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08688

Distr.
LIMITED

ID/WG.289/2
21 November 1978

ENGLISH

United Nations Industrial Development Organization

Expert Group Meeting on Evaluation and
Follow-up of Feasibility Studies in
Selected Least Developed Countries

Vienna, Austria, 4 - 8 December 1978

COUNTRY PAPER OF THE DEMOCRATIC REPUBLIC OF AFGHANISTAN *

by

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id.78-8182

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PART I: IMPLEMENTATION OF INDUSTRIAL PRE-INVESTMENT STUDIES IN DR AFGHANISTAN

1.1 Procedure and practice for initiating and conceiving Industrial Projects

Presently in Afghanistan we may distinguish three principal places where industrial projects can be initiated, conceived and/or promoted:

1. Department of Planning, Ministry of Mines and Industries (MMI),
2. Industrial Development Bank of Afghanistan (IDBA),
3. Private Investment Promotion Department, Ministry of Planning (PIPD-MP)

While the institutions under 1. and 2. deal with public industrial projects only, the Private Investment Promotion Department of the Ministry of Planning was established, in pursuance of the Foreign and Domestic Private Investment Law (FDPIL), to assist the private entrepreneurs in promoting industrial investment activities and, eventually, to evaluate and recommend the respective pre-investment documents to be submitted for final approval to the Investment Committee, by the prospective industrialists (covering small and medium scale industries). Investment Committee is composed of five members: Planning, Mines and Industries, Finance, Commerce, and Agriculture Ministers. They

represent the decision-making body on all private investments projects under the DDIL.

Foreign investors are channelled through the same procedure since - in compliance with the DDIL - a maximum 49% of the total investment outlay, may be owned by foreigners.

As far as the public industrial sector is concerned, the procedure may be described as follows:

In principle, the basic framework for overall public industrial development represents the medium-term development plan. Presently, the country's new Five Year Social and Economic Development Plan is under preparation.

Pursuant to the Plan the MMI, through its Department of Planning, initiates the preparation of pre-investment documents. Until recently, practically all pre-investment documents had to be prepared by foreign consulting firms, machinery suppliers, etc. and - in a few cases - by UNIDO, since no domestic agency/institution existed, capable of preparing pre-feasibility, feasibility and other pre-investment studies.

A couple of years ago, the IDBA was created by the Government with the aim of fostering the industrial development of Afghanistan (public sector only). Meanwhile, among other relevant activities, the IDBA has set up a group of professionals (mostly economists, financial, and marketing specialists) with the assignment of identifying and conceiving viable industrial projects in Afghanistan. To date IDBA has produced a number of very good pre-feasibility and other pre-investment studies and reports (as e.g. on International Transportation Comp.; Bakhtis Gin and Press, Safety Matches,

Aluminum Conductors, Cotton Godowns, Woven Plastic Bags, and others). Some of these projects were already implemented (Interm. Transp. Comp. - joint venture with Holland, e.g.) and some are under, or close to, the implementation stage (Sulphis Gin and Press, e.g.).

Some of these studies were initiated by IDBA themselves, while others were requested by the interested Ministries (Alum. Conductors - for Min. of Power and Water, Interm. Transp. Com. - for Min. of Commerce, e.g.), and some were supported by friendly Governments, foreign banks, foreign aid agencies, etc. (Safety Matches - with a Japanese Firm Cotton Godowns - with Asian Development Bank, for example). What they mostly lack on at this stage, is assistance in the technical and technological matters, required in preparing the pre-investment studies (see also Part III, herein).

A further step in improving and widening their services to the Afghan industry will be the establishing - in the near future - of the Industrial Consulting Institute within the Bank. It will provide consultancy services to both public and private industrialists.

They now perform - upon request of the interested Ministries and institutions - the evaluation of pre-investment studies prepared by others. Within the Department of Planning of the MIL there is the "Project Evaluation and Co-ordination Section" destined to accept, review and evaluate the various pre-investment documents related to industrial and mining projects. Due to the generally known shortage of appropriate skills and experience, they are usually assisted by foreign experts, a number of whom is provided by UNIDO, OTC, etc., while others may be assigned by friendly governments on a bilateral-technical-assistance basis.

Presently two UN Projects (see footnote)* are actively engaged - among other things - in assisting the MMI in the preparation, revising, and evaluation of pre-investment studies and in the implementation of industrial and mining projects. Basically this activity is aimed at training Afghan personnel in the respective professional fields, in order to become self-reliant in the not too far future.

After having passed through all a/m steps, a pre-investment study is sent to the Ministry of Planning, for final evaluation, approval and allocation of financial resources, the latter, of course, requiring the consent of the Ministry of Finance.

In those cases where projects of particular importance to the country are concerned, a project may require the approval of the Cabinet. In fact this isthe case with most of the public industrial projects.

The finally approved projects are sent back to the MMI for implementation and follow-up. Appropriate sections within the Department of Planning are assigned to take care of projects under implementation. After having been completed, a project changes its status, by becoming a factory, company, or department, depending upon its size, importance and other relevant circumstances. The department of Industries within the MMI, is responsible for the operation of public industrial enterprises.

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* The two Projects are:

- Industrial Services Project (UNIDO);
- Strengthening the Government Capability in Planning and Implementation (ILO).

A flow-chart illustrating the above described procedures is shown on page 6 (Figure I). Thus, the role of the various institutions concerned with industrial development in Afghanistan and the decision-making process may fairly be understood.

In addition, it should be emphasized that the Ministry of Planning also has the responsibility of overall coordination of various economic and social development projects, of determining the priorities, of shaping the medium and long range strategy of the country's development, and such other duties and responsibilities as are usually attributable to the planning ministries of the states with centrally planned economies.

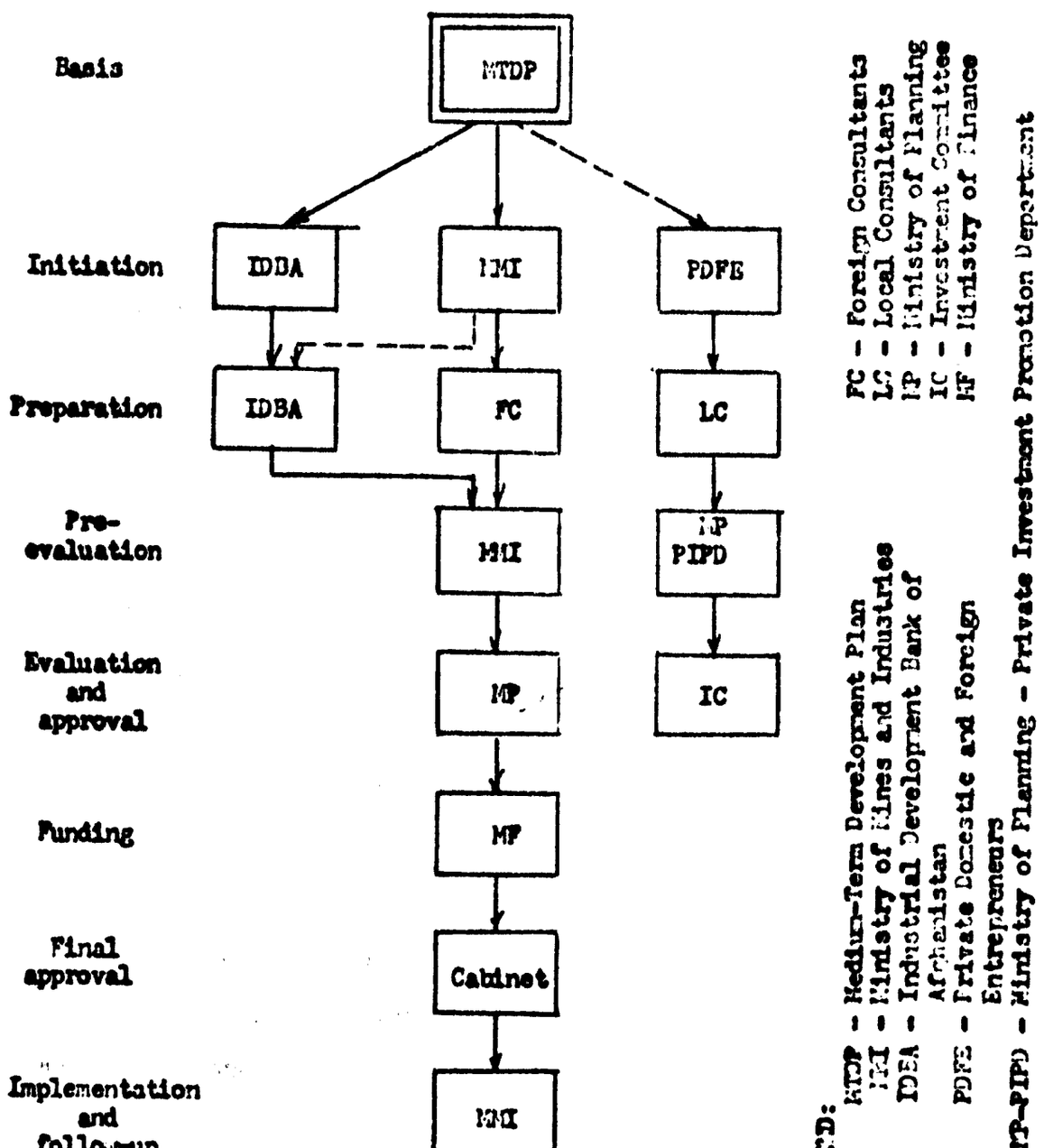
1.2 Critical review of difficulties and constraints in generation of viable industrial projects:

Based on a thorough analysis of some eight pre-investment studies (including the case study), which so far did not lead to an investment, one can identify some of the most important reasons for failure:

1.2.1 Taking into account that Afghanistan is one of the World's least developed countries, it may generally be expected that the lack of skilled professional cadres of all profiles is one of the country's greatest constraints in the generation of viable industrial projects.

While it is true that the basic domestic educational and training facilities do exist, they definitely need substantial improvement in updating curricula, in upgrading the quality of the teaching staff, provision of teaching aids (laboratories, libraries, institutes, etc.), it will still be necessary - for some years ahead - that young Afghans go abroad in order

Figure I: FLOW-CHART illustrating the standard procedure in initiation, preparation, evaluation, approval and implementation of industrial projects in Afghanistan.



to acquaint themselves with advanced technologies, to work in modern research laboratories and to acquire special skills which are not offered in their country. Therefore, the assistance of friendly countries, of the United Nations Organization, and of other international organizations would be most welcome.

1.2.2 Of particular importance appears to be the creation of adequate domestic capabilities and facilities in order to enable Afghans to competently and with full responsibility tackle with rather complex task of initiating, implementing and evaluating pre-investment studies.

Some of such badly needed facilities may be:

- Industrial Information Service,
- Afghan Institute for Transfer and Development, of Technologies and Industrial Research,
- National Textile Institute,
- National Leather and Furs Institute,
- National Engineering Design Institute,

and probably some others.

Of course, there will always be such projects which will require foreign assistance, e.g. in selecting the appropriate technology, in specifying the machinery and equipment, etc. Here again the assistance of friendly countries, of the UN Organization, etc., will have to be provided. Such tasks may be: planning, establishing, and running of a metallurgical complex (our Case Study), an oil refinery, a fertilizer plant, and others.

However, it is, in our opinion, of paramount importance that a country like Afghanistan develops as early as possible its own capabilities

in planning, implementing, and running of such industries as textiles, vegetable oil extraction, hides and skins processing, leather products, construction materials etc., where raw material basis and consequently a certain amount of traditional skills, experience, and a number of manufacturing units already exist. This also includes the preparation and evaluation of pre-investment studies for new projects of the same or similar kind.

It is our firm belief that the best feasibility (or pre-feasibility) study can only be made in the country concerned, with some foreign assistance to the extent required and as appropriate. This is the way Afghanistan intends to follow in the future, after the institutional basis exists and the first positive results have already been scored.

1.2.3 The generally known inefficiency of the past governments, low performance of the bureaucratic state machinery, the hesitant attitude of ministers and other high-ranking government officers, lack of co-ordination among and within various ministries, and other deficiences of the previous regimes, were also among the reasons why a number of industrial pre-investment studies never reached the implementation stage.

With the emergence of our new Democratic Government following the April 27, 1978 Revolution, many things are moving forward and a general improvement in dealing with new industrial projects has already been recorded (see also Part II, hereinafter).

1.2.4 It should not be overlooked, however, that the country's financial resources are rather scarce. Thus a number of industrial projects were to be financed by foreign loans, grants-in-aid and other bilateral arrangements. Some foreign governments, however, never implemented their respective pledges

towards Afghanistan. This - in certain cases - has also been the reason why some industrial projects were never realized.

PART II: CASE STUDY - AFGHAN METALLURGICAL COMBINE

2.1 Introduction

The subject of this case study is a rather complex and, from many viewpoints, a "difficult" project, which will be refered to - for convenience and for the purpose of this study only - as "Afghan Metallurgical Combine" (AMC).

It was more than 100 years ago that rich deposits of high quality iron ore were first discovered at Haji Gak, a mountainous, difficult-to-access area of the Hindukush Range, about 100 kms North-West from Kabul (straight line distance). Some preliminary searching and prospecting work at the deposit was carried out independently by Russian and French geologists during 1959/61.

A first systematic and comprehensive attempt to both, quantitatively and qualitatively assess this natural wealth of Afghanistan, was made by several Soviet geological teams, starting from 1962 through 1965. Based on a contract between the - then - Royal Afghan Government and Soviet "SOUDEXPORT Company, several reports were prepared covering geological prospecting, surveying, mapping, calculation of ore reserves, chemical and

physical properties of the ore, etc.

The next decisive step towards the realization of this long-standing "national dream" of Afghanistan, was the signing in July 1966 of a contract between the - then - Royal Government of Afghanistan and the All-Union Export and Import Corporation "TIAZH-PROMEXPORT" of USSR, on preparation of technical and economic report covering the establishment of an Iron and Steel Plant in Afghanistan. As a result thereof the "Technical and Economic Report on Iron and Steel Plant in Afghanistan" was prepared by GIPROMEZ, Moscow, and submitted to the Afghan Government in 1967.

Though, for the purpose of this paper, we are not going to analyse that Soviet study, it should be mentioned, however, that they discouraged an early establishment of the Afghan iron and steel plant, by saying:

"Taking into account the above mentioned, and the fact that a considerable capital would be allotted for the steelworks project that could affect the development of other industries and the agriculture of the country, it appears reasonable to postpone construction of the iron and steel works."

Though to some extent outdated, it should be stressed that the Soviet study still represents a valuable and lasting contribution to the AMC Project. It was prepared with full professional responsibility and followed, to a considerable extent, the concept of UNIDO's "Manual for the preparation of Industrial Feasibility Studies".

Our further analysis will focus on a set of more recent pre-investment studies related to AMC. Namely, on 19th May 1971 a contract was signed between the Ministry of Mines and Industries on the one part, and a German-French Consortium covering the preparation of a feasibility study related

to the establishment of an integrated iron and steel plant, on the other. Concurrently, another contract was signed with a French Firm (CREUSOT-PIC) covering the preparation of a feasibility study related to the development of the Haji Gak iron ore mine and the Shabashak coal mine. Accordingly, two separate feasibility reports were produced and submitted to the Afghan MII, in April/May 1974.

Further on, and for the purpose of our study only, we are going to deal with the "Feasibility Study for an Integrated Iron and Steel Plant in Afghanistan" prepared jointly by CREUSOT-LOIRE ENTERPRISES (France) and DEMAG (F.R. Germany).

2.2 Case Feasibility Study - Analysis

Following are some basic data and information related the CREUSOT-LOIRE ENTERPRISES feasibility study:

A. General information:

1. Title of study: Feasibility Study for an Integrated Iron and Steel Plant in Afghanistan
2. Type of study: Feasibility study
3. Study made by:
   a) CREUSOT-LOIRE ENTERPRISES, Paris, France
   b) DEMAG, Duisburg, F.R. Germany
4. Date of submission: May 1974
5. Investment cost: FF 362.200.000 equivalent to

   Afs. 528.498.000

   (based on prices and exchange rates as in the beginning 1974)

B. Abstract:

After presenting a thorough and documented market position of steel products in Afghanistan, including exploring potential future export outlets to the neighbouring countries (Iran, Pakistan, USSR) a forecast was made on future trends in consumption of steel products in Afghanistan, which was expected to reach

30.000 tons	in	1975
36.000 "	"	1980
42.000 "	"	1985

Based on an assumption that the future Afghan steel plant would cover about 75% of the country's total requirements on steel products, the following figures on production rate (for local market) were arrived at:

22.500 tons	in	1975
27.000 "	"	1980
31.500 "	"	1985

By assuming an export of 80.000 tons/year of billets to Pakistan and adding the forecasted local consumption figures of domestically produced steel, the quantity of 150.000 tons of liquid steel per year was stated as the target for production capacity of the Afghan steel plant.

The basic conceptual idea of the proposed iron and steel complex (including mines) is that of dispersing it over a wider area rather than setting up a relatively large metallurgical complex in one location. Thus, following five main production units were proposed:

a) - in Haji Gak: iron ore mining,

b) - in Shabashak: Coal mining,

c) - in Doab-Mekhe-zarin: coal washing, production of smokeless briquettes for Kabul and of formed coke for Sekari,

d) - in Sekari: Production of iron and steel and continuous casting of 100 x 100 mm billets,

e) - in Kabul: rolling mills.

While the CREUSOT-LOIRE/DEMAG study covers the production units quoted above under d) and e), the French VENOT-PIC study deals with the units a), b), and c).

A formal account on how far the CREUSOT-LOIRE/DEMAG study conforms to the UNIDO's "Manual for the Preparation of Industrial Feasibility Studies" may be found at annex I of this study. Let us now less formally discuss the main deficiencies of the same study, and try to find out which might have been the reasons as to why the study did not lead to an investment.

2.2.1 Description of deficiences

While some aspects of the feasibility study were prepared rather thoroughly and in detail (market study, description of the production processes, for example) the study, as a whole, lacked a number of components which make it rather unfit to serve as a basis for decision making.

Let us enumerate and elaborate on some of the most important deficiences:

a) Selection of production process (Part 3)

Moulded coke made from Shabashak coals was recommended as substitute for

metallurgical coke in feeding the blast furnace. It was stated, however, (page 66) that "more comprehensive tests at semi-industrial scale" should be conducted in order to confirm (or not) this assumption. Or even more explicit was the statement (further on the same page) that:
"The next step in the realization of the Afghan iron and steel project should thus concern the implementation of semi-industrial tests for the production of formed coke, in order to get better figures for the final engineering of the coke facilities and the right sizing of the small blast-furnaces." Thus, it can be stated, that the technological aspect of the study was not completely clarified.

b) Export market (Part 1, section 1.6)

Export of iron ore, of semi-finished and finished products to the neighbouring countries was investigated but no reliable conclusion was arrived at. Everthing was based on assumptions or speculations (e.g. the export of the Haji Gak iron ore through Bandar-Abbas in Iran). Even, the contemplated export of billets to Pakistan does not appear to be a solid basis for planning the production capacity of an iron and steel mill in Afghanistan, particularly in the light of Pakistan's strict regulations for the imports of steel products (page 18), as well as in regard to other unfavourable circumstances.

C) Utilization of natural gas in metallurgical processes.

In addition to what was said in para (a) above, and in the light of the recent developments having taken place in Afghanistan, as well as due to the favourable results so far obtained in the direct reduction of iron ore by using natural gas (refer to the Annex VII) it is strongly felt that the utilization of natural gas, which - though presently far away from the iron ore depost - is abundant in Afghanistan, was not considered seriously enough

in the study (pages 43, 44, 62).

To this end it should be mentioned that bringing the natural gas (via pipelines or in the liquified form) to Kabul is being seriously contemplated by the Government. Thus, the gas would be more readily available for the planned AMC, as well.

d) Investment cost (Part 6, page 127)

In the light of what was said hereinbefore, it may hardly be assumed that the "preliminary estimate of investments (base beginning 1974)" covers all the elements of the investment costs related to the three production units considered. There is no evidence (no breakdown of costs) that, for instance, the following cost elements were included:

- conducting further technological studies and carrying out tests on a semi-industrial basis,
- detailed project design,
- training of personnel (both in the country and abroad),
- cost of infrastructural project components (roads, power lines, housing, town planning, etc.),

and others.

Therefore, it may be assumed that the actual investment costs (including pre-investment expenditures) would be considerably higher than stated in the study.

e) Production costs (Part 7, page 128)

There is a breakdown of production costs for all main products of the three production units that appears to be acceptable from the standpoint of what was assumed in previous sections of the study. However due to the deficien-

ces of the study enumerated hereinabove, it is questionable whether or not the production costs in the reality would comply with the pre-calculated ones. The same doubt was expressed in the study itself (on page 136) by saying: "These comparisons are quite rough and must be checked with more accurate and up-dated selling prices."

2.2.2 Government responsibilities

It should be clearly stated that the hesitant, undefined, behaviour of the previous governments of Afghanistan, as well as rather unstable political, social, and economic position of the country, among other factors, have considerably contributed towards the non-implementation not only of this, but also of a number of other important and attractive industrial and mining projects. The new Revolutionary Government of the Democratic Republic of Afghanistan, which was established after the historical April 27, 1978 Revolution, is trying hard to uproot many inherited evils, deficiences, and weaknesses of the previous governments, along the principles and ideas as set forth in the "Basic Lines of Revolutionary Duties of Government of Democratic Republic of Afghanistan."

As a reflection of the changes which have occurred in the course of the past six months, and as one of the numerous signs of the strong determination of the new Government of Afghanistan to improve its overall efficiency, its expediency in resolving nation's acute problems, and to cut through the red tape - all these in order to maximally speed up the country's economic and social development, aimed at the substantial betterment of the living standard of the Afghan people - it may be quoted that the following industrial projects have been brought to, or very close to, the implementation stage:

- safety matches,
- industrial estates in provinces,
- cotton godowns,
- woven plastic bags,
- Badghis pin and press,
- Takhar pin and press,
- Baghlan pin and press,
- Balkh pin and press,
- Baghlan cotton seed oil extraction,
- Ghazni slaughterhouse, tannery, furriery,
- can manufacturing plant,

and some others, most of them being backstopped by several friendly Governments, in terms of financial, technical, and other assistance (USSR, India, Bulgaria, Japan).

It may also be useful to mention that the new Five Year Development Plan, already under preparation, will shed some more light on the future trends, among other things - on industrial development in general, and particularly on the Government's further intentions in regard to the AMC. It is expected that the new plan will be more realistic than the previous development plans.

2.3 Conclusive remarks

In conclusion to the above analysis it may be said that the CREUSOT-LOIRE/DUMAG "Feasibility Study for an Integrated Iron and Steel Plant in Afghanistan" did not lead to an investment due to the following main reasons:

- the study was rather incomplete and deficient; there were a number of gaps in it (refer to annex I, attached hereto) and it appeared more like a pre-feasibility, than a feasibility study;
- the project itself represents a very complex undertaking, comprising a number of unknowns which are difficult to tackle, even by technically more advanced countries;
- definitely there were, and ther still are, opinions advocating the postponement of the AIC project towards a moderately distant future, as the country becomes economically and technically more developped and self-reliant;
- uncertainties involving the selection of appropriate technological processes, plant location, plant capacity, use of natural gas, and others;
- a very small domestic market for steel products;
- a rather obscure prospects for exporting either iron ore, intermediate, or end products;
- overall weakness, slowleness, and hesitating attitude of the past governments;
- political implications and strategic interests of big powers;
- and - last but not least - the non-availability of financial resources, both domestically and from foreign sources.

PART III: RECOMMENDATIONS

3.1 Need for improving the pre-investment documents

The decision-making process related to industrial pre-investment studies in Afghanistan is based on a logical and functional approach. From the purely organizational viewpoint the need for any substantial change in the decision-making procedure does not appear necessary, at this stage of development. Where improvement would be very desirable would be in expediency of handling industrial projects throughout the decision-making hierarchy. There are encouraging signs that the new Government of Afghanistan has already made a breakthrough to this end.

In order to enable a more efficient dealing of industrial projects at the pre-investment stage, a more systematic approach towards organizing and carrying out the elaboration of pre-investment studies and reports is needed. As can be seen from the analysis of a number of feasibility studies conducted these days, it may freely be stated that most of them are not complete, usually containing many gaps, and not offering a solid basis for decision-making. Therefore, this subject - i.e. improving the shape, quality and content of industrial pre-investment studies - appears to be of highest priority, and one where the suggestions and recommendations of this our Meeting should primarily be aimed at.

Definitely, the UNIDO's "Manual for the Preparation of Industrial Feasibility Studies" represents an important step towards obtaining better, more elaborate, complete, and uniform pre-investment studies. It is warmly welcomed by all of us who are engaged in the initiation, implementation and evaluation of industrial pre-investment studies.

However, day-to-day practice in applying the "Manual" may bring up some new ideas aimed at improving its concept and shape. For instance, in our opinion, it may not be desirable to elaborate on two, three or more technological (or other) alternatives in a feasibility study (as suggested on page 14 of the "Manual"), since it is usually an expensive venture. It would, probably, be more appropriate to elaborate on respective alternatives at a pre-feasibility study level, which is normally less expensive.

Consequently and as a rule - in our opinion - related to every larger industrial project, there should always be at least three distinctive stages in preparing pre-investment documents, as suggested by the "Manual":

- opportunity study,
- pre-feasibility study,
- feasibility study

Where and when required, support studies on specific topics should be included into this chain of pre-investment documents.

It may be assumed that a well conceived, documented, and thoughtful opportunity study would reveal principal weak points, the non-viability, or the need for postponement of a potential industrial project, thus preventing the wastage of efforts, time, and money that would be required in preparing a pre-feasibility, or even a more expensive, feasibility study. This is what Afghanistan has experienced in a number of potential industrial and mining projects (our Case Study analysed in Part II, is one of them).

3.2 Assistance by UNIDO

As mentioned earlier, UNIDO and OTC already are assisting Afghanistan in further developing and strengthening the national Afghan capabilities in the field of preparation of industrial pre-investment studies, which is very much appreciated by the Government. It may be mentioned here that one or two in-the-house training courses on the preparation and evaluation of feasibility studies are being contemplated. The courses would include market research, demand forecasting and such other relevant topics usually contained in a (pre-) feasibility study. Courses would be organized and conducted by the experts of the two existing UN Projects, operating in the Ministry of Mines and Industries.

The follow-up activities of UNIDO, pertaining to bringing into being the concepts and ideas as set forth in the "Manual", as well as the hoped-for recommendations of this Meeting, may constitute one additional aspect of UNIDO's assistance to all developing countries in this particular field.

The assigning occasionally of short-term experts - mostly engineers/technologists - to assist IDBA in the preparation of (pre-) feasibility studies, would be very much appreciated by the Government of Afghanistan, as UNIDO's contribution towards further developing and strengthening national capabilities in the preparation of industrial pre-investment studies. It should be mentioned here that this sort of UNIDO assistance is already well-established via their "Industrial Services Project" within the MMI.

PART IV: UNIDO's ASSISTANCE IN UPDATING EXISTING FEASIBILITY STUDIES

UNIDO could possibly assist the MMI, IDBA and MP of the DR Afghanistan in updating, reworking, finalizing, and/or recommending on other possible steps and measures related to the following existing pre-investment studies:

4.1 Afghan Metallurgical Combine (AMC)

Several studies and reports related to this project, are available with the MMI. A highly skilled expert experienced in planning, implementing, and/or operating the complex iron and steel plants, will be required for reviewing the existing pre-investment documents and for advising the MMI on further steps aimed at the materialization of the AMC project in a consistent and systematic way. A detailed job description for the expert will have to be drafted.

4.2 Cement Asbestos Project

A sort of pre-feasibility study was prepared by a German Consulting Firm (Stolberg Ingenieurberatung GmbH), as well as a report on Logar asbestos deposits, prepared by a Soviet geological team. Both the German study and the Soviet report recommend the utilization of Logar deposits for manufacturing roofing sheets, pipes, etc. It is recommended to prepare a feasibility study and to set-up a pilot plant in order to precisely determine the technology and collect other data required for a detailed plant engineering design.

Assistance is required in the preparation of the feasibility study (one expert/cement-asbestos technologist) and financial, technical and other

assistance in planning, designing, establishing and running-in the cement-asbestos pilot plant. A detailed job description for the expert will have to be drafted.

4.3 Starch Project

A pre-feasibility study was prepared by the German [illegible] CONSULTANTS, GmbH, Frankfurt, and was submitted to the Afghan Government in July 1977. Production of starch would be based on maize. Following are main reasons for no decision having been brought so far on further steps towards realization of this project:

- the limited domestic market for starch, which is not even capable of consuming the assumed smallest economic capacity of the starch factory (4.500 tons/year). It is suggested in the study the surplus of starch (about 3000 tons/year) be converted into glucose syrup. However, no clear prospects for marketing (exporting) the syrup, were indicated. If, and when, the issues of plant capacity and marketing the final products were resolved, the problem of financing the project would arrise. It may be assumed that foreign financial and technical assistance would be required in further stages of project development.

Feasible UNIDO assistance would be in assigning an expert for reviewing and supplementing the existing pre-feasibility study. A detailed job description for the expert will have to be drafted.

4.4 Herat Sugar Beet Production and Processing Project

A sort of feasibility study was prepared by the British TATE & LYLE TECHNICAL SERVICES LTD., Kent and was submitted to the Afghan Government in December 1975.

A sugar beet factory having a 3,000 tons/24 hours processing capacity is proposed by the study, to be implemented in two stages. Sugar beet is not being cultivated yet in the area. To this aim detailed experimental work is being recommended. Besides, the success of the project heavily depends on the prior implementation of an irrigation scheme, presently under way on the Hari Rud River.

UNIDO's contribution towards the earliest possible implementation of this, for Afghanistan a very important import-substituting project, may be in technical and financing aspects.

The assistance from FAO in starting cultivation of beet sugar in Hari Rud valley, will be required as well. A detailed terms of reference covering a complete set of services required, will have to be drafted.

4.5 Nangarhar Sugar Cane Project

A preliminary report and a supplementary report were prepared by the AGRONOMIC COMPANY LIMITED, Teheran, Iran, and submitted to the MMI in September 1976, and March 1977, respectively. Both reports taken together may be considered as an opportunity study. It has been found by that Company that a number of constraints and obstacles do exist on the way of implementing this project, as e.g. the lack of reliable data on climatic conditions, on the composition and quality of soils, uncertainty concerning the availability of irrigation water, of land for sugar cane cultivation, etc. Therefore, the government decided to postpone the project until better overall conditions in the concerned area will have been created.

4.6 Kandahar Cement Project

A feasibility study was prepared by the FULLER COMPANY, USA and submitted to the MMI in February 1977. With the assistance of UNIDO's experts it has been found that the study has several crucial gaps, as e.g.:

- uncertainty related to the export markets (particularly Iran),
- uncertainty concerning the availability and the quality of raw materials,
- unrealistic production capacity (1.600 tons/day),
- selection of a technological process which is considered unfit for local conditions and possibilities, and some others.

It should also be mentioned that, originally, the Iranian Government pledged to provide funds for the realization of this project. Later, however, it posed some conditions which were unacceptable both for the Afghan Government and for the FULLER Co., as the potential supplier of plant, machinery, and know-how. Thus, the financing of this project is an open question as well.

Our Ministry is in close contact with both, UNIDO and the FULLER Co., aimed at finding appropriate solutions to the so far identified problems. Further UNIDO's assistance may be required in reworking and updating the feasibility study. Detailed terms of reference would have to be drafted at an appropriate time.

As may be seen from these examples there is a variety of reasons related to why certain (pre-) feasibility studies prepared for the Afghan MMI, did not so far lead to an investment. They are self-explanatory and - in our opinion - need no elaboration in this paper. They may, however, be discussed in detail at the Meeting in Vienna.

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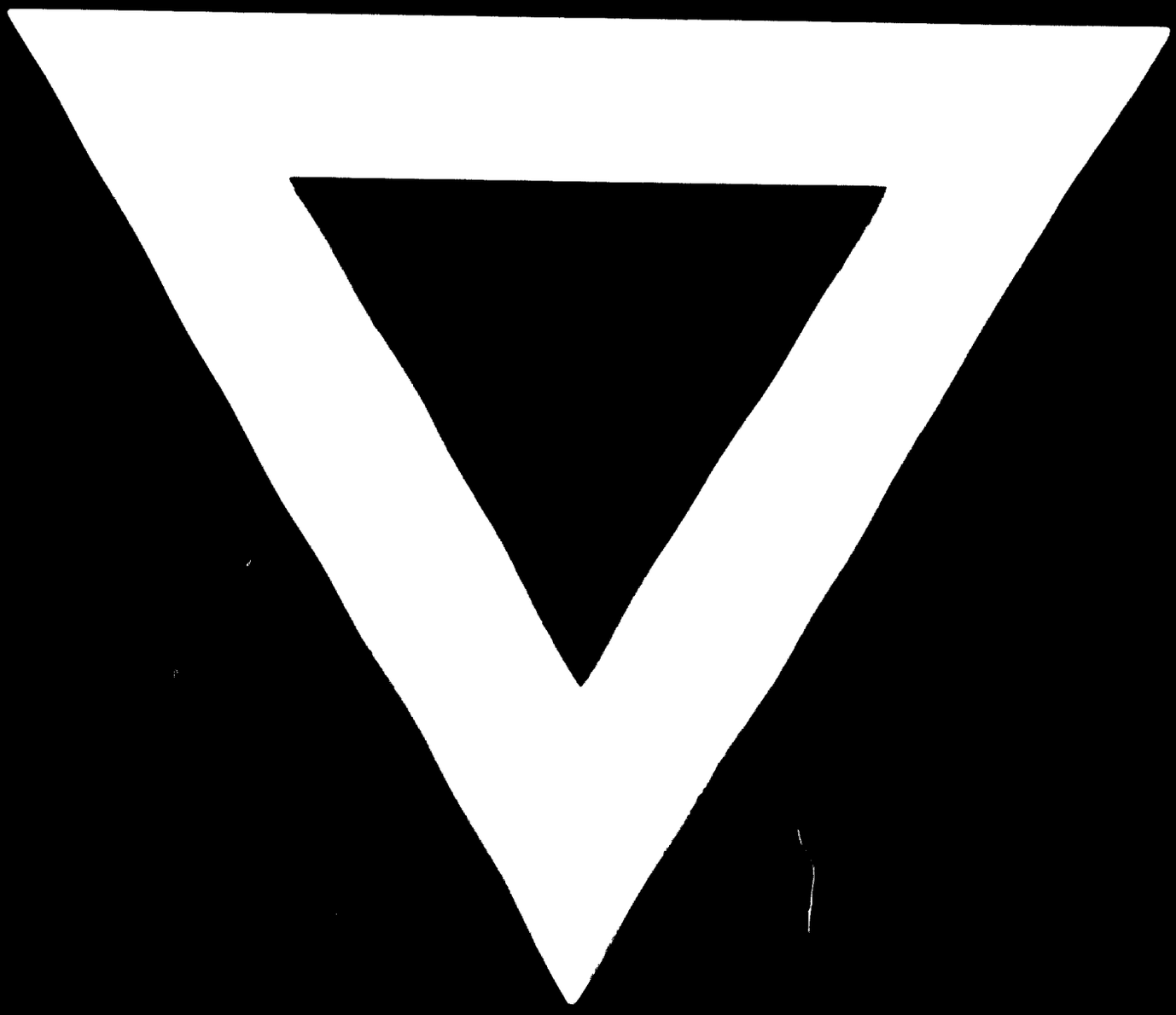

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