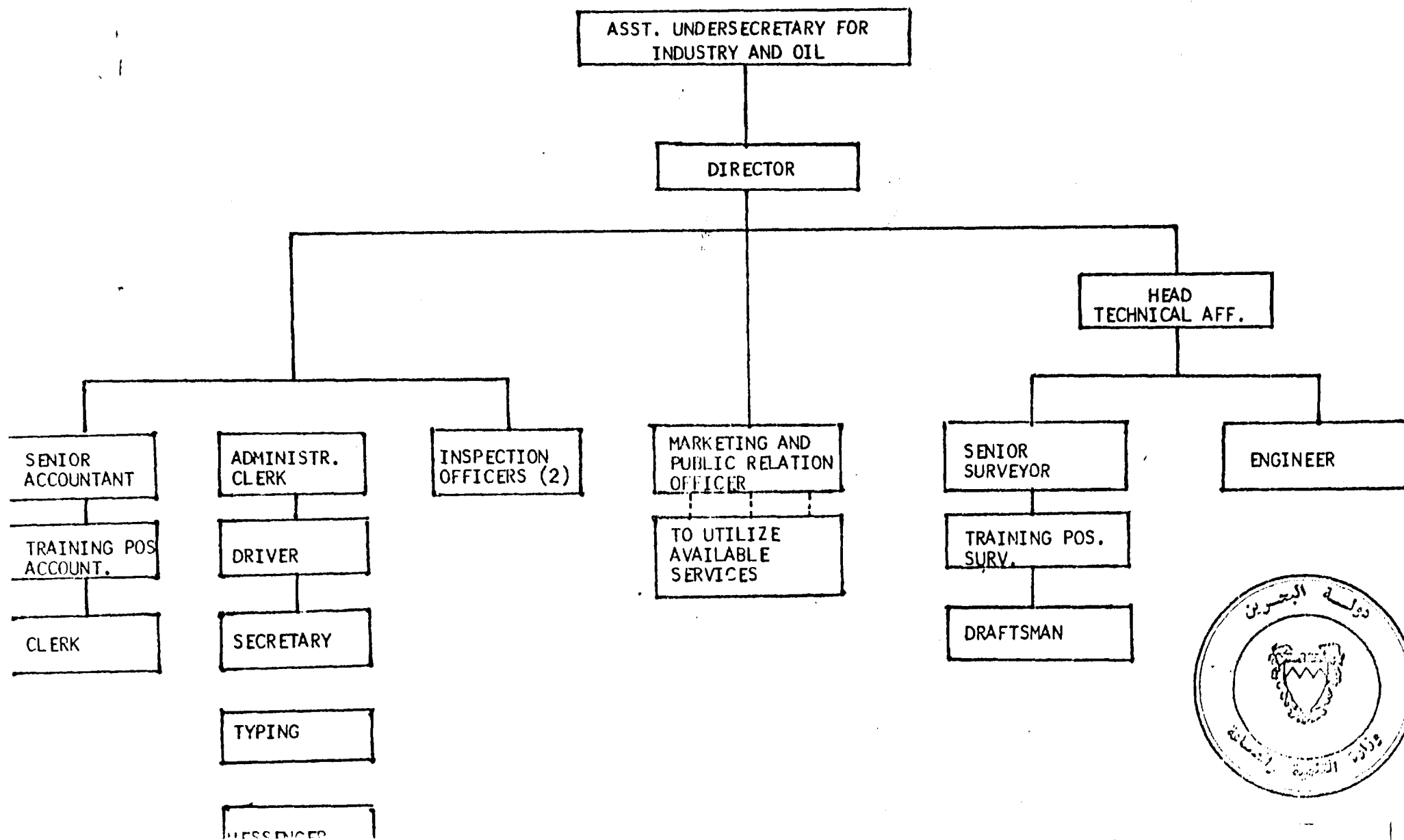
B. Immediate objectives

The project will ensure better management of the industrial area and assist the Government in:

- i) Managing and operating the existing industrial area in Mina Salman in a more efficient way and in proposing measures for co-ordination between its activities and the activities of the industrial zone.
- ii) Formulating recommendations on appropriate policies and programmes for the promotion of small and medium industries.
- iii) Training national staff on the management and operation of industrial areas and preparing a more intensive training programme for these in other countries.
- iv) Identifying any further technical assistance requirements

APPROVED ORGANISATION CHART FOR THE
NEW DIRECTORATE.

APPENDIX 4



ANALYSES OF THE MANUFACTURING SECTOR

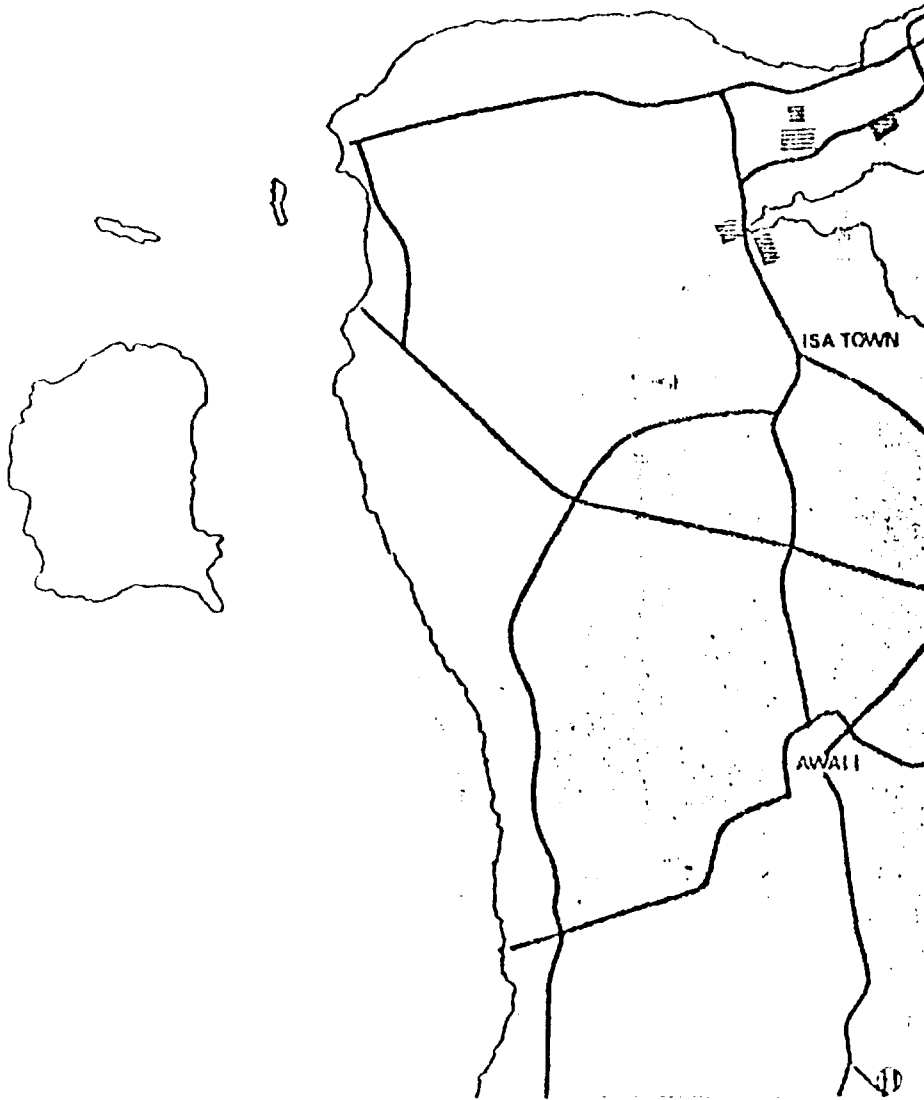
(Extracted from table 2.2 of the World Bank Report dated 28th June 1978)

GNP of the Manufacturing Sector in B.D. Millions at 1977 Constant Market Price

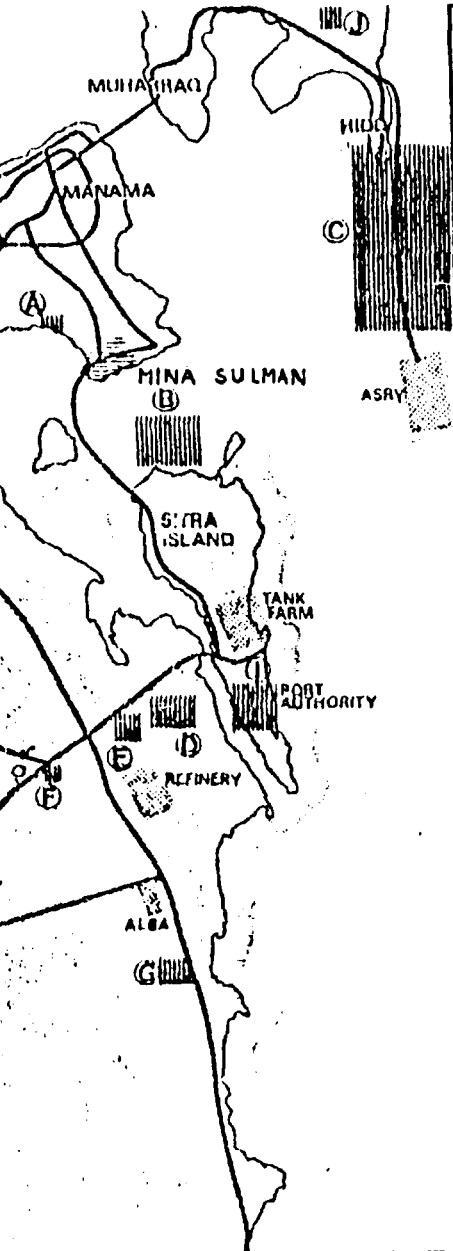
Type of Manufacturing	1973			1974			1975			1976			1977	
	GNP BD.MILL	% OF MANU	% OF GDP	GNP BD.MILL	% OF MANU	% OF GDP	GNP BD.MILL	% OF MANU	% OF GDP	GNP BD.MILL	% OF MANU	% OF GDP	GNP BD.MILL	% OF MANU
OIL REFINING	19.1	39.3	4.40	25.5	39.4	5.11	24.6	30.3	5.20	21.4	21.3	3.55	32.2	28.0
ALUMINIUM	16.0	32.9	3.69	19.9	30.8	3.99	21.4	26.4	4.52	23.0	22.8	3.82	22.6	19.6
LOUR MILL	0.3	0.6	0.07	0.3	0.5	0.06	0.4	0.5	0.08	0.6	0.6	0.10	0.4	0.3
OTHER	13.2	27.2	3.04	19.0	29.4	3.81	34.7	42.8	7.33	55.7	55.3	9.25	59.9	52.0
TOTAL MANUFACTURING	48.6	100.0	11.20	64.7	100.1	12.97	81.1	100.0	17.14	100.7	100.0	16.73	115.1	100.0
GDP	433.7			499.0			473.2			602			655.3	

GNP : Gross National Product

GDP : Gross Domestic Product



APPENDIX 7




State of Bahrain

Ministry of Development and Industry

BAHRAIN

Industrial Development Areas

Alternative Industrial Sites

 GOVERNMENT SPONSORED INDUSTRIAL SITES

(A) UMM AL HASSAN (F) DAWAR SITRA

(B) NORTH SITRA

(G) SOUTH OF ALBA

(C) SOUTH HIDD

(H) QUASSAHAT

(D) MAAMIR

(I) SOUTH SITRA WAREHOUSING

(E) NORTH OF REFINERY

(J) NEAR AIRPORT

 OTHER EXISTING INDUSTRIAL UNITS

 CAPITAL INTENSIVE INDUSTRY


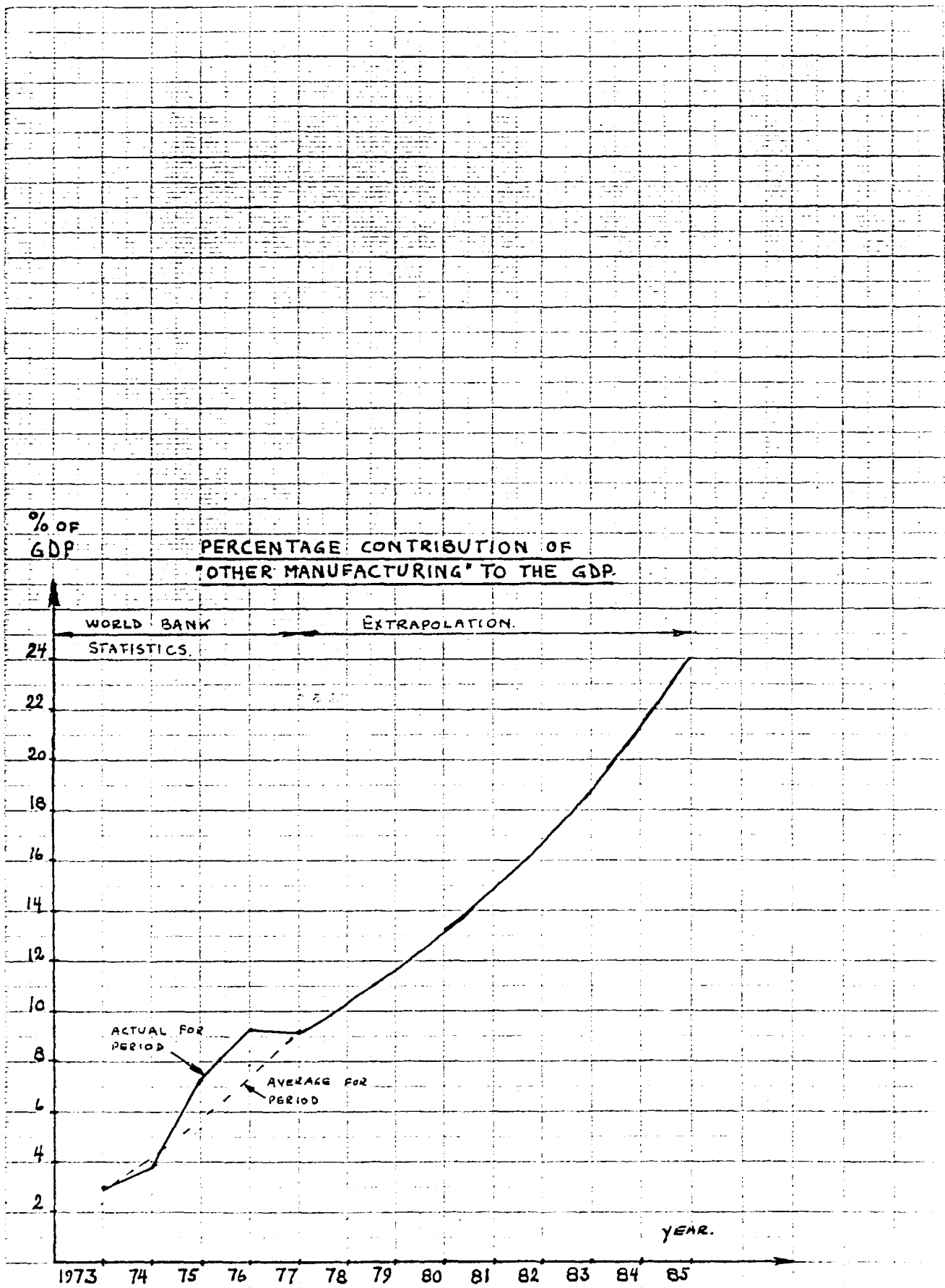
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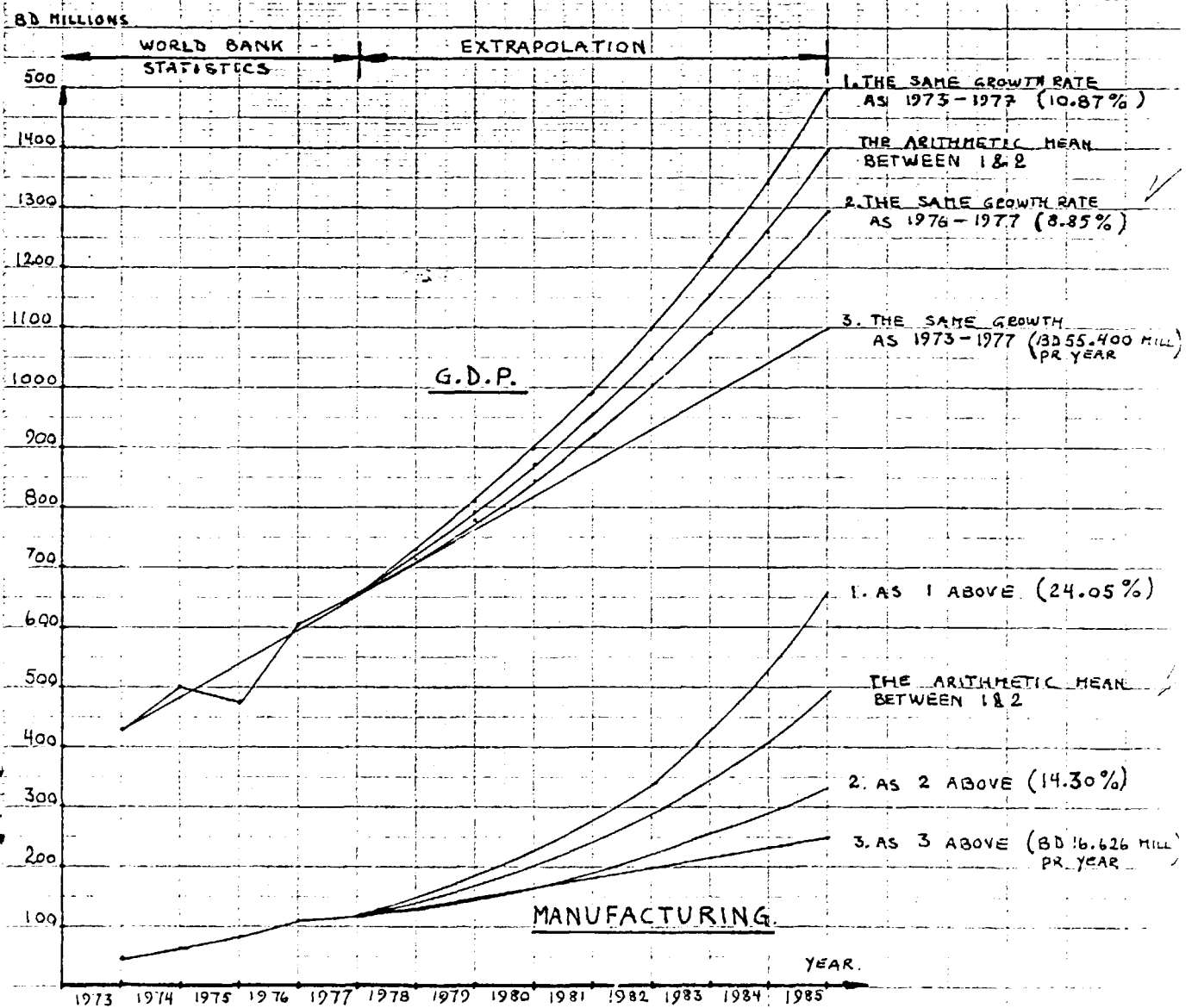
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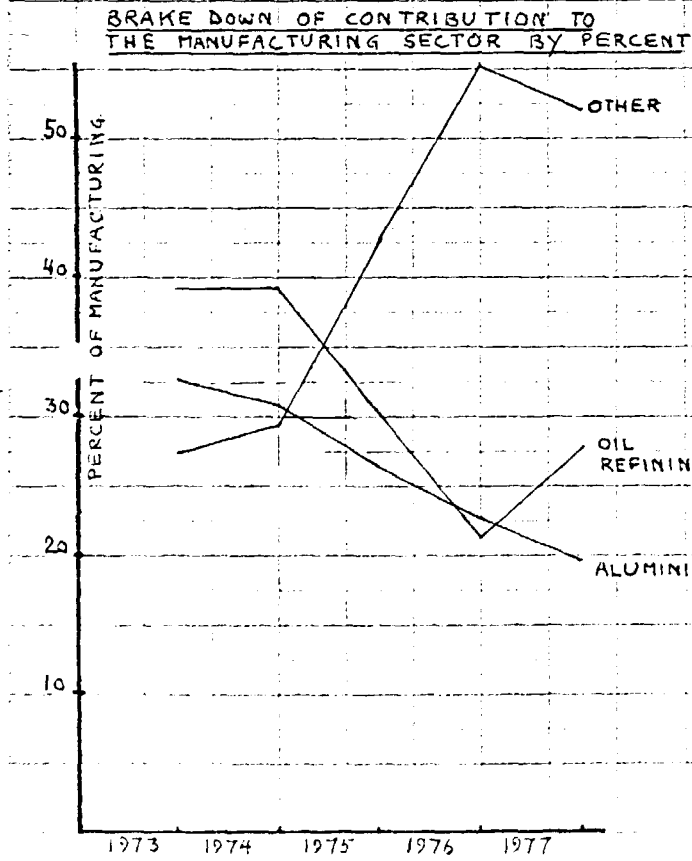
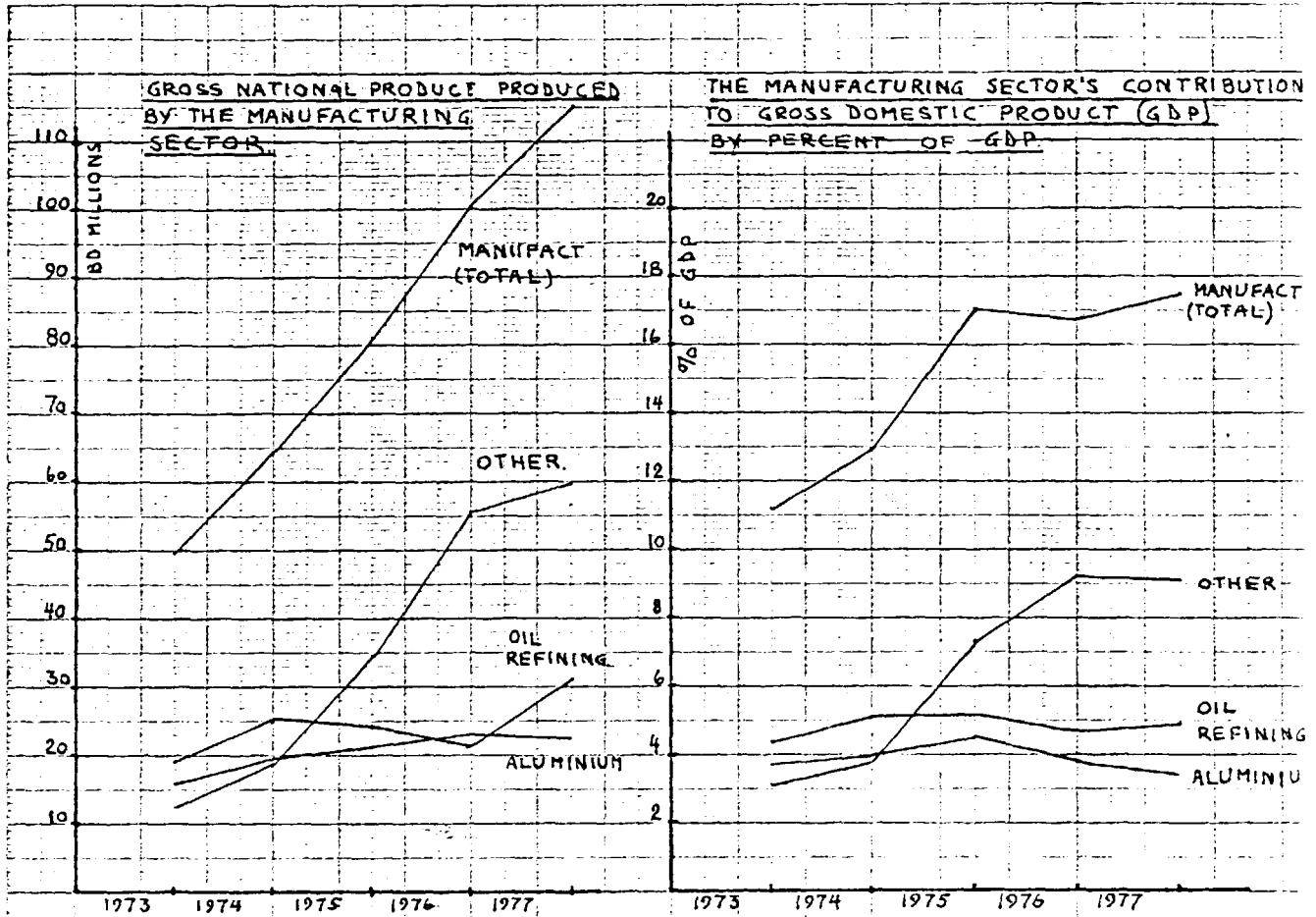




GROSS DOMESTIC PRODUCT (G.D.P.) AND MANUFACTURING.

AT CONSTANT 1977 MARKET PRICE
(V INDICATES THE CHOSEN ALTERNATIVE)





ANALYSES OF THE MANUFACTURING SECTOR FOR THE PERIOD 1973-1977
 SOURCE: TABLE 2.2 IN THE WORLD BANK REPORT 28.6.7

NOTE: THE CONTRIBUTION OF THE FLOUR MILL IS VERY SMALL AND HAS BEEN IGNORED



