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United Nations Industrial Development Organization

Fifth Regional Seminar on UNIDO Operations
Primarily for the Least Developed Countries
in Co-operation with ESCAP

New Delhi, India, 19 - 30 January 1976

REPORT OF THE SEMINAR ^{1/}

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INTRODUCTION

The Objectives of the Seminar

1. The Fifth Regional Seminar on UNIDO operations organized in co-operation with ESCAP, primarily for the Least Developed Countries in Asia and the Far East, and which was held in New Delhi, India, from 19 to 30 January 1976, was the last in a series of regional seminars organized by UNIDO for high level Government officials responsible for industrial development planning and implementation and financed from a voluntary contribution of the Government of Switzerland.
2. The first Seminar of this programme took place in Dakar in June 1971 for the French speaking countries in West Africa; the second was held in Cairo in February 1972 for member countries of the Arab League; the third in Addis Ababa in February 1973 for the least developed countries in Africa and the fourth in San José, Costa Rica, in November 1973 for the Central American and Caribbean countries.
3. The Fifth Regional Seminar had two main objectives;
 - (a) to identify and discuss specific technical assistance proposals in industry in conformity with the priority needs of the Least Developed and Island Countries of Asia in the light of the Lima Declaration and Plan of Action and of the mandates of other inter-governmental forums; and
 - (b) on the basis of the proposals identified and elaborated as above, to promote direct talks between the Least Developed and Island Countries and some other developing countries of the region with a view to establish specific areas of co-operation among themselves, as well as to assist the Least Developed and Island Countries in programming technical assistance from UNIDO/ESCAP/UNDP and other bilateral and multilateral sources.

The Organisation of Work

4. The Seminar was divided into two parts, each of one week duration. The first part was devoted to the discussion and elaboration of the needs of the participating Least Developed and Island Countries and UNIDO's and ESCAP's present and potential roles in these countries. For this part, the following office-bearers were elected:

Chairman: Mr. A.S. Zaman, President, Planning Department,
Ministry of Industry and Mines, Afghanistan

Vice-Chairman: Mr. O. Pradhan, Secretary, Ministry of
Trade, Industry and Forests, Bhutan

Rapporteur: Mr. P. Counder, Principal Assistant Secretary
Ministry of Commerce, Industry and Cooperatives, Fiji.

5. The scope of the Seminar was expanded in the second week, with the additional participation of delegates from six other developing countries of Asia and an observer from one regional organization (APO). This week was devoted particularly to discussions on the Programme of Co-operation among the Developing Countries (CDC). Provision was also made for direct consultations between various delegations with a view to reach preliminary agreements on co-operative arrangements in respect of the proposals identified and elaborated in the previous week. The following office-bearers were elected for the second part of the Seminar:

Chairman: Mr. R.U. Faman, Secretary,
Ministry of Industry and Civil Supplies, India

Vice-Chairman: Mr. B. Kodijat, Special Adviser to the Minister
for Industry, Indonesia

Rapporteurs: E. Wijenaiké, Assistant Secretary,
Department of Business Development, Papua/New
Guinea

Participation

6. The countries represented during the first part of the Seminar were: Afghanistan, Bangladesh, Bhutan, Fiji, Nepal, Papua/New Guinea and Sri Lanka.
7. In the second week, delegations from India, Indonesia, Malaysia, the Philippines, Republic of Korea and Thailand joined the Seminar.
8. The industrialized countries which sent observers to the Seminar were: Austria, Canada, Ireland, New Zealand, Poland and Switzerland.
9. Staff members from UNIDO, ESCAP, UNDP, ILO and APO, Senior Industrial Field Advisers, UNIDO Regional Advisers and Junior Professional Officers attended the Seminar. A list of participants is attached as Annex III.

The Opening Session

10. After the inaugural speech by Mr. A. Saenger, Adviser to the Executive Director, the Honorable Shri T.A. Pai, Minister of Industry and Civil Supplies addressed the opening session of the Seminar on 19 January 1976. He recalled the emphasis laid by the Lima Declaration and Plan of Action on the need to strengthen the base of co-operation among the developing countries as also on the special needs of the least developed among the developing countries. The Seventh Special Session of the General Assembly of the United Nations reaffirmed the need for co-operation among the developing countries and that practical needs should now be found to identify specific programmes and activities where such co-operation can lead to the attainment

of the New International Economic Order.

11. Shri Pai stated that no country can achieve sustained development solely on the basis of import of technologies. Dissemination of knowledge and expertise among the peoples is essential for rapid industrial growth in the developing countries. Further, the technologies available from the developed countries whose industrial structure has achieved a high degree of sophistication in production techniques may not always be ideally suited to the circumstances in the developing countries. It is for these reasons that particular importance should be attached to the programme of technical co-operation among the developing countries. Shri Pai recounted the substantial industrial growth and the experience gained by India in the past 25 years and on behalf of the Government of India, pledged fullest co-operation in building up the industrial economy of the least developed countries.

12. H.E. Mr. E. Suter, Ambassador of Switzerland in India, stated that the Swiss Government was of the view that a well-balanced development could be attained only when agriculture and industry are properly inter-linked. Stressing the need to avoid the danger of creating islands of industrial prosperity in a sea of rural poverty, the Ambassador urged that development policy should give special attention to neglected industry, small-scale industry as well as industries related to the basic needs of the population.

THE LEAST DEVELOPED COUNTRIES

-THEIR PRIORITIES AND NEEDS

13. The representatives of Afghanistan, Bangladesh, Bhutan, Fiji, Nepal, Papua/New Guinea and Sri Lanka read their prepared country papers (except for the representative of Fiji, who made an oral presentation). These papers were prepared in the countries concerned, on request of UNIDO, so as to provide time for inter-departmental consultations at policy and working levels. Each presentation in the Seminar was followed by around-the-table discussions on the salient points raised therein. (The country papers are attached as Annex IV)

The country papers and the discussions that followed highlighted certain common features among the countries concerned.

A. Planning and Strategy

14. The industrial planning machinery in most of the participating countries urgently needs to be strengthened. Thus far the question of linkages of industry with other sectors of economy, or of inter-industry linkages has not received adequate attention and consequently the social and economic returns on investments have been far below expectations. In specific terms, the requirements are:

- a comprehensive, in-depth study of industrial potentials, relative advantages and prospects of developing prime-mover industries, keeping in view the special geographical and institutional limitations of each of the least developed countries;
- as a consequence of the above, formulation of a detailed perspective plan of industrial development with clearly specified sequence of practical actions leading towards the identified objectives;
- strengthening of the project formulation and appraisal machinery;
- establishment of an industrial information system, perhaps linked with an appropriate regional or inter-regional institution and equipped to deal with basic planning data, market indicators and alternate technologies.

B. Management and Administration

15. A number of least developed and island countries have a sizeable public sector in industry, either by deliberate choice or by the necessity of the Government assuming the role of pioneer entrepreneur in the early stage of industrialisation. Management of these public sector enterprises and their relationship with the Government departments need to be improved. Specific examples of weak management and lack of inter-departmental co-ordination resulting in 60-70% idle capacities even after many years of operation were cited and discussed. One of the participants mentioned a detailed study of public sector industrial enterprises in his country undertaken by British consultants under a bilateral aid arrangement. It was stated that the study brought forth a number of practical recommendations on structure of management, lines of control,

accounting and reporting procedure, delegation of authority, techniques of co-ordination of public sector enterprises at departmental level, etc. This evoked a keen interest among many participants who felt that they could greatly benefit from similar expert advice on their own situation or at least from study of that particular case.

The essential thing is to tackle the question of management and administration in a comprehensive package from providing specific practical guidance at the operation as well as policy levels.

C. Industrial Marketing

16. These main problems were cited in this area:
- competition from foreign products and the extent and nature of protection that would be healthy and just;
 - severely limited domestic market, conditioned more so perhaps by wrong product-mix whereby the majority of present industries are oriented towards the needs of a small urban minority, than towards the basic needs of the general population; and
 - absence of regional or sub-regional marketing arrangements in respect of manufactured goods.

D. Manpower Development

17. The need for training in various industrial disciplines was emphasized by all participants. The representatives of Fiji, Papua/New Guinea and Sri Lanka made particular mention of entrepreneurial development training. Several examples were put forth regarding nationals being unable to operate and maintain plants obtained from industrially advanced countries even after many years requiring the continued presence of expatriate technicians.

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18. UNIDO, IDCAP and ILO staff members explained at length the programmes of activities they have been undertaking for the benefit of the least developed countries in Asia. Prospects on future activities were discussed in detail. The observers from Canada and Ireland explained the underlying principles in respect of their aid policies. (See Annex V)

19. The representatives of the participating countries submitted requests for some specific technical co-operation in certain branches of industry. Such needs were discussed in the course of the Seminar with UNIDO staff members. Annex I lists the project proposals identified during the Seminar. Annex II contains the detailed project proposals listed in Annex I.

Observations and Recommendations.

20. There appears to be a growing feeling among the least developed countries that the efforts of the past several years have not, for various reasons, yielded commensurate results. The national plans for industrial development have lagged behind and the industries that have come about have not provided economic and social benefits as expected. Now they seem to be in a mood to take stock of the whole situation and seek ways to tackle the problem of industrialization with a definite and practical perspective framework in mind.

21. In line with the above, the nature and the scope of assistance requested by the least developed countries are changing. The Seminar in Delhi further confirmed this trend. There seems to be a growing awareness that multi-sided but concerted action is essential for meaningful industrial development and in the peculiar circumstances of the least developed countries this would mean steady and continued application of experts' assistance over a fairly long period of time. However, such assistance, it was stated, should come within a well-defined programme of action. Therefore, the following recommendations are submitted for consideration:

22. (a). Consultation should be held immediately at the initial stage with selected least developed countries to undertake comprehensive, in-depth studies to ascertain their industrial opportunities and to assist in the formulation of perspective programmes of action, as stated above under the heading, Planning and Strategy.

In course of time, the studies and consultations should be extended to all least developed countries.

23. The carrying out of such studies should preferably be entrusted to well-known and reliable consultants with the proviso that they must sub-contract, wherever possible, part of the work to local universities or institutions in the countries concerned. This approach would have certain obvious advantages in as much as it would provide opportunity to train nationals in industrial planning and, at the same time, the ultimate product would benefit from local insight and practical wisdom.

24. UNDP should be requested to agree to finance such studies and consultations in the least developed countries under the Special Industrial Services Programme even if they exceed the presently specified normal limitations on amount and duration for SISP projects.

25. (b) "Twinning" arrangements between the central co-ordinating authorities and sector enterprises in the least developed countries with similar institutions in developed countries, might be beneficial. Under this arrangement, the institution in the developed country would provide, on a long-term basis and under active supervision of UNIDO, management expertise, consultancy services and training facilities to the staff of the least developed country. This might also open opportunities of lasting relationships on industry-to-industry basis leading to promotion of semi-manufactured and manufactured products.

26. (c). Whereas UNIDO's efforts on the Programme of Co-operation among Developing Countries have been very worthwhile, co-operation on industrial development needs to be supported by concomitant co-operation on trade. For this reason, UNIDO should hold consultations with UNCTAD and Regional Economic Commissions on joining efforts. This could be done concurrently with the regional and global seminars on CDC sponsored by UNDP.

The need of the least developed countries to gain access to neighbouring foreign markets in order to achieve any degree of industrialisation is obvious. So the first concerted action of UNIDO, UNCTAD and the Regional Economic Commission could perhaps be geared towards some of the countries of this group.

27. (d). The need for industrial training needs no elaboration. At the same time, however, the paradox of a considerable under-utilization of trained man-power in some least developed countries is already visible. Therefore, training programmes must be carefully designed primarily within the context of the perspective programmes of action as stated in Recommendation 1 above. Maximum use must be made of the training facilities provided by other developing countries within the CDC Programme.

28. (e). UNIDO's Section for the Least Developed Countries should actively follow up on the requests for assistance submitted by these countries in the course of the New Delhi Seminar, (see Annexes I and II) keeping them informed of developments at various stages.

CO-OPERATION AMONG THE DEVELOPING COUNTRIES

29. Following the introductory statement of the Resident Representative of UNDP, the discussions on the programme of co-operation among the developing countries started with the expression of needs of the least developed and island countries as elaborated in the previous week.

30. The UNIDO Regional Advisers read papers on various aspects of co-operative efforts in the field of industry in Asia. The ESCAP staff member described in detail the various steps undertaken and planned to promote regional and sub-regional co-operation. The representative of APO explained the activities undertaken by that organization, particularly in respect of training.

31. The participant from India gave an account of the magnitude and direction of growth and development over the last twenty-five years which has resulted in the establishment of large and diversified industrial structure with a strong public sector in crucial areas with significant development of village and small-scale industries. This enabled his country to offer a wide variety of training facilities and supporting facilities and services, consultancy services and planning techniques. Indicating a positive response to specific needs mentioned by the least developed countries, he said that this could be further developed on the basis of specific projects/proposals. Further, the participant from India stressed the need for systematic effort for determining the technological requirements, particularly, of least developed countries. There is also need for effort to prepare information on the technologies available in the middle level and other developing countries.

32. Centralised purchase and acquisition of appropriate technologies for dissemination, if necessary, on subsidised terms, was another aspect to which agencies like ESCAP and UNIDO might devote their attention. Middle level developing countries should be pioneers in implementing fair practices in technology transfer to the least developed countries.

33. The participant from Indonesia referred to the National Housing Development Programme in his country which aims at low cost housing in rural areas. Indonesia could offer assistance in this field.

34. Presently, Indonesia is putting forward a programme for the Workshop of the Village Task Force in Port Moresby (Papua New Guinea) for manufacture

of Clay Roofing Tiles. Such a programme may be of use to other countries as well. Indonesia could also provide training facilities in other industries such as metal working and textiles.

35. The representative of Malaysia said that his country could offer assistance in three areas:-

- (a) Aluminium rolling, extrusion, manufacture;
- (b) Institutional facilities of Industrial financing;
- (c) Plantation, maintenance of rubber estates, training facilities.

36. The participant from the Philippines felt that it would be necessary to distinguish between three types of co-operative arrangements: licensing arrangements with individual firms, joint ventures, and assistance to be provided on an industry basis. The Government sector is directly concerned only with the third type of co-operation. For the first two types private sector initiative is necessary with Government giving indirect assistance as necessary. It is on this basis that offers of assistance of the Philippines have been formulated.

37. The participant from the Philippines stated that her country could offer assistance in the fields of Training, Research and Consultancy facilities of the Institute of Small and Medium Industries (ISSI), the Development Organization of the Philippines (DAP) and the National Development Board (NSDA). The Philippines could also provide training facilities as available in the private sector in the fields of mining, cement, sugar, pulp and paper, electronics and steel fabrication.

38. The participant from the Republic of Korea said that his country was providing training facilities and expertise in a variety of fields and invited interested participants to visit Korea to study the free export zone.

39. The participant from Thailand suggested that the most effective way of establishing co-operation would be that recipient countries would send representatives to Thailand and by observation would determine which organization or enterprise would be the most suitable to give assistance.

Direct Negotiations

40. The above statements were followed by direct negotiations among the participants. These negotiations resulted in preliminary agreements on

co-operative projects, some of which will be further discussed directly between the governments concerned.

Annex I lists the project proposals identified during the Seminar. Annex II contains the detailed project proposals listed in Annex I.

Some Observations and Recommendations with Reference
to the Programme of Co-operation among Developing Countries

41. The Seminar has shown that, given encouragement, the Programme of Co-operation among the developing countries can develop into a major activity within the UN system. The forthcoming regional UNDP Seminar on CDC activities, which will take place in Bangkok, to be followed by a World-wide Symposium organized by UNDP in 1971 will, it is hoped, further provide practical direction and necessary boost to this Programme. Certain features related to the CDC Programme will, however, need particular consideration:

42. (i) The initial hesitations among some of the Developing Countries about the various aspects and potential effects of the CDC Programme seem to be fading away, albeit gradually, in view of the clear economic benefits that could be derived from co-operative efforts. In this process, the role of the UN system assumes critical importance in making available, as necessary, objective consultations with a view to assure that the benefits of co-operative efforts are shared equitably and the long-term interests of all partners are reasonably balanced.

43. (ii) The scope of the CDC programme as visualized by the developing countries seems to exceed what was so far envisaged. Most of the requests for co-operation so far put forth in the course of the Seminar were related to exchange of research information on adaptation of technologies, particularly scaled-down technologies, establishment of pilot demonstration plants, joint-ventures in industrial production and marketing, etc. Short-term exchange of visits of officials and scholars are regarded useful but not the whole purpose of the Programme.

44. (iii) Following on the above, there appears a tendency to treat the CDC Programme as a special activity distinct from other kinds of projects financed by UNDP. The CDC Programme, it is contended, involves economic, social and political considerations among the developing countries in a more intimate manner than the activities within regular technical assistance

programmes do. Therefore, special procedure and distinct financing arrangements are thought to be necessary.

45. It may be pointed out that the above thoughts have already been expressed by the developing countries in various international forums, e.g. Special Sessions of the General Assembly, Second General Conference of UNIDO.

46. In order that UNIDO may further build on the substantial ground-work already done in respect of the CDC Programme, the special unit created, following Resolution 36 (VII) of the Industrial Development Board and incorporated in the Policy Co-ordination Division should, inter alia, undertake the following tasks on a priority basis:

(a) Collaborate in compiling and disseminating up-to-date information on:

- availability of industrial technologies in the developing countries with the prospects of their transfer to other countries;
- existence of excess industrial capacities with a view to meet related needs of other countries on a co-operative basis.

(b) Collaborate with the Regional Economic Commission in identifying industrial projects which would lead to joint efforts among the developing countries;

(c) Collect information on and analyse the experience of various inter-governmental economic groups with a view to formulating hypothetical models for reference as necessary.

(d) Review UNIDO's submissions for inter-country programmes, keeping in mind that regional projects can be useful vehicles to promote long-term mutual co-operation among developing countries.

(e) Co-ordinate and monitor the implementation of already identified CDC Projects, including those identified in the course of this Seminar.

(f) Continue and expand activities presently undertaken by UNIDO including those carried out within joint UNIDO/Romania Centre and UNIDO/India Agreement on Transfer of Technology.

48. 2. Concurrently, a committee should be established ^{within UNIDO} and charged with examining all aspects and implications of the Programme of Co-operation among the developing countries and submitting policy recommendations to the Executive Director. Among other things, the Committee should study the question of promoting the CDC Programme as a special activity with distinct criteria of its own and the means of financing such a programme. These recommendations should form the basis of further consultations with UNDP on this subject.

49. 3. Under an agreement between the Deputy Administrator of UNDP and the Executive Director of UNIDO, SIS fund is being utilized to meet the international travel costs of experts, and fellows are expected to be met by the countries where they would be located, except in the case of the least developed countries where SIS may be utilized for this purpose also.

UNDP should now be requested to agree to authorize use of SIS funds to meet local costs, at standard UN rates, of experts and fellows in all cases, regardless of whether they are located in the least developed countries or not.

As a case in point, during the Seminar one delegation actually withdrew two projects, in which the Government of India had agreed to provide terms of experts, as on later calculation they found the contribution to be paid for local expenditures too high to assume.

ANNEX 1

LIST OF PROJECT PROPOSALS IDENTIFIED DURING THE VISIT

Projects to be considered for UNIDO assistance	Projects to be considered for CDC
<u>AFGHANISTAN</u>	
<ol style="list-style-type: none">1) Possibility study of Iron and Steel Resources and Processing Alternatives2) Industrial Planning3) Study on utilization of natural gas4) Establishing of Industrial Engineering Centre	<ol style="list-style-type: none">1) Quality upgrading of Ceramic Industry (India)2) Training and assistance for Extraction of Iron ore and establishing of Iron and Steel plant. <u>Experts</u> (India)3) Training and assistance for Extraction of Iron ore and establishing of Iron and Steel plant. <u>Training</u> (Philippines)4) Extraction and processing of copper (Philippines)5) Training of personnel in Textiles (Thailand)6) Establishment of pulp and paper manufacturing from straw and grass (Thailand)
<u>BANGLADESH</u>	
<ol style="list-style-type: none">1) Manufacture of Footwear for Export	<ol style="list-style-type: none">1) Fish-meal and Poultry-feed Industry (Philippines)2) Export-oriented Industries (Republic of Korea)3) Assistance to Paper Industry (Indonesia)4) Joint Venture in Fish Products Industry (Thailand)5) Fruit Processing (India)6) Textile Industry (India)7) Possibility Study on the establishment of an Electric Arc Furnace (India)8) Development of Rubber plantation Maintenance and processing (Malaysia)

Projects to be considered for UNIDO assistance

Projects to be considered for CDC

INDIAN

- 1) Establishment of a Marble processing Unit
- 2) Establishment of a Slate processing Unit
- 3) Pilot Plant for Processing of essential Oil as Lemon grass oil and Pine oil
- 4) Establishment of a Pilot Plant for exploitation and up-grading of Graphite
- 5) Establishment of a Small-scale Animal-feed manufacturing Unit
- 6) Pilot plant for Ply-wood manufacture

PLI

- 1) Fish processing (Republic of Korea)
- 2) Building Material Industry (India)
- 3) Export-oriented small-scale Industries (Indonesia)
- 4) Rubber Products Industry (Malaysia)
- 5) Leather Products Industry (Philippines)
- 6) Development of Export Industries (Republic of Korea)
- 7) Molasses processing (India)
- 8) Standardisation (India)
- 9) Installation of coir-fibre processing Unit (India)
- 10) Industrial Free Zone (Ireland)
- 11) Food Processing (Republic of Korea)

Projects to be considered for UNIDO assistance	Projects to be considered for C/C
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NEPAL

- 1) Study and Selection of appropriate products and technology
- 2) Assistance in implementation of Iron and Steel Projects
- 3) Development of an Industrial Information Centre
- 4) Demonstration plant for compounding/capsuling of selected pharmaceuticals

- 1) Fruit Processing Industry (India)
- 2) Glass manufacturing (India)
- 3) Pulp and Paper technology (India)
- 4) Development of Sericulture Industry (Republic of Korea)
- 5) Training in Industrial Services for Small Enterprises (Philippines)
- 6) Improvement of Rice Milling Operations (Thailand)
- 7) Management and Training in Agro-based Industries (Ireland)
- 8) Timber processing Industry (Indonesia)

PAPUA/NEW GUINEA

- 1) Promotion of joint ventures (India)
- 2) Furniture Industry (Thailand)
- 3) Silk Industry (Thailand)
- 4) Joint venture in Silk Industry (Thailand)
- 5) Metalworking Industry (India)
- 6) Leather Industry (India)
- 7) Development of Rationalisation of Rural Industries (Indonesia)
- 8) Development of small-scale and medium-size Industries (Philippines)
- 9) Development of Sericulture Industries (Republic of Korea)
- 10) Rubber-moulded goods (Malaysia)
- 11) Export-oriented Industries (Ireland)

Projects to be considered for UNIDO assistance	Projects to be considered for CRC
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INDIA

1) Institutional Development of public Sector Corporations

- 1) Building Materials Research-Extension Services (Indonesia)
- 2) Rubber Technology and Product Development (Malaysia)
- 3) Rice Milling and Storage Facilities (Thailand)
- 4) Agricultural raw Material Survey for Establishment of Agro-based Industries (India)
- 5) Development of the Essential Oils Industry in Sri Lanka (India)
- 6) Establishing small-scale industrial facilities at village level (India)
- 7) Small-scale Industries Programme (Ireland)

ANNEX II

DETAILED PROJECT PROPOSALS LISTED IN ANNEX I

Projects to be considered for UNIDO Assistance

RECIPIENT COUNTRY: AFGHANISTAN

DESIGNATION OF PROJECT: Feasibility Study of Iron and Steel Resources and Processing Alternatives

BRIEF DESCRIPTION OF PROJECT: Afghanistan possesses large and high quality iron ore deposits, which so far have not been exploited properly. The resource situation needs to be studied in light of new information (recent discoveries of deposits and proposed railway link to Iran).

OBJECTIVES OF PROJECT: To extract iron ore
To set up iron and steel plants with optimum capacities

RECIPIENT COUNTRY: AFGHANISTAN

DESIGNATION OF PROJECT: Industrial Planning

BRIEF DESCRIPTION OF PROJECTS:

- 1) To provide planning inputs to the industrial sector (public) in terms of short-, mid- and long-term policies and strategies on a continuing basis in conjunction with a leading University;
- 2) To train appropriate capabilities at the local level, and
- 3) To provide an organisational framework within the Ministry of Mines and Industry

RECIPIENT COUNTRY: AFGHANISTAN

DESIGNATION OF PROJECT: Study of utilization of natural gas

BRIEF DESCRIPTION OF PROJECT: To study utilization of domestically available natural gas for combustion purposes and liquefaction

OBJECTIVES OF PROJECT: To provide for maximum local utilization of domestic gas.

RECIPIENT COUNTRY: AFGHANISTAN

DESIGNATION OF PROJECT: Establishing of Industrial Engineering Centre for training Afghan engineers and technicians

BRIEF DESCRIPTION OF PROJECT: Analysis of establishment of Centre for technical training in the field of:
- Petro-chemical - fertilizer
- Gas and Oil
- Cement
- Textile - a) Dyeing
 b) Printing

OBJECTIVES OF PROJECT: Training Afghan engineers in production and maintenance aspects of the above fields to replace foreign experts.

CO-OPERATION REQUIRED: A team of 3 consultants for a period of one month to study and analyse the possibility of establishment of such training centre.

OBSERVATIONS: It will be taken under consideration of Ireland Government and the result will be conveyed in the near future to UNIDO and the Government of Afghanistan.

Projects to be considered for GDC

RECIPIENT COUNTRY: AFGHANISTAN CO-OPERATING COUNTRY: INDIA

DESIGNATION OF PROJECT: Quality upgrading of Ceramic Industry

OBSERVATIONS: In principle, the Government of India agreed to send one or two experts to Afghanistan and Government of Afghanistan must give more information about the field of activity in ceramic industry.

RECIPIENT COUNTRY: AFGHANISTAN CO-OPERATING COUNTRY: INDIA

DESIGNATION OF PROJECT: Training and assistance for extraction of iron ore and establishing of Iron and Steel Plant

BRIEF DESCRIPTION OF PROJECT: The project of extraction of iron ore and iron and steel processing is under study, to obtain optimum size of the plant.

OBJECTIVES OF PROJECT: Facilitate the development of iron ore deposits /...

OBSERVATIONS: India has in principle agreed to assist the country. The details of the project are under consideration.

RECIPIENT COUNTRY: AFGHANISTAN **CO-OPERATING COUNTRY:** PHILIPPINES

DESIGNATION OF PROJECT: Training and assistance for extraction of iron ore and establishing of iron and steel plant

BRIEF DESCRIPTION OF PROJECT: The project of extraction of iron ore and iron and steel processing is under study, to obtain optimum size of Plant

OBJECTIVES OF PROJECT: Facilitate the development of iron deposits

CO-OPERATION REQUIRED: For training:
2 engineers in Mining
2 engineers in Metallurgy
2 engineers for Metal Processing

OBSERVATIONS: Philippines agrees

RECIPIENT COUNTRY: AFGHANISTAN **CO-OPERATING COUNTRY:** PHILIPPINES

DESIGNATION OF PROJECT: Extraction and Processing of copper

BRIEF DESCRIPTION OF PROJECT: The project of extraction of copper processing is under study, to obtain optimum size of plants

OBJECTIVES OF PROJECT: Facilitate the development of copper deposits

CO-OPERATION REQUIRED: Training for:
2 Engineers in Mining
2 Engineers in Metallurgy

OBSERVATIONS: Assistance will be available

NOTE: The above assistance is under consideration by the Philippine Government

RECIPIENT COUNTRY: AFGHANISTAN CO-OPERATING COUNTRY: THAILAND

DESIGNATION OF PROJECT: Training of personnel in textiles

BRIEF DESCRIPTION OF PROJECT: Training of Afghan technicians in the field of finishing such as:
1. Dyeing
2. Printing, and
3. Designing of textiles

OBJECTIVES OF PROJECT: To improve the quality of textile products

CO-OPERATION REQUIRED: 2 Experts and training of Afghan technicians for 6 persons in a period of 3-4 months :
2 for dyeing
2 for printing
2 for designing

OBSERVATIONS: Provision of expert was not possible and training of Afghan technicians will be possible

RECIPIENT COUNTRY: AFGHANISTAN CO-OPERATING COUNTRY: THAILAND

DESIGNATION OF PROJECT: Preparation for the establishment of pulp and paper manufacturing from straw and grass.

BRIEF DESCRIPTION OF PROJECT: Exchange of information and experience. Senior Engineer for 15 days

OBSERVATIONS: The delegate of Thailand informed that Thailand will provide facilities for exchanging information on Pulp and Paper production from straw and grass.

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Projects to be considered for UNILC Assistance

RECIPIENT
COUNTRY:

BANGLADESH

DESIGNATION
OF PROJECT:

Manufacture of footwear for export

BRIEF
DESCRIPTION
OF PROJECT:

The project envisages obtaining expert assistance in conducting a market study on the prospect of export of footwear from Bangladesh. The report may also indicate the types of footwear which can be manufactured for purpose of export, giving the names of countries to which these can be exported.

OBJECTIVES
OF PROJECT:

It aims at setting up a modern footwear manufacturing factory for export.

OBSERVATIONS:

Bangladesh provides good quality hides and skins which can be profitably used for manufacture of high-grade footwear for export. The Government would provide local facilities to the experts.

Projects to be considered for CDC

RECIPIENT
COUNTRY:

BANGLADESH

CO-OPERATING
COUNTRY:

PHILIPPINES

DESIGNATION
OF PROJECT:

Fish-meal and Poultry-feed industry

BRIEF
DESCRIPTION
OF PROJECT:

Assistance in the form of experts' services is required in the promotion of fish-meal and poultry-feed industry in Bangladesh.

OBJECTIVES
OF PROJECT:

Development of resource-based industry

CO-OPERATION
REQUIRED:

Experts' services

OBSERVATIONS:

Philippines will explore the possibility of assisting Bangladesh in this field and inform Bangladesh and UNIDO about further action.

RECIPIENT COUNTRY: BANGLADESH CO-OPERATING COUNTRY: REPUBLIC OF KOREA

DESIGNATION OF PROJECT: Export-Oriented Industries

BRIEF DESCRIPTION OF PROJECT: Assistance is needed in the development of export-oriented industries in Bangladesh. The project involves identification of industries and formulation of appropriate policy measures.

OBJECTIVE OF PROJECT: Development of the export of manufactured products of Bangladesh

CO-OPERATION REQUIRED: Experts' services

OBSERVATIONS: Korea will ascertain the availability of required expertise and inform UNIDO and Bangladesh about further action

RECIPIENT COUNTRY: BANGLADESH CO-OPERATING COUNTRY: INDONESIA

DESIGNATION OF PROJECT: Assistance to the Paper Industry

BRIEF DESCRIPTION OF PROJECT: The project involves a study of the technical aspects of the paper industry in Bangladesh with a view to improving its efficiency.

OBJECTIVES OF PROJECT: Development of Paper Industry for Export

CO-OPERATION REQUIRED: Expert's services

OBSERVATIONS: Indonesia will confirm the availability of required expertise and write to Bangladesh directly, keeping UNIDO informed.

RECIPIENT COUNTRY: BANGLADESH CO-OPERATING COUNTRY: THAILAND

DESIGNATION OF PROJECT: Joint Venture in Fish Products Industry

BRIEF DESCRIPTION OF PROJECT: The proposal seeks to promote a joint venture between Thailand and Bangladesh in the field of fishery, canning, preservation and marketing of products. A feasibility study on the establishment of an integrated facility in Bangladesh along these lines is needed.

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RECIPIENT COUNTRY: BANGLADESH CO-OPERATING COUNTRY: INDIA

DESIGNATION OF PROJECT: Feasibility Study on the Establishment of an electric Arc Furnace

BRIEF DESCRIPTION OF PROJECT: Techno-economic feasibility study to explore the possibility of establishing an electric Arc Furnace with facilities for forging and heat treatment. It would include deployment of experts to work with a local engineering firm and make recommendations. On the basis of the recommendations, training programme can be arranged.

OBJECTIVES OF PROJECT: The object of the project is to set up a capacity to manufacture alloy steel, steel castings and other items required mainly for the railways.

CO-OPERATION REQUIRED: UNIDO and India (the country providing the foreign consultants) are expected to bear costs of experts. UNIDO (International Travel); India (subsistence for the experts and other expenses in India).

OBSERVATIONS: The project is expected to be taken up very shortly (3 months experts in the field).

RECIPIENT COUNTRY: BANGLADESH CO-OPERATING COUNTRY: MALAYSIA

DESIGNATION OF PROJECT: Development of Rubber plantation maintenance and processing.

BRIEF DESCRIPTION OF PROJECT: It envisages obtaining assistance in the plantation and maintenance of the rubber gardens and processing of latex. It will involve sending experts to Bangladesh to study the local conditions and undertaking training programmes for the technicians of here and abroad.

OBJECTIVES OF PROJECT: It aims at making the country self-sufficient in rubber

OBSERVATIONS: The Government would provide local facilities for the experts and local expenses connected with the training programme.

Projects to be considered for UNIDO Assistance

RECIPIENT COUNTRY: BHUTAN

DESIGNATION OF PROJECT: Establishment of a Marble Processing Unit

BRIEF DESCRIPTION OF PROJECT: Extensive deposits of good quality marble have been discovered in Paro, Western Bhutan. In order to process this raw material, the first step would be to start a Unit for manufacture of marble slabs and chips. These materials are utilized in the construction industry on a large scale.

OBJECTIVES OF PROJECT: To exploit the mineral deposits for use mostly in the construction industry and for exports to nearby countries and consequently increase Government revenue.

CO-OPERATION REQUIRED: UNIDO contribution required would amount to about US\$ 650,000 for equipment for slicing, polishing and edge cutting.

OBSERVATIONS: The Government's contribution would be about 30 or 40,000 U.S.". This project has priority in the Industrial Programme.

RECIPIENT COUNTRY: BHUTAN

DESIGNATION OF PROJECT: Establishing a Slate Processing Unit

BRIEF DESCRIPTION OF PROJECT: Over 500,000 cu. metres of good quality slate has been discovered in Wangdiphodrang District. Presently small quantities are being mined for use as roofing material. If suitable equipment is provided by UNIDO it would be possible to go in for extensive mining operations.

OBJECTIVES OF PROJECT: To replace imported corrugated galvanized iron sheets and also to manufacture other small items like school slates, blackboards, etc.

CO-OPERATION REQUIRED: UNIDO contribution required would be about US\$ 50,000 for equipment for polishing, edge cutting and most probably for slicing material.

OBSERVATIONS: The project has priority to enable saving of foreign currency reserves.

RECIPIENT
COUNTRY: BHUTAN

DESIGNATION
OF PROJECT: Pilot plant for processing essential oil such as Lemon Grass Oil and Pine Oil.

BRIEF
DESCRIPTION
OF PROJECT: Bhutan has vast chirpine forests. Presently Resin is being extracted and processed on a small scale in the Eastern Region of Bhutan. The present processing of Resin into Rosin and Turpentine is rather crude and thereby makes it difficult to produce marketable quality products. Details of this project will be sent to UNIDO by April or May 1976.

OBJECTIVES
OF PROJECT: To utilize the available forest resources and to increase the efficiency and quality of manufactured goods for export. Foreign currency earnings would be considerably enhanced.

CO-OPERATION
REQUIRED: The entire equipment of a Pilot Plant, which would amount to about US\$ 650,000.

OBSERVATIONS: This project has priority in the Industrial Programme. The Government input would be about US\$ 80,000.

RECIPIENT
COUNTRY: BHUTAN

DESIGNATION
OF PROJECT: Establishment of a Pilot Plant for the exploitation and up-grading of graphite

BRIEF
DESCRIPTION
OF PROJECT: About 5 million tons of Graphite ore of suitable grade has been discovered in Chalkila, Western Bhutan. Feasibility studies are being carried out for exploitation of these deposits. The feasibility study will be ready for submission to UNIDO by early March 1976. Once a plant has been set up, the up-graded graphite could be utilized for various industrial purposes.

OBJECTIVES
OF PROJECT: The immediate objective of the project is to explore the available mineral resources by up-grading Graphite ore. This would help in future industrialisation through establishment of other industries, such as crucibles for steel industry, pencils, etc.

CO-OPERATION
REQUIRED: UNIDO's contribution would be about US\$ 400,000 to US\$ 500,000 for equipment, and 1/24 man-months expertise.

OBSERVATIONS: This project has priority in the Industrial Programme of the country. The Government contribution would amount to approximately US\$ 50,000.

RECIPIENT COUNTRY: BHUTAN

DESIGNATION OF PROJECT: Establishment of a Small-scale Animal Feed Manufacturing Unit

BRIEF DESCRIPTION OF PROJECT: To manufacture animal and poultry feed. Raw materials required for this purpose like mustard oil cake, rice bran, maize, etc. are available mostly within the country. Presently, the major portion of the requirement is being imported.

OBJECTIVES OF PROJECT: To produce good quality animal and poultry feed from available resources. This would help to substitute imports and save foreign currency reserves.

CO-OPERATION REQUIRED: UNIDO's contribution would amount to about US\$ 60,000 for the equipment required for manufacturing the feed.

OBSERVATIONS: The Government contribution would amount to about US\$ 20,000

RECIPIENT COUNTRY: BHUTAN

DESIGNATION OF PROJECT: Pilot Plant for Plywood manufacture

BRIEF DESCRIPTION OF PROJECT: Bhutan has large forest areas, the timber from which is suitable for manufacture of plywood. It would therefore be possible to set up a Pilot Plant by utilizing these resources for the manufacture of plywood.

OBJECTIVES OF PROJECT: To utilize the available resources and thereby meet local requirements of plywood and earn foreign currency through exports.

CO-OPERATION REQUIRED: The project has priority. The Government would contribute about US\$ 80,000.

Projects to be considered for CDC

RECIPIENT COUNTRY: FIJI CO-OPERATING COUNTRY: REPUBLIC OF KOREA

DESIGNATION OF PROJECT: Fish Processing.

BRIEF DESCRIPTION OF PROJECT: Provision of training of Fiji Nationals in the "Fishing Vocational Centre" and feasibility study for the manufacture of fishing nets at the village level.

OBJECTIVES OF PROJECT: To develop the fishery industry in Fiji.

CO-OPERATION REQUIRED: Training of 2/3 Fiji Nationals.

OBSERVATIONS: The representative of Korea will take up the above request for the formal approval of his Government.

RECIPIENT COUNTRY: FIJI CO-OPERATING COUNTRY: INDIA

DESIGNATION OF PROJECT: Building Material Industry.

BRIEF DESCRIPTION OF PROJECT: Testing the clay for the production of brick, tiles, ornamental ceramics, pottery etc. and training of technicians in the above discipline.

OBJECTIVES OF PROJECT: To develop the building materials industry in Fiji.

CO-OPERATION REQUIRED: Testing of clay and training of 3 technicians for a period of three months as above.

OBSERVATIONS: India will provide the above facilities.

RECIPIENT COUNTRY: FIJI CO-OPERATING COUNTRY: INDONESIA

DESIGNATION OF PROJECT: Export-oriented small-scale Industries.

BRIEF DESCRIPTION OF PROJECT: Identification of possibilities of promoting small-scale industries primarily oriented towards export market.

OBJECTIVES OF PROJECT: Development of export of manufactured articles.

CO-OPERATION REQUIRED: A team of two experts for one month to study the above and make appropriate recommendations.

OBSERVATIONS: Indonesia will be able to provide the experts as requested.

RECIPIENT COUNTRY: FIJI **CO-OPERATING COUNTRY:** MALAYSIA

DESIGNATION OF PROJECT: Rubber Products Industry.

BRIEF DESCRIPTION OF PROJECT: Joint venture in a rubber products industry to be located in Fiji.

OBJECTIVES OF PROJECT: Co-operative development of resource based industries.

CO-OPERATION REQUIRED: Technical know-how/financial participation.

OBSERVATIONS: Malaysia will direct the proposal to interested private parties if the Government of Fiji would make a formal request.

RECIPIENT COUNTRY: FIJI **CO-OPERATING COUNTRY:** PHILIPPINES

DESIGNATION OF PROJECT: Leather Products Industry.

BRIEF DESCRIPTION OF PROJECT: Provision of:
a) in-plant training to the technicians of the existing private firms in Fiji,
b) joint venture for a new plant,
c) licensing arrangements.

OBJECTIVES OF PROJECT: Co-operative development of resource based industries.

CO-OPERATION REQUIRED: Training facilities, technical know-how and financial participation.

OBSERVATIONS: The delegate of Fiji will contact the existing private firms in Fiji and provide specific details to the Philippines Government.

RECIPIENT COUNTRY: FIJI CO-OPERATING REPUBLIC OF KOREA
COUNTRY: COUNTRY:

DESIGNATION OF PROJECT: Development of Export Industries.

BRIEF DESCRIPTION OF PROJECT: Study tour of the Free Trade Zones in Korea and exchange of experience with appropriate authorities.

OBJECTIVES OF PROJECT: To develop the export of manufactured products of Fiji.

CO-OPERATION REQUIRED: Study tour for one official.

OBSERVATIONS: The Government of Korea has already made such an offer to UNIDO and the request will be processed through UNIDO.

RECIPIENT COUNTRY: FIJI CO-OPERATING COUNTRY: INDIA

DESIGNATION OF PROJECT: Molasses Processing.

BRIEF DESCRIPTION OF PROJECT: To make a comprehensive survey of a feasibility to establish molasse processing industries by the Indian National Industrial Development Centre - 1 man x 3 months.

OBJECTIVES OF PROJECT: To use the sugar cane molasse which is now waste.

CO-OPERATION REQUIRED: as above.

OBSERVATIONS: Details of the project would be worked out by OPAS expert.

RECIPIENT COUNTRY: FIJI CO-OPERATING COUNTRY: INDIA

DESIGNATION OF PROJECT: Standardisation.

BRIEF DESCRIPTION OF PROJECT: Six weeks' survey by the Indian Standardization Institute for the identification of basic requirements for standardisation. The follow-up activities and the second phase of the project will be worked out after further discussions between the two countries.

OBJECTIVES OF PROJECT: To improve the feasibility of local manufacturing products for export.

CO-OPERATION REQUIRED: as above.

OBSERVATIONS: Details of the project will be clarified during the

RECIPIENT COUNTRY: FIJI CO-OPERATING COUNTRY: INDIA

DESIGNATION OF PROJECT: Installation of coir-fibre processing unit.

BRIEF DESCRIPTION OF PROJECT: The equipment is being purchased from India. Technical assistance is requested to supervise the assembling of the equipment, the starting of the plant and the training of technicians. 1 man x 6 months

OBJECTIVES OF PROJECT: To use the coco-bersks which are now wasted.

OBSERVATIONS: The details of the project will be clarified after further negotiations between the two countries.



RECIPIENT COUNTRY: FIJI CO-OPERATING COUNTRY: IRELAND

DESIGNATION OF PROJECT: Industrial Free Zone

BRIEF DESCRIPTION OF PROJECT: Facilities for sending a participant to the Shannon Development Centre Study Course in Industrial Free Zones in 1976.

OBJECTIVES OF PROJECT: The eventual establishment of an industrial free zone for export oriented industries.

CO-OPERATION REQUIRED: See "BRIEF DESCRIPTION" above.



RECIPIENT COUNTRY: FIJI CO-OPERATING COUNTRY: REPUBLIC OF KOREA

DESIGNATION OF PROJECT: Food processing

BRIEF DESCRIPTION OF PROJECT: Provision of study-tour/training facilities for Management/technical personnel

OBJECTIVES OF PROJECT: To develop food-processing industry in Fiji on modern, scientific basis.

CO-OPERATION REQUIRED: Study/tour training for six Fiji nationals

OBSERVATIONS: The delegate from Korea will submit the above proposal to his Government for approval.



Projects to be considered for UNIDO Assistance

RECIPIENT
COUNTRY: NEPAL

DESIGNATION
OF PROJECT: Study and selection of appropriate products and technology

BRIEF
DESCRIPTION
OF PROJECT: Comprehensive survey to: 1) formulate criteria for appropriateness of technology to Nepal's conditions, and 2) identify products and processes for priority implementation

OBJECTIVES
OF PROJECT: To help in selection of the "correct" industries for generation of employment and utilization of local markets and materials

CO-OPERATION
REQUIRED: 3 UNIDO/ESCAP regional advisers for four weeks and 2 experts for 16 weeks

OBSERVATIONS: The Government staff members to work with UNIDO/ESCAP team. The multi-disciplinary mission should be at the end of 1976 or early 1977.

RECIPIENT
COUNTRY: NEPAL

DESIGNATION
OF PROJECT: Assistance in implementation of iron and steel projects

BRIEF
DESCRIPTION
OF PROJECT: UNIDO should provide assistance on:
1) Scrutiny of feasibility study
2) Locating sources of capital and technology
3) Fellowships to familiarise technicians with charcoal production/electro-smelting, iron making

OBJECTIVES
OF PROJECT: Establishment of a viable small steel mill

RECIPIENT
COUNTRY: NEPAL

DESIGNATION
OF PROJECT: Development of an Industrial Information Centre

BRIEF
DESCRIPTION
OF PROJECT: Programme to be designed for dissemination of information and promotion of appropriate technologies. Later this could develop into a national centre for appropriate technology

OBJECTIVES
OF PROJECT: To set up a I.S.C. or a small information cell in the Department of Industry, to collect and disseminate information on alternative technologies.

RECIPIENT
COUNTRY: NEPAL

DESIGNATION
OF PROJECT: Demonstration plant for compounding and capsuling of
selected pharmaceuticals

OBSERVATIONS: This would be a follow-up of an approved SIS project.

Projects to be considered for CDC

RECIPIENT
COUNTRY: NEPAL

CO-OPERATING
COUNTRY: INDIA

DESIGNATION
OF PROJECT: Fruit Processing Industry

BRIEF
DESCRIPTION
OF PROJECT: Fruit preservation and canning needs improvement. Management
is required. Eastern ferai units are rather developed but
produce with a low capacity. One expert is needed to
study the situation and recommend how to make these units
more economical.

OBJECTIVES
OF PROJECT: To develop agro-industries

CO-OPERATION
REQUIRED: Expertise

OBSERVATIONS: India will provide an expert for 2 months who will - together
with an expert of Nepal - survey the industry and make
recommendations.

RECIPIENT
COUNTRY: NEPAL

CO-OPERATING
COUNTRY: INDIA

DESIGNATION
OF PROJECT: Glass manufacturing

BRIEF
DESCRIPTION
OF PROJECT: A glass factory already exists and a preliminary feasibility
study has already been done by India. The factory wants now
to diversify its product covering sheets manufacturing and
bottle making. An expert is needed to survey the glass in-
dustry. Training is also needed.

OBJECTIVES
OF PROJECT: To survey the existing situation and advise on diversifying
the products.

CO-OPERATION
REQUIRED: Expert's services

OBSERVATIONS: India requested from Nepal a list of equipment now available in the factory. India, however, agreed to send an expert for 3 weeks under CDC. If Nepal wishes that an expert should visit Nepal soon, they may consider the possibility of seeking Indian assistance bi^o laterally, as CDC may take some time.

RECIPIENT
COUNTRY: NEPAL

CO-OPERATING
COUNTRY: INDIA

DESIGNATION
OF PROJECT: Pulp and Paper Technology

BRIEF
DESCRIPTION
OF PROJECT: Feasibility report is available on a 100 t/day plant. The report was prepared by an Indian company. An expert is needed to survey the raw materials and the market and advise on the scaling down of capacity and on the establishment of a mini plant, for which a feasibility study exists.

OBJECTIVES
OF PROJECT: To develop appropriate technology for an economically viable unit of 50 t/day.

CO-OPERATION
REQUIRED: Technological consultancy services

OBSERVATIONS: India requested that the comments of the Nepal Government as to the scaling down should be sent to the NIDC, which prepared the feasibility report. Also a copy of the feasibility report on the mini plant should be submitted to the NIDC. After its study the Indian Government will send an expert for two or three weeks for consultation.

RECIPIENT
COUNTRY: NEPAL

CO-OPERATING
COUNTRY: REPUBLIC OF KOREA

DESIGNATION
OF PROJECT: Development of Sericulture Industry

BRIEF
DESCRIPTION
OF PROJECT: South Korea has already provided assistance to Nepal on Sericulture. Based on the findings of the preliminary investigations, follow up action is required. A sericulture expert will be deputed to Nepal for a period of 4 weeks to assist the Government in formulating plans for setting up a pilot project.

OBJECTIVES
OF PROJECT: To help establish an alternative means of livelihood for farm workers in rural communities.

CO-OPERATION
REQUIRED: Expert services as described above.

RECIPIENT COUNTRY: NEPAL CO-OPERATING COUNTRY: PHILIPPINES

DESIGNATION OF PROJECT: Training in Industrial Services for Small Enterprises

BRIEF DESCRIPTION OF PROJECT: The Ministry of Industry and the Industrial Services Centre need to strengthen their capabilities for preparing and appraising industrial projects as well as for providing management consultancy services. It is proposed that 4 officials of the above Organizations undergo training at UP-ISSI for the duration of about 3 months each in feasibility study preparation and industrial management.

OBJECTIVES OF PROJECT: To develop local capability in planning and implementing small industrial projects

CO-OPERATION REQUIRED: Training facilities for four officials as indicated above.



RECIPIENT COUNTRY: NEPAL CO-OPERATING COUNTRY: THAILAND

DESIGNATION OF PROJECT: Improvement of Rice Milling Operations

BRIEF DESCRIPTION OF PROJECT: In order to improve the efficiency of rice milling operations in Nepal and the utilization of all by-products, four officials will be sent on a study tour to observe modern mills in Thailand.

OBJECTIVES OF PROJECT: To up-grade the technology of rice milling and by-product utilization

CO-OPERATION REQUIRED: Four officials will make a tour of above 4 weeks duration to study all aspects of rice milling in Thailand



RECIPIENT COUNTRY: NEPAL CO-OPERATING COUNTRY: IRELAND

DESIGNATION OF PROJECT: Management and Training in Agro-based Industries

BRIEF DESCRIPTION OF PROJECT: 1) Expert for 2 weeks to make preliminary study for identification of agro-based industries for further technical assistance from Ireland ii) Facilities for training in Ireland for two trainees in industrial management

OBJECTIVES OF PROJECT: 1) The development of further agro-based industries ii) The provision of trained persons to carry out work in the field of industrial consultancy in Nepal.



RECIPIENT COUNTRY:	NEPAL	CO-OPERATING COUNTRY:	INDONESIA
DESIGNATION OF PROJECT:	Timber Processing Industry		
BRIEF DESCRIPTION OF PROJECT:	Facilities for study tour by two Nepal Government officials to Indonesia to observe (i) saw-milling (ii) by-product processing plants in Indonesia, followed by advisory mission of one Indonesian expert to Nepal for about 2 weeks to assist in formulating plans for improving this industry in Nepal.		
OBJECTIVES OF PROJECT:	To develop timber processing on a rational basis		
CO-OPERATION REQUIRED:	Two study fellowships followed by advisory mission		
OBSERVATIONS:	The Indonesian representatives to take up above request with the Government for approval.		

Projects to be considered for CDC

RECIPIENT COUNTRY: PAPUA/NEW GUINEA CO-OPERATING COUNTRY: INDIA

DESIGNATION OF PROJECT: Promotion of Joint Ventures

BRIEF DESCRIPTION OF PROJECT: The Government of Papua/New Guinea has provided significant incentives to external private capital. Joint ventures between the Indian and Papua/New Guinea entrepreneurs could be mutually beneficial. It is proposed that prospective areas of joint investment in industries located in Papua/New Guinea should be explored.

OBJECTIVES OF PROJECT: Development of co-operative industrial production.

OBSERVATIONS: The matter should best be discussed among the entrepreneurs themselves. Papua/New Guinea will provide detailed information on opportunities and incentives.

RECIPIENT COUNTRY: PAPUA/NEW GUINEA CO-OPERATING COUNTRY: THAILAND

DESIGNATION OF PROJECT: Furniture Industry

BRIEF DESCRIPTION OF PROJECT: Papua/New Guinea imports all its furniture. The country is now interested in undertaking modular furniture production. Training facilities are needed.

OBJECTIVES OF PROJECT: Development of resource-based Industry.

CO-OPERATION REQUIRED: Training of two Papua/New Guinean nationals for 6-9 months.

OBSERVATIONS: Thailand will arrange to provide training facilities as requested.

RECIPIENT COUNTRY: PAPUA/NEW GUINEA CO-OPERATING COUNTRY: THAILAND

DESIGNATION OF PROJECT: Silk Industry

BRIEF DESCRIPTION OF PROJECT: A project in this area was initiated in 1968, but the results have not been satisfactory. Some expertise and training facilities are necessary.

OBJECTIVES OF PROJECT: To develop village-level silk industry in Papua/New Guinea

**COOPERATION
REQUIRED:** Experts' services training facilities

OBSERVATIONS: Thailand will be willing to provide one training fellowship for twelve months on production technology.

**RECIPIENT
COUNTRY:** PAPUA/NEW GUINEA **CO-OPERATING
COUNTRY:** THAILAND

**DESIGNATION
OF PROJECT:** Joint venture in Silk Industry

**BRIEF
DESCRIPTION
OF PROJECT:** Promotion of a joint venture between Papua/New Guinea and Thailand entrepreneurs for a modern Silk Production Plant to be located in Papua/New Guinea.

**OBJECTIVES
OF PROJECT:** Co-operative development of resource-based industries.

**CO-OPERATION
REQUIRED:** Technical know-how,
Financial participation.

OBSERVATIONS: Thailand will direct the proposal to the Silk Association in that country as and when a formal request is received from Papua/New Guinea.

**RECIPIENT
COUNTRY:** PAPUA/NEW GUINEA **CO-OPERATING
COUNTRY:** INDIA

**DESIGNATION
OF PROJECT:** Metalworking Industry

**BRIEF
DESCRIPTION
OF PROJECT:** A demonstration and Training Centre in this field is being established. The Government of Papua/New Guinea will provide necessary equipment to the Centre. There is, however, a need for experts' services to organize the Centre on a sound footing and to train the nationals.

**OBJECTIVES
OF PROJECTS:** To provide training in various skills in the field of metalworking industry.

**CO-OPERATION
REQUIRED:** Experts' services.

OBSERVATIONS: India will agree to provide a team of three experts for six months.

RECIPIENT COUNTRY: PAPUA/NEW GUINEA CO-OPERATING COUNTRY: INDIA

DESIGNATION OF PROJECT: Leather Industry

BRIEF DESCRIPTION OF PROJECT: There is no leather industry in Papua/New Guinea, although a sufficient quantity of hides seems to be available. It is felt that a tanning industry would be beneficial.

OBJECTIVES OF PROJECT: Establishment of a tannery plant

CO-OPERATION REQUIRED: Experts' services

OBSERVATIONS: Papua/New Guinea will provide detailed information on the kind and the estimated quantity of hide tanning materials available. India will send an expert for two months to finalise a feasibility report.



RECIPIENT COUNTRY: PAPUA/NEW GUINEA CO-OPERATING COUNTRY: INDONESIA

DESIGNATION OF PROJECT: Development and rationalisation of rural industries.

BRIEF DESCRIPTION OF PROJECT: Some handicraft articles are produced in Papua/New Guinea but the marketing of the products is completely in the hands of middle-men providing very little returns to the craftsmen. There is need to rationalise production on the village level and to organise the marketing aspect.

OBJECTIVES OF PROJECT: Development of rural industries.

CO-OPERATION REQUIRED: Services of an expert for one year.

OBSERVATIONS: Indonesia could provide the expert. But in view of the duration of the requirement, adequate supplementary facilities for the expert might be sought through UNIDO/UNEP.



RECIPIENT COUNTRY: PAPUA/NEW GUINEA CO-OPERATING COUNTRY: PHILIPPINES

DESIGNATION OF PROJECT: Development of small-scale and medium-size industries.

**CO-OPERATION
REQUIRED:**

- a) Furniture-producing expert three to six m/m, high level, for planning and organizing factory.
- b) A blacksmith expert (high level planning) for pilot plant, as suggested by the Philippines representative.
- c) Expert for three to six months for a pilot project being set up in rural farming areas for handicrafts.
- d) Expert in nail- and wire-making for three months (offered in principle by the Philippines and accepted by Papua/New Guinea).
- e) Separate exchange of correspondence will take place on possible joint venture in medium-scale industry.

OBSERVATIONS:

No firm commitment made by the Philippines, but the representative will communicate available expertise to Papua/New Guinea (copy to UNIDO) for further action.

**RECIPIENT
COUNTRY:**

PAPUA/NEW GUINEA

CO OPERATING

COUNTRY:

REPUBLIC OF KOREA

**DESIGNATION
OF PROJECT:**

Development of Sericulture Industries

**CO-OPERATION
REQUIRED:**

One experienced expert for 3 m/m in Sericulture (urgently needed) since eggs have already been purchased by FIG from Korea.

OBSERVATIONS:

No firm commitment from Korea but the Representatives will follow up and try to identify suitable expertise. Direct communication with FIG, copy to UNIDO.

**RECIPIENT
COUNTRY:**

PAPUA NEW GUINEA

CO-OPERATING

COUNTRY:

MALAYSIA

**DESIGNATION
OF PROJECT:**

Rubber moulded goods

**CO-OPERATION
REQUIRED:**

One expert for more m/m in rubber moulded goods for an operating mill already in operation.

OBSERVATIONS:

Malaysia will identify a suitable expert, communicate his C.V. directly to FIG, with copy to UNIDO for further action.

ASSISTANT COUNTRY:	PAPUA/NEW GUINEA	CO-OPERATING COUNTRY:	IRELAND
DESIGNATION OF PROJECT:	Export-oriented industries		
BRIEF DESCRIPTION OF PROJECT:	Advisory assistance in the promotion of investment in export-oriented industries.		
OBJECTIVES OF PROJECT:	Attraction of investment from outside the country		
CO-OPERATION REQUIREMENTS:	Not yet formulated, but probably the services of two experts for a period of one month.		

Project to be considered for UNICE Assistance

RECIPIENT
COUNTRY: SRI LANKA

DESIGNATION
OF PROJECT: Institutional Development of Public Sector Corporations

BRIEF
DESCRIPTION
OF PROJECT: Identify possible methods for restructuring institutional arrangements for administering public sector corporations and for developing a scheme for implementing the identified method.

OBJECTIVES
OF PROJECT: Facilitate the long-term consolidation and development of public sector corporations

CO-OPERATION
REQUIRED: Phase I: Visit of two officials from the Government of Sri Lanka to a) IRI, Italy, 2 weeks; b) I.W.I. Spain, 2 weeks.
Phase II: Invite one expert from I.R.I. or I.W.I. for advice on implementation of selected methods - 3 months

OBSERVATIONS: Government counterpart staff and institutional support.

Projects to be considered for CEE

RECIPIENT
COUNTRY: SRI LANKA

CO-OPERATING
COUNTRY: INDONESIA

DESIGNATION
OF PROJECT: Building Materials Research - Extension Services

BRIEF
DESCRIPTION
OF PROJECT: One expert from the Sri Lanka Building Materials Research Centre to undertake a Study Tour of the Indonesian Regional Housing Centre, Bandung, for a period of two weeks

OBJECTIVES
OF PROJECT: To ascertain the methods used for Extension Services at the Regional Housing Centre, Bandung, and identify potential areas for Joint Research between the two Research Institutes.

CO-OPERATION
REQUIRED: study tour arrangement as above.

RECIPIENT COUNTRY: SRI LANKA CO-OPERATING COUNTRY: MALAYSIA

DESIGNATION OF PROJECT: Rubber Technology and Product Development

BRIEF DESCRIPTION OF PROJECT: One or two Experts from the Sri Lanka Rubber Research Institute to undertake a Study Tour of the Malaysian Rubber Research Institute and the Malaysian Rubber Development Corporation for a period of two weeks.

OBJECTIVES OF PROJECT: To ascertain the methods used for the processing of Rubber and to study the work being carried out by Malaysia in rubber product development.

CO-OPERATION REQUIRED: Study tour arrangement as above.

OBSERVATION: Malaysia will provide arrangements as requested.

RECIPIENT COUNTRY: SRI LANKA CO-OPERATIVE COUNTRY: THAILAND

DESIGNATION OF PROJECT: Rice Milling and Storage Facilities

BRIEF DESCRIPTION OF PROJECT: One expert from the Sri Lanka Paddy Marketing Board to undertake a study tour of the Thailand rice milling and storage facilities

OBJECTIVE OF PROJECT: To ascertain methods used for rice milling and storage

CO-OPERATION REQUIRED: Arrangements for study tour as above.

OBSERVATIONS: Thailand will undertake action towards providing the study tour facility as requested.

RECIPIENT COUNTRY: SRI LANKA CO-OPERATING COUNTRY: INDIA

DESIGNATION OF PROJECT: Agricultural raw materials survey for the establishment of agro-based industries

BRIEF DESCRIPTION OF PROJECT: The undertaking of a survey to ascertain the quantities of agricultural raw materials available and to identify the product areas for the establishment of agro-industries at village level.

OBJECTIVE OF PROJECT: Facilitate the development of agro-industries

CO-OPERATION REQUIRED: A team of 3 consultants for a period of 3 months. The team to include a statistician with one member designated as Project Manager
All members of the team to arrive at the same time

OBSERVATIONS: India agrees to provide consultants' services as requested.

RECIPIENT COUNTRY: SRI LANKA **CO-OPERATING COUNTRY:** INDIA

DESIGNATION OF PROJECT: The development of the essential oils industry in Sri Lanka

BRIEF DESCRIPTION OF PROJECT: Feasibility Study for the identification of commercially exploitable chemical isolates from essential oils and the possibilities for the production of blended products and also the identification of export markets for products manufactured from essential oils and isolates.

OBJECTIVE OF PROJECT: To ascertain the possibilities for the development of the essential oils industry in Sri Lanka

CO-OPERATION REQUIRED: Experts' services to undertake the above study and make recommendations

OBSERVATIONS: India will send 2 experts from the C.S.I.R. and the External Trade Ministry for 2-3 months as requested above.

RECIPIENT COUNTRY: SRI LANKA **CO-OPERATING COUNTRY:** INDIA

DESIGNATION OF PROJECT: Establishing small-scale Industrial Estates at village level

BRIEF DESCRIPTION OF PROJECT: Conducting of a survey for ascertaining the availability of skills and raw materials at village level. Based on this survey, a scheme for the establishment of small-scale Industrial Estates at village level, including the provision of institutional supports for sustaining such Industrial Estates will be developed.

OBJECTIVES OF PROJECT: Facilitate the development of manufacturing centres at village level that would generate employment and the processing of raw materials available in the immediate vicinities.

CO-OPERATION REQUIRED: A team of 3 to 4 experts for a period of 3 months. Team to include an expert on the establishment of small-scale Industrial Estates and a statistician. The team to arrive at the same time with one member designated as Project Manager

OBSERVATIONS: India will send 3-4 experts for 3 months as requested. Further discussions between the 2 countries on details of the project will still be required.

RECIPIENT COUNTRY:	SRI LANKA	CO-OPERATING COUNTRY:	IRELAND
DESIGNATION OF PROJECT:	Small Scale Industries Programme		
BRIEF DESCRIPTION OF PROJECT:	Assistance in the development of small-scale industries programme		
OBJECTIVES OF PROJECT:	Further development of the small-scale industries		
CO-OPERATION REQUIRED:	Not yet formulated but probably the services of one or two experts for one month.		

ANNEX I

LIST OF PARTICIPANTS

AFGHANISTAN :

Mr. Abdul S. Zaman
President,
Planning Department,
Ministry of Industry and Mines

Mr. Abdullah Olomi
General Director,
Treaties and Machinery Department
Ministry of Industry and Mines

BANGLADESH :

Mr. Habibur Rahman
Deputy Secretary,
Ministry of Industries.

Mr. Abdus Salam Bhuyan
Deputy Chief,
Industries Division,
Planning Commission

BHUTAN :

Mr. Om Pradhan
Secretary,
Ministry of Trade, Industry & Forestry

Mr. Rinchen Dorji
Director of Trade and Industries
Ministry of Trade, Industry & Forestry

Mr. Angkee Tshering
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Royal Bhutan Mission,
New Delhi.

INDIA :

Mr. P. Gounder,
Principal Assistant Secretary,
Ministry of Commerce
Industry and Co-operatives.

INDIA :

**(Ministry of Industry
and Civil Supplies,
Department of
Industrial Development)**

**Mr. H.V. Raman
Secretary
Mr. A.K. Ghosh
Additional Secretary
Mr. B.K. Saxena
Joint Secretary
Mr. C.B. Rau
Director**

**(Department of
Science and
Technology)**

**Mr. A. Ramchandran
Secretary
Mr. K.V. Swaminathan
Director**

**(Council of Scientific
and
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**Mr. Y. Nayudamma
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**Mr. A.N. Verma
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Mr. R.K. Puri,
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**(Ministry of
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**Mr. R.K. Anand
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Mr. Shashank
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Special Advisor :

**Mr. Bhagwan Singh,
Indian High Commissioner,
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Advisor :

**Mr. R.K. Suthi,
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- INDONESIA :** Mr. Benito Kodijat
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- Mr. T.K. Sharma,
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Industrial Services Centre
- PAPUA/NEW GUINEA :** Mr. E.M. Wijoneiko
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- Mr. K.U. de Silva
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Ministry of Industries and
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- THAILAND :** Mr. M.C. Piriyadis Biskul
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Industrial Economic and Planning
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UNITED NATIONS SYSTEM :

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**Mr. S.T. Luong
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**Mr. H.B.R. Ruddy
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Mr. R. Upadhyay
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Mrs. Rosette Spalt
Professional Assistant

ORGANISMS

REGIONAL ORGANISATIONS:

**Asian Productivity
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Special Assistant to the
Secretary General

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ANNEX IV

COUNTRY PAPER - AFGHANISTAN

The Republic of Afghanistan is at present primarily an Agricultural country but nevertheless it has a well established industrial sector and it is the policy of the Government to expand this progressively with the objective of further developing both export and import-replacement activities.

Important and expanding industries include textiles, cement, sugar and fertilisers, these being based on home-produced raw materials. Electricity supply is being increased to support the domestic and industrial expansion. Mining is important, natural gas is being exported and possibilities with regard to petroleum production and iron ore, copper ore extraction are under close investigation. Action is being taken to improve the structure, management and control of commerce and industry. An Industrial Development Bank has been established and the Government has nationalised its commercial banks with the objective of facilitating the provision of necessary capital.

It is our policy that our resources and foreign aid be directed at the industrial priorities, which are:

- (a) Industries which are lying idle and need to be reactivated, or which are not working full capacity or which call for extension in the existing plant capacity.
- (b) Industries which are based on agricultural raw material or livestock resources so that fuller use is made of agricultural products, thereby raising the farmers' income and their purchasing power.

- (c) Industries based on mineral and other natural resources of the country.
- (d) Industries on which some kind of investigation or surveys have been undertaken in the past and their industrial potential established, but no follow-up action has been taken.
- (e) Industries required to meet the existing or potential consumption demand of the existing industries (such as starch manufacturing for the textile industry and plastic sacks manufacturing for the fertilizer industry, etc.).

The objectives are to achieve:

- (i) higher living standards through accelerated industrial and agricultural development and through diversification of industrial activities;
- (ii) more employment and provide increased training for managers, engineers, technologists, skilled workers etc.;
- (iii) even distribution of new industrial activities.

As in any developing country, industrial expansion is subject to problems and constraints. There is insufficient capital for what has to be done and assistance must be sought from external sources. Many established enterprises are working below their rated capacity. There is insufficient supply of technically trained personnel and it is necessary to raise a new generation of managers who can effectively manage the

existing and proposed industrial plant. In this respect, the development of Financial Management, Marketing skills and Industrial Engineering are of particular importance. Whilst industrial planning is being undertaken, it is not as yet developed as it needs to be, more comprehensive procedures for both planning and evaluation being required.

Looking towards our neighbours in Asia, it would seem that, in particular Afghanistan requires technological assistance to help in the identification and evaluation of new industrial expansion that might be undertaken and, where such industry is to involve the production of consumer goods for the home market, the opportunity that might exist for the supply of sets of component parts to enable production to be commenced, initially on an assembly basis, progressively replacement of individual items by home manufacture as technology improves.

Thus in order to assist in the development of innovative thinking in this respect, the following would be helpful :

- (i) Information on established light industries in the various countries concerned of a type which might be established in Afghanistan either on an assembly of supplied parts basis or manufacture under licence, related particularly to :
 - a) Simple agricultural implements especially hand implements;
 - b) Simple and inexpensive consumer goods;

- c) Clothing manufacturing; and
 - d) Hand mining equipment.
- (ii) Information on established medium to heavy industries in the various countries concerned from which technological expertise might be drawn, in one form or another (i.e., visiting technicians, special training of Afghans in the countries concerned). Under this heading, Afghanistan would be particularly interested, for example, in:
- a) All types of mining works;
 - b) Iron ore extraction and processing;
 - c) Oil exploitation; and
 - d) Chemical processing plant of various types.
- (iii) Information on possible market opportunities existing for products based on the raw materials of Afghanistan such as, for example:
- a) Cotton based products;
 - b) Fruits of all kinds; and
 - c) Various cottage industry type products.
- (iv) Information on the possibilities of attracting people of neighbouring countries to enjoy the tourist attractions, and very acceptable winter climate that Afghanistan has to offer.

Much has to be done and if the general standard of living is to be progressively improved in all sectors, then employment opportunity must be expanded.

especially for the high school students and University graduates now emerging in increasing numbers, and the natural resources of the country exploited to the full. To do this, help will be needed. At the same time, the Government would hope that such collaboration should be on a two-way basis so that Afghanistan could also make contribution in one way or another to her Asian neighbours.

COUNTRY PAPER - BANGLADESH

Industrial Policies and Priorities

Bangladesh is one of the least industrially developed countries of the world. The contribution of the manufacturing sector in its GDP is only 10% - 6% in the large manufacturing units and 4% in the small and cottage industries. The history of industrial activity in this part of the world has been influenced by two important factors - lack of tapped resources other than natural gas, water, certain quantity of agricultural raw materials and a large un-skilled labour force; and the peripheral status of this region as related first to Indian manufacturing in Calcutta before 1947 and then to West Pakistan till the emergence of Bangladesh in 1971.

Agriculture contributes more than 60% of the GDP of the country and the role of agriculture in its economy has remained virtually unchanged during the last 2 or 3 decades. Agriculture and farming are still using the primitive methods and are characterised by very low yield due to lack of proper use of chemical fertilizers and modern techniques of cultivation.

Apart from the fact that the role of industry in the predominantly rural and agriculture economy is essentially complimentary, the other important factor which the planners had to take into consideration in formulating the industrial plan of the country was the socio-political changes that took place in the country immediately after liberation. Before 1971 the majority of industries were in the hands of private individuals but after liberation these industries were abandoned by their previous owners. The Government had therefore to step in to reactivate and manage these industrial concerns. Apart from these, the Government had to take over the ownership of the jute, textile and sugar mills in order to implement its avowed policy of establishment of a society free from economic exploitation. As a result, a sizeable public sector emerged after liberation which had to control over 80% of the manufacturing sector.

In this background the first five year plan was launched in 1973. In the formulation of the plan priorities were given, as expected, to the export-oriented, agro-based and import substitution industries. The plan also laid emphasis on increased use of local raw materials and labour intensive processes. Rehabilitation and optimum utilisation of the existing manufacturing capacities which suffered a serious setback during the war of liberation in 1971 was however the primary concern of the planners.

On the above basis, the Government has declared the following priorities in its industrial policy:

- (a) Creation of new capacity after allowing for the optimum utilization of the existing and sanctioned capacity of the country;
- (b) Preferential promotion of export reoriented industries;
- (c) Preferential development of small and labour intensive industries;
- (d) Development of agro-based industries;
- (e) Development of a consumer goods industries as direct import substitution industries;
- (f) Rehabilitation of the existing industrial units by providing for balancing, modernization and replacement of damaged and worn out machineries.

The plan provides for investment of a total of about Tk.11,395 million of which Tk.7,213 million would be in foreign exchange. Out of this amount, Tk.9777 million has been earmarked for public sector and Tk.1818 million for private sector. A sizeable percentage of the investment is for balancing, modernization and replacement of existing industries. A synopsis of the industrial development outlay for the First Five Year Plan has been given at Annex. 'A' of this report.

As will be seen in the plan for industrial investment, development of chemicals and petro-chemicals alone would account for about 25% of the total investment. These industries would be almost entirely based on local raw-materials like natural gas and a sizeable portion of the products is meant for export. The next highest investment would be in the textile sector closely followed by iron and steel and engineering sectors which are for import substitution. The allocation in the private sector would be almost entirely for small and medium scale labour intensive industries.

The different incentives which have been provided for development of new industries include liberal credit facilities, tax holiday for a period of 5 to 7 years, facility for deferment of payment of customs duty, rebate of 5% of customs duty on import of capital machinery upto Tk.1 million and others.

After a review of the development which has taken place in the industrial sector the Government has decided to further liberalise the investment policy in respect of private sector by increasing the ceiling of investment and by allowing foreign equity participation in the private sector also. In the original policy foreign collaboration was allowed only as a technical know-how arrangement in the private sector.

Need for external technical assistance and UNIDO's activities

External technical assistance is required in Bangladesh for a wide range of subjects including development of infrastructural facilities as well as for technology transfer from developed countries. Expert technical assistance in the identification of different problems for industrialisation and finding out a solution is also of great importance to our country. This problem assumed tremendous magnitude immediately after liberation because of dearth of technically qualified and trained personnel to run over the existing industries. Before liberation the industries were mainly owned by outsiders who had a virtual monopoly of technical and managerial expertise. Bangladesh had, therefore, to face an immediate task of developing a sizeable trained manpower in the least possible period to ensure optimum utilisation of the existing manufacturing capacity and development of new projects. It is here that external technical assistance is critically needed.

One of the first steps which were taken by Bangladesh was to approach the British Government for expert assistance for identification of the problems of the nationalised industries and find out a solution for improvement in their efficiency. In response, the British Government engaged a reputed Consulting Firm namely P.A. Management Consultants to do the job. They have studied the subject for about 5 years and have recently submitted their recommendations on the ways and means for improvement of the efficiency of the nationalised enterprises. Most of their recommendations are under implementation and already a modern Management Information System and personnel administration technique have been successfully introduced in the nationalised industries sector. There is, however, still certain area where further expert assistance is necessary for achieving greater success. The British Government has agreed in principle to provide further technical assistance to cover certain areas. Apart from this, there exists such a vacuum in the technical management and supervision which is required for successful operation and implementation of industries particularly the sophisticated ones that foreign technical assistance is essentially needed even to make a meaningful beginning.

in this direction. It has been reflected in our request to UNIDO for massive technical assistance. The technical assistance which has been requested for, can be broadly classified into 2 groups - pre-investment studies and improvement of existing operating performance. The response from the UNIDO has been very encouraging and there is a big portfolio of projects both under implementation and in the planning stage with technical assistance from UNIDO. The technical assistance projects which have already been approved by the UNIDO and are under implementation are summarized below:-

1) Plastic processing and demonstration

The purpose of this project was to recommend setting up of a Plastic Processing and demonstration Centre for application of latest techniques, introduction of standardisation, quality control and training in the field of Plastic technology.

2) Jute industry development.

The purpose of this scheme was to help establish improvement of management systems, marketing and production methods, standardisation and quality control in the Bangladesh Jute industry.

3) Industrial self-management

The purpose was to assist in wider delegation of authority and participation of more workers in decision making in order to raise the general level of performance of industries.

4) Textile Industries development

The purpose was to assist Bangladesh Textile Industries Corporation in improving and expanding yarn and textile production through more efficient management thereby ensuring adequate supply of reasonably priced yarn and textiles for the domestic market.

5) Assistance of Small Scale Industries

The purpose of this scheme was to assist in reviewing and determining the objectives scope and functions of Bangladesh Small Industries Corporation and give recommendations on the re-organisation of the Corporation so as to be more effective in the development of Small Scale Industries.

i) Metal working and engineering industry development

The project will assist Bangladesh Machine Tools Factory particularly in the fields of production planning and materials handling, in the design and development of new products, in organisation and management and on the expansion of production facilities.

Assistance was also provided for enabling the Government representatives to attend Investment Promotion meetings in different places of the world. The assistance by UNIDO to all these projects involved an amount of US \$ 3.82 million.

The programme has also been drawn up for receiving further UNIDO technical assistance for preparation of feasibility studies, study of the performance of the existing units and identification of the sectors where investment should be made. A tentative programme of US \$ 7.35 million has been drawn up for UNIDO assistance in the next few years. The fields in which assistance has been sought are discussed below:

i) Cement Plant feasibility study

It aims at assisting Bangladesh Mineral Exploration and Development Corporation in the establishment of a normal functioning Cement Factory in Bagli Bazar Area based on local lime-stone.

ii) Leather Industry Development

It aims at re-vitalizing and strengthening the leather industry in Bangladesh and expand considerably the export potential for leather and leather products.

iii) Assistance to Bangladesh Standard Institute

The project envisages strengthening and developing national standardization and Quality control.

iv) Assistance to Bangladesh Shilpa Bank

It aims at strengthening the capability of Bangladesh Shilpa Bank to identify, evaluate and initiate viable industrial projects and to develop the skills of its staff by providing instructions and on the job training in these functions.

v) National Consultancy Institute

The aim is to develop consulting services in the public sector within the framework of a National Consultancy Institute.

vi) Assistance to Bangladesh Cottage Industries Corporation

The project aims at giving expert assistance in the fields of silk worm breeding, silk reeling, handicraft designing and marketing, processing of Cashew nut, processing of Pine fibres from Pine apple leaves and financing of project proposals.

vii) Technological Research Centre

It aims at establishment of a Technological Research Centre for the engineering industries responsible for project design, development of new machinery and production methods, advisory services and training.

viii) Study of linkages in engineering industries

It aims at assisting the Government in accelerating development and strengthening of engineering sector.

ix) Assistance to selected engineering industries

It aims at assisting certain selected enterprises under BEC in revitalizing their production facilities.

x) Shipbuilding industry development

The project aims at improving the management and production methods in the shipbuilding sector of the Bangladesh Engineering and Shipbuilding Corporation.

xi) Chemicals and Fertilizer Industry Development

It aims at improvement of the management and production capabilities of BECFC and helping establishment of new production units in particular fields such as utilization of Gypsum disposed from Triple Superphosphate Plant etc.

iii) Pharmaceutical and Chemicals

It aims at giving assistance to BPC in the establishment of a complex for production of pharmaceuticals and chemicals based on indigenous raw materials to meet the requirement of the country which will result in substantial savings of foreign exchange.

iiii) Chemical Technology Institute

The project will assist in the establishment and promotion of an Institute for chemical technology responsible for basic industrial research and design development.

iv) Assistance to Bangladesh Steel Mills

It aims at strengthening and improvement of the iron and steel industry by producing new management systems and enabling it to achieve high economic productivity and requisite quality of the steel and other products.

v) Assistance to Bangladesh Food & Allied Industries Corporation

The project will provide assistance to the various enterprises under Bangladesh Food & Allied Industries Corporation in management, production and quality control.

vi) Assistance to Bangladesh Paper & Board Corporation

The project includes preparation of feasibility studies for the establishment of certain specialised Paper Mills and training engineers and technicians of Bangladesh Paper & Board Corporation.

vii) Furniture Industry Development

It aims at strengthening Bangladesh Forest Industries Development Corporation's furniture industry, management and production capacities.

xviii) Jute Technological Research Institute

It aims at developing Bangladesh Jute Research Institute into an effective institution to carry out research and development programmes for the benefit of the Bangladesh Jute Industry.

xix) Light Weight Concrete Aggregates Plant

It aims at upgrading the national building industry and expanding indigenous building materials production of light weight Concrete aggregates.

. It would be seen from the list of the projects which have been conceived for obtaining UNIDO assistance are mostly for improvement of the efficiency of the existing manufacturing capacities and development of new capacity primarily based on local raw materials and for earning or saving foreign exchange, which is consistent with the national objectives of Bangladesh.

Utilization of Technical assistance

Bangladesh has in the past, successfully utilized the technical assistance it received from various bilateral and multi-lateral sources including the UN agencies. As a matter of fact, almost its entire infrastructure like country-wide electrification programme, elaborate road and water transport system, appropriate port facilities etc were built up after detailed and carefully ~~planned~~ reputed consultants whose services were provided as technical assistance from various sources. The creation of Power and Water Development Boards, Inland Water Transport Authority etc. can be quoted as examples. These Institutions have been instrumental in the modest development that has taken place in this region during the last decade or so.

The transfer of technology from developed countries in selected fields is possibly the most important area where the technical assistance programmes from various sources played the most significant role. Much of the present growth of industrialisation owes its origin to the receipt of expert technical know-how from the developed countries. The development of carpet backing cloth industry, machine tool industry, engineering and shipbuilding industry, tube light manufacturing industry, electric cable manufacturing industry etc are examples where technical assistance in the shape of technology transfer played the most significant role. Studies of the existing performance of various industries under technical assistance programmes have identified the areas where improvements were necessary. There are a good number of cases where significant improvement in the efficiency of the industrial units could be achieved as a result of these studies.

Special needs of Bangladesh

Although Bangladesh has received technical assistance for transfer of technology from the developed countries in various fields, this has nevertheless given rise to certain problems in some places. Because of a very large gap in the level of industrialization in the developed and the developing countries, a simple transfer of technology does not in all cases offer a solution to the problems of the developing countries, particularly those which are in the group of the "least developed countries". The application of technology from developed countries has, therefore, to be modified if the projects have to operate successfully. Besides, the emphasis of the planners in the least developed countries is understandably on the development of manufacturing capacities based on local raw materials some of which may be non-existent in the outside world. This is where innovations are necessary. The donors of technical assistance have recognized the special need of such type and expert assistance has been designed accordingly. The aim of the country is to depend as far as possible on external assistance and with that end in view our projects have to be designed in such a way that the local talents can be trained in the least possible period and in the most efficient manner. This has been reflected in our request for technical assistance to various sources including the UNCTAD. It is believed that adherence to such a policy will enable us to achieve the national objective of attaining a consistent growth rate of 10% in the manufacturing sector in the next few years.

DEVELOPMENT OUTLAY FOR THE FIVE YEAR PLAN

<u>Subject Sector</u>	<u>Total development outlay (in Million Taka)</u>	<u>Part 2 component (in million Taka)</u>	<u>Sectoral investment as percentage of total development outlay</u>
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Public Sector

1. Jute	205.75	237.46	3.28%
2. Textile	1308.11	667.89	11.67%
3. Engineering	1165.36	671.49	10.16%
4. Shipbuilding	440.07	281.20	3.86%
5. Iron & Steel	1203.89	771.00	11.64%
6. Chemicals	746.13	676.08	6.44%
7. Petro Chemicals Fertilizers, PVO etc)	2142.00	1622.00	18.62%
8. Paper & Board	518.86	405.92	4.64%
9. Forest	129.76	89.20	1.12%
10. Mining & Mineral based industries	823.36	536.88	7.10%
11. Sugar	162.67	109.85	1.57%
12. Food & Allied Products	108.88	61.78	0.89%
13. Leather	67.20	41.21	0.75%
14. Film	45.75	10.19	0.22%
15. BEEC & CIC	226.28	27.88	2.22%
16. Others	24.22	1.22	0.22%
Total Public Sector:	8777.17	6021.22	

Private Sector

1. Food & Allied Industry			
2. Textile goods			
3. Forest Products & Furniture)	1817.70	1161.20	15.25%
4. Paper, Printing & Publishing			
5. Leather & Rubber products			
6. Chemicals & Phar- maceuticals			
7. Minerals, oil & gas			
8. Engineering industries			
9. Others			
Total	1128.97	713.41	1.08%

* Foreign exchange requirement has been re-established on the basis of devaluation.

COUNTRY PAPER ON BHUTAN

Bhutan is a land locked country on the southern slopes of the Himalayas between 26°30' south to 28°30' north latitude and 88°13' to 92° east longitude bound on the north by China and on the east, west and south by India. The trade at present takes place along the customs free Indian border.

The Country is predominantly agricultural and till the late 1960s the main industrial activities centred around cottage crafts such as handicrafts and handlooms carried on as traditional occupations by individual families. The gradual alteration in the industrial climate was entirely due to the initiative taken by the Government which took the following forms :-

- a) consolidation and strengthening of the traditional and cottage industrial sectors by means of encouraging production, provision of training facilities, procurement and marketing operations with an eye to commercialise these sectors.
- b) encouragement offered for the starting of industries in the private sector mainly catering to essentially demand based industries and service industries in the small scale sector. The Government had to come in a big way by offering financial and technical assistance to entrepreneurs who in the course of the last decade have set up a wide spectrum of industrial activity consisting of few consumer industries and service industries. The industries range from saw-milling and furniture manufacture, resin and turpentine, fruit processing and preservation, distilleries, match factory and other service industries such as printing press, workshops etc.

- c) direct investment in medium and large scale resource based industries which are found economically viable.

In the National Industrial Policy, which the Government has adopted, private sector investment is allowed in all fields bearing the following :-

1. Large scale industries based on valuable minerals, particularly base metals.
2. Large industries catering to critical economic needs such as manufacture of cement and fertilizers.
3. Essential economic operations such as power generation, tourism, transport and communication (excluding road transport).
4. Large industries dependent on extraction of timber such as paper and pulp plants or plywood factories where extraction of timber exceeds 15000 cubic metres per annum. (Industries such as resin and turpentine, lemon grass oil and citronella distillation or such other industries based on forest by-products which do not denude the forests will not fall in this category).

The National Industrial Policy also welcomes collaboration with outside concerns with the major proviso that the majority share participation in industries will have to be in local hands, either in the private or public sector. Each collaboration will be governed by separate agreements, subject to the approval of the Government, and there are sufficient incentives for the foreign collaborator in the form of control over the management, tax benefits and freedom to repatriate profits.

Leaving aside the field of agriculture and horticulture the main avenues for industrialization in Bhutan are the vast forest and mineral resources. About seventy percent of the total area of Bhutan (45,000 sq.Kms.) is covered with forests. These forests range in variety from the tropical trees in the foot hill regions to the sub-tropical varieties and the temperate zones in the higher reaches. In the field of forests, integrated schemes are contemplated starting with the introduction of wide based and large scale logging facilities leading upto the establishment of saw milling and plywood manufacture and proceeding in a phased manner towards the setting up of paper and pulp mills.

The detailed geological mapping and investigation that have been carried out till now have furnished data regarding the availability of large and commercially viable deposits of Limestone, Dolomite, Slate, Lead/Zinc, Graphite and Gypsum. Certain large scale occurrences of Copper are under investigation and offer promise of being proved economically exploitable. Project reports are under preparation for the utilization of the Graphite deposits, Limestone deposits and Gypsum deposits. Though there is more than seventy million tonnes of Graphite Ore, commercially viable deposit with more than fifteen percent Graphite content have been restricted to about three to five million tonnes. The Gypsum deposits found in Eastern Bhutan have been proved to be one of the best in the world in quality. They are found to be about fifty million tonnes in one single continuous area. A study has revealed that an investment of more than hundred million rupees (US \$12.5 million approximately) is required to provide infrastructure facilities such as roads and ropeways for carrying the deposits to the nearest rail-head. As such the mining has to be of sufficiently large volume of about 2000 tonnes per day to sustain the heavy

capital cost. The main problem has been to find markets for such large quantities of Gypsum which can be mined. The Government are also carrying out feasibility studies on the utilization of Lead/Zinc deposits and Dolomite deposits for making industrial products such as Magnesium Carbonate and Calcium Carbonate.

The main thrust of the industrial activity of the Government, therefore, is directed against these industrial resources.

The major industrial scheme which is at present under implementation is the project for the manufacture of one hundred thousand tonnes of cement per year in the foot hills of Bhutan, bordering India. The plant will be commissioned by late 1978 and will meet in full the cement requirement within the country. There will also be a sizeable surplus for export.

The major constraints on rapid industrialization in Bhutan have been the absence of adequate infrastructure in the form of transport facilities and power. With the completion of 250 MW Chukha Hydel Project by early 1980s, there will be adequate availability of power in western Bhutan. There has also been concerted moves to train indigenous manpower in various fields so that undue reliance on imported manpower could also be avoided. There is, however, considerable shortage of manpower not only for skilled work but even for unskilled operations owing to the limited population who obtain their livelihood from agriculture. This constraint calls for selection of industrial schemes from the angle of possibility of mechanization. This also makes it possible for the Government to adopt schemes from purely economic considerations uninfluenced by the pressures of providing employment.

Another major handicap for forest utilization is the absence of adequate private savings and inadequacy of Government revenues. This makes it imperative for the Government to obtain financial assistance for all the major schemes either through multi-lateral agencies or by bilateral aid.

UNDP/FAO assistance is being obtained at present in the field of forestry in the form of logging expertise, inventory control and allied forestry consultancy.

Against the background of the foregoing information individual projects or programmes for UNIDO assistance or assistance from financing agencies and under the CDC scheme could be considered.

CONFIDENTIAL

Indonesia

In this Regional Seminar on UNIDO operations primarily for the least developed countries, Indonesia is putting forward a case of possible co-operation which may be beneficial to the least developed countries within the context of Indonesian own development effort.

Within the Second Five Year Plan, Indonesia has launched a National Housing Development Program, which among others aims at low cost housing in the rural areas.

By virtue of the characteristics of building materials, this program is an excellent opportunity of developing smaller industries within the context of local (regional) development.

Therefore, in conjunction with this program, the Department of Industries is presently engaged in the Development of Building Materials Manufacture Program.

To assure close linkages of the two programs, the Department of Public Works and the Department of Industries are co-ordinating through a coordinating body supervising the Building Materials Program mentioned.

We are fortunate that in this program, we are able to obtain assistance from the UNIDO on a Five Year Program starting at 1975.

Basically the program provides for:

- (a) the improvement of the traditional building materials industries,

- (b) the development of new building materials industries with indigenous resources.

Within the context of the improvement of the traditional building materials industries, in which we have the basic craftsmanship and where improvements are backed with research and development institutes, and assisted by UNIDO inputs, is where we think that we are able to assist in the most appropriate level of technology, while the project itself may be of social and economic impact in local developments.

As an example, Indonesia is putting forward a proposed program for the Workshop Village Iacka Fore in Port Moresby, Papua/New Guinea in the subject of Manufacturing Process of Clay Roofing Tiles. Although it is aimed at a specific country, it may be of value to other countries as well, possibly of different levels of technology, and as a starting point of follow up activities in the real implementation of a brick and roofing tile industry.

GENERAL INFORMATION

Introduction

Nepal, an Asian landlocked nation, is a rectangle varying from 147 Km. to 243 Km. in width, lies between longitudes 80° 41' to 87° 27' East and latitudes 26° 22' to 30° 27' North. Situated between India to the south and the People's Republic of China (Tibetan Region) in the North, it covers a land area of 145,391.31 sq.km. ranging from the flat low-lying Terai or Tundhara border to the great Himalayan range.

The country falls into three natural regions :
(1) The Terai region which, together with the foothills, covers fertile plains that slope southwards. From here the foothills gently rise to 600 metres and then steeply to 1200 metres. (2) The Middle Ranges which constitute a 64-80 Km. broad complex of hills and valleys, provide an area much eroded by a large network of streams and rivers. (3) The Trans-Himalayan region which is an elevated area rising over 4,550 metres has the highest mountain ranges in the world with a dry climate and Tibetan landscape. Similarly, the country comprises four climatic zones, namely, sub-tropical monsoon climate, temperate monsoon climate, cool temperate climate, and Alpine climate.

The Economy :

Nepal is classified as one of the twenty-five least developed countries in the world and is also landlocked. Due to its geographical situation and the nature of the terrain, all surface transport between Nepal and the rest of the world has to pass through India which accounts for more than 90 percent of Nepal's foreign trade. The population in mid 1975 is estimated at 12.587 million and only about 14 percent of the total population is literate.

Almost the entire population in the country (about 93 percent) is engaged in agriculture which

accounts for a little over one-third of the gross domestic product and three quarters of total export earnings. The gross domestic product for the year 1973-74 has been estimated at N.6,700 million and the annual growth rate has been estimated at 7.65 percent from 1970 to 1974 at constant prices of 1964-65, while the per annum population growth (1972 to 76) has been calculated at 2.16 percent and per capita income has been estimated at 90 to 100 U.S. dollars (1974). These figures coupled with the subsistence orientation of traditional agriculture demonstrate the degree of under development of the country. Nevertheless, resource potential of the country has yet to be explored and infrastructure yet to be built up. The country is rich in hydro-power (potentiality estimated to be 83.2 million K.W.) forest resources and mineral deposits (occurrences of iron ore, lead, zinc, limestone, silica sand, slate magnesite, talc, ochre, etc. have been identified.).

Industry :

His Majesty's Government itself has itself played a substantial direct role in industrial development which started in Nepal in 1936 with the establishment of a jute mill in Biratnagar. In the same year the first Nepal Companies Act was established and the Government began to advocate a somewhat liberal policy in the establishment of relatively large manufacturing units. The shortages encountered during the Second World War gave impetus to a set of new industries of which cotton textiles, matches and jute factories are worth mentioning. Thus the first few years of the post-war period saw a boom in the establishment of new industries but because of inexperienced management entrepreneurs neglected financial and marketing aspects which led most of these industries to liquidation right after the end of the war.

No significant industrial ventures came into existence till the late fifties. However, during the period

some universal and general infrastructure for future industrialization was planned. The construction of Tribhuvan Highway facilitating the road to Kathmandu from Raxaul (India), the industrial policy declared in 1957 and Nepal Factories and Factory Workers Act of 1959 followed by the establishment of Nepal Industrial Development Corporation in the same year were the significant steps towards launching new programmes of industrial development in the country.

Planned effort for industrial development started in 1956 with the First Five Year Plan. During the 18 years of planning (1956-1974) the major emphasis was laid on creating basic infrastructure for further development. The first two plans could not put forward a clear and systematic base for industrial development. Improvements were made in the third plan (1965-1970) which gave top preference to industries that would exploit most of the country's industrial and commercial raw materials and help reduce imports from other countries. Thus, industries like paper, sugar, cement and plywood were promised liberal investment incentives and facilities. But during this period, low priority industries like stainless steel and synthetic textile plants sprung up in the private sector, mainly aimed at the Indian market. These industries were adversely affected by the Trade and Transit Treaty of 1971 with India and these are now either closed or working at a fraction of their capacity. In the public sector sugar, cigarette, leather and shoe, agricultural tools, and brick and tile factories were set up with foreign assistance. Similarly during the Fourth Plan (1970-75) the industries were grouped in import-substitution industries, export-oriented industries and basic and mineral based industries. During the plan period hotels, transport companies, cement factory, oil refinery, straw-board factory, bakeries and a number of rice and flour mills started functioning.

Like the earlier plans the Fourth Plan also suffered from the wide target-achievement gap. Consequently, some important industries initiated in the plan period are yet to be set up; these include cotton textile, agricultural and industrial lime, vegetable ghee and oil, and brick factory. Preliminary works have begun to set up these industries within the current fifth plan period.

Current Industrial Scene :

The Government has started some large industries including foreign assisted turn-key projects. It has constructed some industrial estates. Patan and Indragiri in the Kathmandu valley and Hetauda in the Kathmandu-Birgunj axis are in operation. Bharan Industrial Estate in the eastern region has recently been constructed and three more in Pakhara, Butwal and Nepalgunj (western and Far western Region of the country) are in the process of coming up.

Nepal has more potential for industrial growth has been hitherto attained. Forests, mineral deposits and temperate crops hold promise of comparative advantage for export. Traditional skills in certain crafts and ample supply of unskilled labour provide further scope.

Considerable progress has already been made in the development of modern industry. Plants engaged in producing consumer goods, such as beer, spirituous liquors, cigarettes, shoes, matches, sugar etc. have been operating in the country. Capital goods in the form of agricultural tools, bricks and tiles and cement are being produced locally. A vegetable ghee factory and a cotton textile mill are under construction. Among the existing major industries jute, match, saw-mills, sugar, cigarette and bidi, brick and tile, agricultural tools, leather and shoes, brewery, distilleries, tea, grain milling and cement are worth mentioning. In addition, furniture, soap, stainless steel, synthetic textiles, nylon buttons,

woollen textiles, woollen carpets, hosiery and knitting, power looms etc. are also operating in the country.

Tourism has emerged as Nepal's major growth industry. A number of service industries in the form of hotels and travel agencies are flourishing. Modernization and expansion of Tribhuvan International Airport in Kathmandu, together with improvement of other transport facilities have further helped to increase the inflow of tourists into Nepal.

The rapidly expanding road system of Nepal and various construction projects have also shown a promising area of investment in transport and construction industries.

It is estimated that modern industry in Nepal accounts for less than 1 percent of GDP, while further 6 percent is contributed by small scale traditional and cottage industries. These industries offer a wider variety of traditional crafts than is to be found in most of the developing countries where traditional crafts have tended to be discouraged due to the competition from mass products of modern factories.

Traditional industries produce a wide range of basic consumer goods such as cotton and woollen clothing, carpets, shoes, caps, household utensils and knives, hand-made paper, cane and bamboo products, food processing and construction materials. Wood carvings and other art crafts are another important activity getting popular with the increasing flow of tourists.

New Industrial Opportunities :

In the Fifth Five Year Plan (1975-80), industries manufacturing resin and turpentine, magnesite brick and fertilizer, paper and pulp and cement are to be established either in the government sector or through joint collabo-

ration. Private investment in some agro-based, forest-based and mineral-based industries are to be encouraged.

The following industries have been proved feasible and are proposed to be established in the private sector within the Fifth Five Year Plan.

<u>Name of Industries</u>	<u>Units</u>	<u>Annual production Capacity</u>	
I. Agro-based :			
1. Modern Rice Mill	15	54,000	tons
2. Modern Rice Mill	5	9,000	"
3. Modern Oil Mill	2	3,000	"
4. Modern Flour Mill	3	5,000	"
5. Ghee	1	200	"
6. Sugar	3	3,750	"
7. Woollen Mills	1	Cloth : 120,000 Mtrs. Threads : 19.3 tons	
8. Biscuits & Confectionary	1	Biscuits : 450 tons Chocolates : 150 tons	
9. Miscellaneous (cold storage, leather processing etc.)	19		
II. Forest-based :			
1. Rosin & Turpentine	1	3,000	Tons
2. Match Factory	1	30,000	gross
3. Catecheu	1	Catecheu 32 tons Cutch : 20 "	
4. Wood Seasoning	3	3,40,380	cu.ft
5. Furniture	5	27,500	units
6. Card Board	1	2,00,000	units
III. Mining :			
1. Bricks	6	54,000,000	units
2. Gravel	4	48,000	tons
3. Oxygen	1	1,000	cu.ft/hr
4. Slate	1	6,00,000	units
5. Electric Arc Furnace and Re-rolling Mill	1	15,000	M.Ton bars
IV. Miscellaneous :			
1. Hotel (different star ratings).	11	70	rooms
2. Tourist Lodges	18	150	rooms
3. Drinks (soft)	1	5	million bottles
4. Auto Repairing Workshop	6	847,000	equiv
5. Dry Cell Battery	1	500,000	units
6. Baby food	1	180	M. tons
7. Others (cement, press, workshop)	14		

Industrial Policy:

The Government has been keen to give legislative and institutional support to the development of industry in the country. The new Industrial Enterprises Act of 1974 and policy guidelines on industries adapted in the current plan set out the policies and procedures on industrial development. The aims of the Act and policies are to encourage industrial production and productivity, increase industrial employment, mobilize local capital, techniques and resources, achieve self sufficiency in essential consumer goods and some construction materials, reduce regional economic disparity and improve the balance of payments by export promotion and import substitution. To achieve these objectives, provisions have been made for tax holiday, rebate in custom duty and interest rate and other facilities making the investment in industry more attractive than investment in trade or real estates. Additional facilities have also been outlined for investment in remote parts of the country.

Regulations governing investment allocations have been specified in the Act. Enterprises in which private sector is slow or reluctant to invest, have been reserved for the public sector. Investment related to defence and social overheads like electric power generation and distribution is to be in the Government sector. New enterprises in iron and steel, chemical fertilizer, petroleum, cement and in some primary consumption goods such as cotton textiles, medicine, dairy, vegetable ghee, paper etc. may have private participation up to 49 percent. In other sectors private participation may reach percent. Cottage and Village industries and small-scale enterprises have been reserved only for the Nepalese investors. Investment in medium scale industries are open to both Nepalese and non-Nepalese investors but the preference will be given to the former. Equal opportunity has been given to both the Nepalese and the foreign investors case of the large scale establishments.

On the basis of investment size, the industries have been classified as follows:

- i) Village and cottage industry - with capital investment not exceeding N.R. 200,000 in fixed assets.
- ii) Small Industry - with investment not exceeding N.R. 200,000 and N.A. 1 million in fixed assets.
- iii) Medium Industry - with investment between N.R. 1 mill. to N.R. 5 million in fixed assets.
- iv) Large Industry - with investment more than N.R. 5 mill. in fixed assets.

Industrial Institutions:

Adequate industrial institutional services are being developed by His Majesty's Government to accelerate the pace of industrialization in the country. The Ministry of Industry and Commerce is responsible for all matters concerning industrial and commercial operations. Within the Ministry, the Department of Industry is responsible for the administration of small, medium and large scale enterprises and a separate Department of Cottage and Village Industries handles the activities related to cottage and village industries and handicrafts including training programme suitable for these industries.

Besides these institutions, industry is also supported by Nepal Industrial Development Corporation with funds to invest in private enterprises on both loan and equity share basis. The NIDC had built up its own research units to study and assess the feasibility of project proposals and to conduct industrial research and extension activities for promoting industrial investment. However, for some time the need had been felt to expand these industrial services to cover a wider field than NIDC's own clientele. In consonance with the need, Industrial Policy of 1976 now provisions to set up three additional

institutions supporting industries. These are Industrial Services Centre, Institute of Statistics and Industrial Security Marketing Centre of which the Industrial Services Centre was established a year back. The other institutions are in process of establishment.

Other institutions supporting industries include Trade Promotion Centre, Agricultural Projects Services Centre, some technical training institutes, National Trading Limited, Handicrafts Sales Emporium and Industrial estates.

Industrial Services Centre (ISC) :

The Centre was established in November, 1974, to assist in the implementation of the New Industrial Policy by providing non-banking services for industrial development. The principal objective of ISC is to promote industrial development and the following are its principal functions :

1. Carry out feasibility studies.
2. Organise training in industrial management.
3. Advise on way of modernising, expanding, diversifying and increasing the efficiency of industries.
4. Provide details of viable projects to potential investors.
5. Assume responsibility for the management of industrial districts.
6. Advise MAE on matters of industrial policy and problems of implementation.

The Centre's activities are divided into three divisions: Industrial Promotion, Planning and Feasibility Studies; Industrial Districts; and Industrial Extension Services. However, since the activities are inter-disciplinary the Centre utilises the services of personnel from different divisions to handle its projects.

At present, the Centre is engaged in the following activities :

1. Research in part-financed studies conducted in Nepal, a project sponsored by International Development Research Centre, Canada, in conjunction with the 'Performance of Public Enterprises in Asia Project' in which South Korea, Philippines, Indian, Bangladesh, Sri Lanka, India and Nepal are participating.
2. Study of the impact, structure, distribution and overall management aspect of the National Trading Limited of Nepal.
3. The Centre has completed a study of the organizational and management aspects of Kathmandu, Patan, and Mustang Industrial Districts.
4. A study on management training needs in Nepal and a review of the present state of management training in Nepal is in process.

The Centre is also undertaking a number of feasibility and industrial potential studies in various parts of the country on its own initiative and is also undertaking industrial feasibility studies and preparing project reports as requested by the investors.

Problem Areas :

In Nepal the scope of developing manufacturing industries has been minimal, even less than in most other least developed countries. The difficulty of both external and internal communications due to its topography and land locked position has acted as a serious constraint on Nepal's development efforts. The immediate

problem facing the industrial development of the country is the lack of technical and managerial manpower, limited market due to low level of living and transportation bottleneck. Further, the industrial potentiality in the different parts of the country may not be assessed and available resources inventory has not been prepared as yet. Because of these constraints, Nepal has to request for assistance from bilateral and multilateral agencies.

UNIDO's Role :

UNIDO has been supporting Nepal's endeavour for industrial development in various ways. In particular, UNIDO's assistance has been significant in providing short term advisers and training their local counterparts.

At present the most significant assistance of UNIDO in Nepal is its support to the Industrial Services Centre. The immediate area of assistance is concentrated on the provision of advisory staff to work in the Centre with the dual function of assisting in the Centre's work and providing in-service training for the local staff, and the provision for formal training at appropriate institutions abroad and gain experience of similar industrial research institutions in other countries.

Conclusion :

This brief industrial picture of Nepal amply supports the fact that in the initial stages of industrialization, co-operation among the developing countries themselves would prove more fruitful rather than with highly industrialized countries. Areas of co-operation among the developing countries may be related to training and exchange of short-term consultants, skilled or semi-skilled labour, marketing arrangements for raw materials

and finished products, adaptation and transfer of technical know-how, identification of areas of foreign investment aid and loan, and formulation of industrial policy. I sincerely hope that this seminar will deliberate on these issues and formulate an effective programme to promote co-operative activities for mutual benefit fostering industrialization in the third world.

...

Papua New Guinea's framework for industrial development is geared towards expansion of the present industrial base and the broadening of that base through new activities in line with the overall national development aims of the Government. In order to be compatible with the aspirations of the national aims Industrial Development must specifically:

1. Promote self-reliance by generating Government revenue, increasing exports and replacing selected imports with locally produced products.
2. Promote rural development by increasing income earning opportunities in rural areas and providing inputs to agriculture and the rural sector in general.
3. Create productive employment opportunities and in particular create job opportunities to deal with problems of urban drift and the increasing number of unemployed school leavers.
4. Provide opportunities for manpower development through the acquisition of entrepreneurial management and technical skills.
5. Contribute to regional equality through the dispersal of industrial growth.

Industrial Development activities in Papua New Guinea must be taken in the context of priority development aims in agriculture development and the development of the country's natural resources. The development of

the country's industrial base is seen as a complementary aim to these priority areas.

Within the industrial sector the Government is concentrating its efforts in and has given recognition to the need for private enterprises both local and foreign. Additionally it is the policy of the Government to seek to maximise the participation of Papua New Guineans in all private enterprise projects. To this end a number of entrepreneurial activities have been reserved for Papua New Guineans. The focus within these activities has been on the development of appropriate technologies for villages and small scale industries and the promotion of these industries in both rural and urban sectors to serve local demand.

The Government is also conscious of the need for and the benefits which can accrue from foreign investment when contributing to the overall development aims. The policy of the Government is to encourage such foreign investment in selected sectors and activities, in so doing the Government has moved away from an open door approach to a more selective one. The instrument through which this selectivity is effected is the National Investment Priorities Schedule (NIPS). The Priorities Schedule specifies particular activities in which foreign investment is presently being sought and is actively encouraged by the Government of Papua New Guinea. These activities include specific manufacturing activities, fishing, forest exploration, exploring for and extraction of minerals and natural hydrocarbons, construction, professional services, etc. The NIPS also indicate those activities which are reserved for Papua New Guinean investment.

In general the Government looks to foreign investors

providing for all the capital needs from external finance for foreign investment projects. In general also Papua New Guinean participation is effected in these projects through the Government seeking direct equity participation. This equity participation is selective and tends to concentrate in activities which will foster new development and the creation of new job opportunities. The Government provides finance and support to local business undertakings through the Development Bank and other Government programmes aimed at promoting indigenous businesses.

Direct Government investment will only be made in those priority areas where it has not been possible to attract private investment or in areas which are considered to be key areas of national interest. Where such investment is made the Government would look to such agencies as UNIDO to provide the necessary technical skills. Taking into consideration the rich natural resources of the country the Government has deemed it important that development of industrial activity be of a secondary industry nature based on these resources in order to ensure their proper utilisation and to maximise the benefits to the nation at a minimum cost in both social and environmental terms.

These policies outline in brief the steps in planning for the development of a strong industrial sector in Papua New Guinea.

The longer term plans of the Government is to consider linkages and interdependencies between the different sectors in the economy so that industrial activities can be integrated and linked at the regional level.

The constraining factors in Industrial Development plans and programmes are basically financial and human resources. The most constraining human resource is the lack of technological skills and it is in this area that we look to UNIDO.

Specific programmes and detailed policy are, as would be expected, in a newly independent State, evolving but having not yet emerged in the form of a coherent, strategic development plan. Problems are tackled in the interim on an ad hoc basis. However, the needs for technical assistance have been identified in specific areas. Accordingly the Government of Papua New Guinea would welcome from UNIDO proposals for technical assistance programmes in the following areas:

1. Integrated timber processing.
2. The development of handicraft industry.
3. The development of light engineering industry.
4. Agro based and food processing industry.

Recently following the identification of the need for UNIDO technical assistance by a small industries expert team from India a programme was devised under three main headings:

1. International expert services.
2. Fellowship for indigenous extension officers.
3. Funds for machinery and equipment for the proposed regional extension centres.

We feel that this development is a most relevant and welcome input by UNIDO and we look forward to the development of such programmes as a component part of our Industrial Development strategy.

COUNTRY PAPER - THE PHILIPPINES

Historical Overview:

In the years following the Second World War or during the Pre-Control Period (1946-1949) industrial output recovered rapidly as a consequence of the postwar reconstruction programs and favourable export prices.

The termination of reconstruction aid (and also the US recession in 1949) effected a foreign-exchange crisis that led to the imposition of import-restrictions in 1950. This paved the way for import-substituting industrialization which prevailed in the 1950s generally referred to as the Control Period (1950-1960).

The control system limited the importation of consumer goods while permitting the liberal entry of producer products, and manufacturing activities tended to concentrate on the finishing stages, with most industries involved in the assembly or light processing of imported goods and materials. Although the share of consumer import fell, total imports as a percentage of GNP remained constant. Moreover, with the policies employed (i.e. overvalued exchange rates, low interest rates, etc.), industrial development tended to be import-oriented and capital-intensive.

The ineffectiveness of import-substitution to reduce the country's dependence on imports placed the strain of providing foreign exchange on the agricultural sector, which however failed to support sufficient exports and domestic food supplies to pace with the national growth. The outcome was the continuing balance of payments difficulties and a further tightening of import controls after 1957. The fact that many of the import substitution opportunities have been exploited by the late 1950's brought a sharp retardation in industrial activities. Also, the tightening of import controls on "non-essentials" had by then proceeded so far that there was no further room for additional control measures. Thus came the Decentral Period (1960-1970). The government boldly opted for decentral and devaluation which was completed in 1962.

The Period of Decentral can be seen as a period of relative stagnation in industrial growth. Agricultural growth was slow to earn the foreign exchange to support industries. Devaluation shifted land out of food and towards export crops in consequence a rise in food prices. Furthermore, decentral did not result in substantial trade liberalization. Physical decentral of imports simply permitted a highly protective tariff structure, thus retaining only moderately the bias in favour of import-substitution and against manufactured exports. Accordingly, import substitution continued, although at a slower pace.

The continuance of import-substitution, together with the sluggish growth in agriculture, brought new balance of payments difficulties in the late 1960s. Recognizing the need to redirect industrialization toward export and more efficient import substitution led to the enactment of the Investment Incentives Act (1967).

Two decades of import substitution in manufacturing plus heavy protection led to a continued relative de-emphasis on manufactured exports and an over-emphasis on large-scale capital-intensive manufacturing activities (but also an increasingly capital-intensive set of technology) at the expense of labor-intensive/small and medium-scale industries. The system has also accentuated existing biases in favour of concentration of industrial activities in Manila and its surrounding regions.

The growing impact of short-term foreign supplies' credit and increase in liquidity and borrowings during the 1969 elections brought severe balance of payments difficulties towards 1970. A second devaluation was resorted to in early 1970 by floating the peso. Again, devaluation was not accompanied by substantial trade liberalization. The new import controls and most of the old import-substitution biases remained.

Since the devaluation there has been a minor export boom combined with an improving international climate for Philippine manufactured exports.

Long-Term Development Strategies

The basic approach towards industrial development under the current industry development plan for FY 1974-77 calls for the promotion and diversification of export-oriented industries especially of manufactures, the encouragement of labor-intensive industries and techniques of production, the promotion of small and medium scale industries, the promotion of backward integration and the regional dispersal of industries.

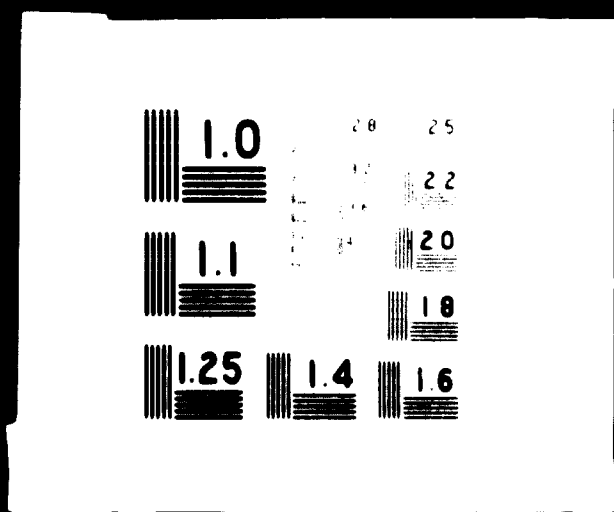
More specifically, the strategy involves the accelerated growth of export industries that utilize heavily indigenous raw materials and excess capacity and those that are based on the further processing of traditional exports. It also involves the rapid growth of industries that extensively make use of labor and the growth of intermediate and capital goods that have the greatest potential for forward and backward linkages. The geographical base of industrial growth is deemed to be spread over the different regions of the country.

The strategy is a marked departure from the finishing phase of import-substitution pursued in the last two decades. The basic change arises from the need to pursue new directions for more meaningful growth to proceed at a faster pace.



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In the process of development, exports expansion of manufactured products, selected on the basis of comparative advantage and horizontal integration of industries shall serve as the new engine of industrial growth.

Major Industrial Policy Instruments

The mix of industrial policies evolving from the judicious combination of macro policy instruments, namely: exchange rate policy, business incentives policy, tariff protection policy, minimum wage policy and interest rate policy have exerted great influence upon the pace and nature of industrialization.

Foreign Exchange Rate Policy: A flexible exchange rate policy (adopted in 1970) has provided greater flexibility in harmonizing internal economic activities with developments in the world economy. With the floating rate, the balance of payments crisis has been minimized through the market adjustments of relative prices of exports and imports.

Tax and Incentives Policy: The Investment Incentives Act of 1967 and the Export Incentives Act of 1970 were enacted to make legally explicit a policy of attracting domestic and foreign capital into industries that are strongly linked with the natural resource sectors, with intermediate and capital goods industries and those with export potential.

These are being re-examined to enhance their effectiveness in balancing the extension of fiscal assistance to economically desirable industries, reducing the degree of overprotection granted to priority industries and induce them to be more competitive and harmonizing these with international developments.

Tariff Protection Policy: One of the most important reforms in the correction of the biases against export products and backward integration is the revision of the Tariff and Customs Code. Under the revised code, a simple five-level schedule of protection rates is provided to encourage efficiency in investments and other resource allocation.

There are valid advantages in structuring the tariff system further particularly towards liberalization of imports of necessary raw materials and avoiding "disguised" subsidies to non-preferred areas. Likewise, there is a need to constantly evaluate the efficiency of export and premium duties to respond more effectively to fluctuations in world prices (without sacrificing the original intent of inducing a shift towards exportation while ensuring domestic supply).

Wage Policy: In order to maintain the competitiveness in the world market, efforts are being undertaken at re-examining the minimum wage structure. The New Labor Code provides guidelines to ensure fairness to all parties involved.

Interest Rate Policies The amendment to the Anti-Usury Law removes the distortion in the true social cost of capital.

PD No. 116 authorizes the Monetary Board to prescribe maximum interest rate ceilings and evolve a flexible and more realistic interest rate structure to make the capital market more efficient in mobilizing savings and allocating investible funds to productive uses.

Other long-term economic policies such as the development of small and medium scale industries, facilities for technology transfer and development, regional dispersal and development of international economic cooperation at various levels are being pursued vigorously.

The latter part of 1973 and 1974 saw the emergence of inflation as the major problem. Inflation occurred against a backdrop of worldwide inflation basically rooted in an unusual clustering of raw materials and food shortages mainly brought about by natural phenomena. This was tremendously aggravated by politically based initial oil outbacks and later on, monopolistic oil price increases. The raw material shortage eventually spilled over into the economy through higher import cost, lower import volume and the heavy strain on the balance of payment position. On the whole, the Philippine situation stalled from domestic food shortfalls and foreign originated cost-push factors and aggravated by a demand pull arising from an increase in real income.

1975 saw the sharp drop in world prices of manufactured exports as a result of varying degrees of business slowdowns in industrial countries. The decline in prices of major mineral exports was compounded by the reduced take-off by foreign buyers.

These compounded the problems that the country faces: the expansion of markets, provisions of adequate supply of raw materials and intermediate inputs, investment, credit, foreign exchange and support services, manpower and entrepreneurial skill requirements of industry, those related to efficiency of resource-use particularly excess capacity utilization and those related to location of industrial production.

Growth Prospects

What would be the industry picture in the coming years?

Inflationary pressures have tapered off in 1975 signalling the recovery in industrial output. Net value added in manufacturing is projected to grow at 5.4 per cent. Growth in 1974 was 3.5 and in 1973, 12.0 per cent.

Thus, industrial recovery in developed countries will have its impact on the recovery of Philippine industries in terms of increased exports, especially wood and mineral products. Developed countries forecast an average six percent growth in 1970.

Increased incomes, especially in the rural areas due to improvement in agriculture techniques and better weather conditions (as predicted by experts), will mean an enlargement of domestic market.

The growth of industries will depend on the success of domestic efforts in evolving a production pattern which shall be in keeping with the country's priority needs and requirements. Cooperation with developed and developing economies in collaborative projects to help bring this about is a prerequisite.

COUNTRY PAPER - REPUBLIC OF KOREA

I. Introduction

There is a widespread need in many less-developed countries for assistance in the development and implementation of science and technology policy, including the organization, development and evaluation of institutions created for this purpose, the development of management competence amongst the science and engineering community within the countries, and the identification and adaptation of appropriate technologies for their particular environments and situations.

Technical cooperation, multilateral or bilateral, has been undertaken directly between advanced countries and developing countries, but the science and technology of an advanced country is not always applicable in developing countries.

When an advanced country or a multilateral donor agency tries to cooperate with a developing country to meet its needs or a developing country seeks consultative services, it is suggested that a participation using other developing countries' experiences should be worked out.

For instance, when a donor country or agency gives consultative services to developing countries, it must try to build a service group so that advanced country technologies are combined with the experience of other developing countries. Korea is prepared and would be pleased to share its experiences in this area with other countries on a cost-compensated basis.

II. Need for Science and Technology Development Cooperation

It is apparent that there is a hierarchy of needs common to most developing countries with regard to the acquisition and adaptation of technology for their development and for the establishment of policies and institutions for these purposes.

The appropriate type of scientific and technical organization to be established in a given situation is frequently a difficult problem to solve. The proper design and organization of such institutions is a critical problem requiring a high degree of expertise to assure operating efficiency. Unfortunately, such institutions have often been created and have then become obsolescent, although they were originally appropriate to their time and place. It is more difficult to change an existing institution significantly than it is to start a new one. Unfortunately, this alternative of creating a new institution does not always exist and the nation's scientific policy-makers

are left with the choice of working with large national organizations and procedures or doing nothing at all.

In either event - whether creating a new institution or refurbishing an existing one - the experience of other organizations and their activities in a similar area can provide useful insights and contribute significantly to the efficiency and effectiveness of the entity.

In seeking to optimize its technological evolutionary processes, a country's technology policy formulation and implementation authorities are frequently faced with the need to make a thorough and competent assessment of existing technological resources. In the science and technology planning process one of the most important elements is to assess the state of development, current problems and relative efficiencies of existing technical institutions and systems objectively. Most often this process can be very significantly assisted by enlisting consultation and assessment support from organizations and individuals from outside the country, who have highly specialized and current experience in making such assessments.

III. The Type of Experience needed to meet Industrial and Technological Development Requirements.

From the preceding brief discussion, it can be deduced that an experience which can be shared with a country in the process

of evolving its technological and industrial development policies, creating institutions to implement these policies, and evaluating existing institutional and organizational resources, should be from a country with the following principal characteristics.

- A. A cultural, social and economic background similar to that of the country seeking assistance.
- B. A range of technological and industrial policy development with results in a current experience level which will yield useful comparisons for the recipient country.
- C. The existence of scientific and technological institutions at a stage of development and operation which will make possible valuable comparisons of experience.
- D. The existence of an industrial base which is sufficiently diversified and advanced to provide an index of comparison and a source of relevant experience.
- E. Access to all significant sources of available contemporary technology to:
 1. Aid in identification and selection of appropriate technology for the recipient country
 2. Assist in research and development for effective adaptation of such technology.

3. Have experience and competence in providing assistance in making realistic assessments of the economic, social and environmental effects of the adoption of such technology.
4. Provide a centralized point of rapid access to the most important sources of technologic and economic information throughout the world.

It becomes apparent that the availability in a single country or organization of all of these attributes is unlikely if not totally unknown.

What is needed might be termed a continuum of experience and knowledge beginning at a level approximately equivalent to that of the recipient country and extending forward through all intermediate stages of knowledge and experience, and culminating in an organization which has access to all principal areas of contemporary scientific and technological development, coupled with a sophisticated social and economic analytical capability.

IV. Proposed Plan

Through realization and discussion of the need for providing a continuum of experience in the areas of national science, technology and industrial policy development and implementation, it is important to frame an inter-organizational group in an interactive and well-organized network.

At any point in time there will be an array of institutions in various countries which can be observed in their various stages of development. To the extent that one country's cultural and economic situation is similar to another's, and that country's scientific and technological institutions are in a later stage of development, then presumably that country's experience should be of considerable value to the one seeking significant improvement in its own scientific and technological institutions.

With the rapid progress of industrialization resulting mainly from technological development, Korea is ready to share with other developing countries its experience in science and technology policy planning and execution by MOST, and its experience in establishing and operating KIST, a multidisciplinary industrial research center.

Relatively brief descriptions of these two entities are presented in the Appendix.

A. Share of experience in science and technology policy formulation.

1. When donor countries or agencies dispatch survey teams to provide and support science and technology policy formulation, they must include experts from

advanced countries and experts from a developing country with experience in development in a developing country. Countries seeking aid should always request expert service teams with this balance of experience.

2. When donor countries or agencies make arrangements for experts from developing countries to observe science and technology development, the experienced developing country must be included.

3. Share of experience in establishing a multi-disciplinary industrial research center.

1. Feasibility study for the establishment and operation of a multi-disciplinary industrial research center must be carried out by a balanced team including an expert or experts from advanced countries and from experienced developing countries.

V. Conclusion

In my opinion, it is a good idea for a donor country or agency to encourage the forming of a consultative group, in an interactive and well-organized network, including a research institution in an advanced country and a research institution which has passed part of the way along the road to development.

I would like to conclude this paper by mentioning that discussions between principals of the Ministry of Science and Technology of the Republic of Korea, Korea Institute of Science and Technology and Denver Research Institute of the University of Denver (U.S.A.) have yielded the framework for an inter-organizational consultative group which can meet developing countries' needs.

Appendix

Ministry of Science and Technology-Republic of Korea:

The Ministry of Science and Technology (MOST) established in 1966, has played a dominant role in the evolution of scientific and technological policy. MOST is instrumental in creating and guiding Korean scientific and technological institutions whose purpose is to build and sustain the scientific base for the rapidly developing economy, and to assure the timely provision of the technological resources which are vital to the world's most rapidly growing and diversifying industrial base. In seeking to accomplish its mission, MOST has developed an organization of experienced administrators and specialists in all areas related to scientific and technological development. Its major concerns include the following:

- A. Creation and development of scientific and technological institutions,
- B. Initial and continuing training of scientific and engineering manpower,
- C. Formulation of science and technology policies and long-range plans consistent with national development goals,

- D. Effective representation and presentation to the legislative and administrative units of the government of the requirements for meeting scientific and technological goals and the securing of the necessary support for achieving these,
- E. Repatriation of highly qualified scientists and engineers from overseas to augment the increasingly sophisticated and diversified scientific and engineering capability of the country,
- F. Initiation and implementation of programs of scientific and technological exchange with other nations of the developed and less-developed world,
- G. Provision of support and incentives to industry to develop an indigenous technologic infrastructure.
- H. Securing of grant and loan assistance from aid-giving nations in support of its programs.

The Ministry is engaged in a diversity of programs and has developed the expertise and working knowledge required to carry out its tasks effectively. Korea is in an advanced stage of the development process, while experiencing or still being very close to the principal problems facing a developing economy, so the

Ministry and other Korean institutions possess know-how and experience which could be most useful to similar entities within other governments wrestling with the complex problems of national development.

The Korea Institute of Science and Technology (KIST)

As part of Korea's technological infrastructure KIST is a unique and vital resource for the accomplishment of national industrialization goals. Comprising a staff of over 500, KIST carries out scientific and technological research and development projects including numerous techno-economic feasibility studies of industrial projects in the order of US\$6 million per year for both domestic and foreign firms. Korea does not possess all the sophisticated technologies possessed by advanced countries, but its forte lies rather in the intermediary levels of technology which are eminently applicable in developing countries. A great deal of care as well as technological literacy has been found essential in setting out on the industrialization path.

The institute, created in 1966, maintains extensive research and development facilities in mechanical engineering, electronics and electrical engineering, chemical engineering and chemistry, metallurgy and materials science, techno-economics and food science. Established on a self-sustaining and autonomous basis, it is sustained largely by research and development performed under

contract for the public and private sectors, industry and government. In its brief existence, it has made many notable contributions to the industrial development of the country through the development of new products and processes, the effective adaptation of existing technologies, techno-economic analysis, the provision of technical information and consulting services.

KIST maintains a far-ranging interaction with technological institutions throughout the world and has a program of sabbatical leaves for professional staff which helps maintain a contemporary capability in its technological undertakings.

In the process of its own evolution, KIST has gone through various stages of organisational development and adaptation in pursuing fulfillment of its original concepts and objectives. Thus the management of KIST has experience and insight into organisational problems and solutions of a specialised type which probably exceeds that of any other organization in the world. In addition to having extensive experience in meeting the technological needs of Korean industry, KIST has in-depth experience with the many internal and external problems which affect the success of a major technological institution, which if made available to similar undertakings elsewhere, could prove of immeasurable value in assisting with planning, organisational and implementation tasks.

THE five year national development plan envisages an increase of the contribution of the industrial sector to the gross domestic product over the plan period. The industrial sector is also expected to provide employment opportunities to an additional 105,000 persons during the plan period. These targets are to be achieved through the expansion of existing public sector industries, the establishment of new public sector projects and also through the expansion of industries in the small scale sector. The increase in the volume of industrial production will come through the manufacture of commodities consumed by the large masses of the population, the expansion and establishment of industries manufacturing intermediate industrial inputs.

ONE of the basic defects of the industrial structure prior to the base year of the Five Year Plan was that the industrial sector was critically overdependent on import inputs for production. In seeking to achieve the targets set out in the plan, the need to keep the foreign exchange requirements for investment as well for operations at the barest minimum levels receives very special consideration. The development of the export-oriented industries is receiving the highest priority under the development plan. Apart from resulting in increasing foreign exchange earnings and thereby easing the prevalent general shortage of foreign exchange these industries will also be able to contribute much towards the import of industrial inputs and equipment.

TO achieve the targets relating to investment and export earnings set out in the Five Year Plan, a number of policy measures have been adopted and these are amplified in the White Paper on private foreign investments issued in June 1972.

IN the task of implementation of projects that have been identified, and included in the five year plan, the main constraint has been the lack of foreign exchange to finance the foreign component of the investment. The measures adopted to overcome this limitation has been to seek assistance from multi-lateral aid giving agencies as well to obtain aid on a bi-lateral basis.

IN regard to the development of industrial exports, a breakthrough has been made to set up projects on the basis of joint collaboration. This includes ~~mutual~~ equity participation, deferred payment for machinery imports, market guarantees for export etc.

THE highest priority is to be accorded to the development of a sound agro-based ~~maxim~~ industrial sector which will contribute towards the supplementing of rural incomes by creating more employment opportunities and providing the demand for the raw materials originating in the rural agricultural sector. Kaniec Starch flour, Essential Oils, Sericulture, development of local fibres such as sun hemp are some of the agro-based industries identified for further development.

THE light engineering industry too has been assigned a special role and its ability to serve as a catalyst in the industrial activities is being utilised to the maximum. This sector is expected to manufacture and supply the bulk of the simple agricultural implements and tools, motor spares and similar components required by the other industrial sectors.

By virtue of its wide investment potential and the better utilization of capital as well as foreign exchange, the small scale sector is fundamental to the development process to be undertaken. The expansion of small scale industries should be carried out in the fields of textiles, light engineering, food processing, rubber and leather products etc. Regional development activities being under taken through the Industrial Development Board will bring industries into areas which have hitherto been neglected.

The major lacuna in investment programme in Sri Lanka is the absence of a suitable Central Information Bureau which provides data regarding the existing status quo in manufacturing industry, the state of the economy, demand for various items, needed by the community, incentives available for the manufacturing sector etc. In other developing countries of this region in which foreign investment has made an impact in the economic development, Central Investment Bureau has been established. The most celebrated example is Singapore where the Economic Development Board is assigned the functions of monitoring all applications for foreign investments. In the Budget speech of 1975 the Hon. Minister of finance has stated that a Central Foreign Investment Authority will be set up where all applications entailing foreign capital participation and technical participation will be evaluated. He also intends enacting a law guaranteeing foreign investment in this country. As at present the White Paper is the only statement in force which is not legally binding. Once the foreign investment law is enacted all the incentives and other benefits provided will be legally guaranteed. In order to evaluate and examine applications received for foreign investments, it is necessary that the proposed Foreign Investment Authority be staffed with competent personnel who could fulfil these assignments with acceptance. The availability of basic data is a vital factor in project evaluation. UN and its allied agencies could furnish this country the necessary expertise to establish a Data Bank in this country for this purpose.

At the 21st Session of ESCAP held in New Delhi in 1975 a proposal to set up an Asian Centre for Technical Transfer and Investment was accepted by the Assembly and the Indian Government agreed to host this centre. This proposed Debt Bank would also provide the necessary country support for the apex organization to be set up by the ESCAP for regional transfer of technology.

COUNTRY NAME - IRELAND

1. Industrial Development Policy

A policy of industrialisation was adopted by successive Irish Governments following the achievement of independence in 1922.

The policy at first was based on import substitution and it was characterised by protection against imports by means of tariffs and import restrictions. In addition, restrictions were placed on foreign investment.

Local manufacturing responded by expanding to serve home markets and many small and medium size enterprises were established, mainly for the production of consumer goods and building materials. But the growth of industry was far below what was needed. Agriculture was shedding labour. Unemployment increased and remained at a high level.

By the late 1950s it was clear that this policy would not solve the twin problems of unemployment and emigration, and that future industrial expansion could be achieved only by attracting new industries catering for export markets.

A survey of a number of industries carried out in the early 1960s showed that numerous problems existed:

- Over diversification of production resulting in short production runs with consequential high production costs.

- Production units are small in scale.
- Under-utilisation of plant.
- Need for modernisation and re-equipment of plant.
- Management deficiencies.
- Inadequate training.
- Inadequacy of marketing and product research, design standards, packaging and product presentation.
- Bad marketing on export markets.
- Transport problems.

2. Developing a new policy :

The need now was to devise a strategy for achieving a rapid increase in the volume of export oriented industry. This required two major changes :

- Existing Irish industry would have to be adapted to move from production for a small highly protected home market to competing in the home market in conditions of free trade and competing also in export markets.

attraction from outside the country of new export-based industries.

The new policy had the following features :

- i) the re-organisation and enlargement of the Industrial Development Authority;
- ii) a revised and extended system of industrial incentives and services;
- iii) the identification of objectives and priorities in job creation which became the basis of programmes of activity.

At the root of the new strategy were four key questions. Where should industry be located ?

What sort of industrial mix should there be in terms of size of enterprises? What sectors/industries should be encouraged? What kinds of companies should be sought within the industrial sector?

The broad aim was to attract foreign investment into country industrial projects having the characteristics of growth, stability, good quality jobs and export potential, while at the same time seeking to identify and develop opportunities within existing Irish industry and support those sectors of industry which had the capacity to prosper under free trade.

3. Industrial Incentives and Services

Non-Industrial

- i) Complete exemption from taxation on exports generated profits for 15 years.
- ii) Non-repayable cash grants towards the cost of fixed assets.
- iii) Training grants.
- iv) Loan guarantees and interest subsidies (where appropriate).
- v) Equity participation (where appropriate).
- vi) Export advice on taxation and legal questions.
- vii) Advance factories on industrial estates and in other locations.

- viii) Advisory services on site selection, factory building cost control, planning and pollution control regulations.
- ix) Manpower information and advisory services.
- x) After-care services in initial production stages.

Enterprises Industries -

Re-equipment grants towards the cost of modernisation of plant and machinery.

Small Industries:

Financial, advisory and after-care assistance for industrialists establishing new small-scale industries, expanding existing ones or diversifying their product range.

4. Other Organisations Involved in Industrial Development:

- Department of Industry and Commerce
- Department of Local Government & Local Government Authorities
- Department of Foreign Affairs
- Irish Export Board
- Institute for Industrial Research and Standards
- Confederation of Irish Industry
- Industrial Training Authority
- Irish Management Institute
- Irish Productivity Centre
- National Manpower Service
- Industrial Credit Company Limited
- Shannon Free Airport Development Company Ltd.
- Sea Fisheries Board

Pigs and Bacon Commission;
Agricultural Institute;
Electricity Supply Board;
Irish Peat Development Authority;
National Institute for Physical Planning
and Construction Research;
Irish Transport Authority;
National Building Agency;

(Note : Special Arrangements exist for
co-ordinating the work of these
bodies).

9. Special Features of the Irish Approach
to Industrial Development :

Regional Industrial Plans -

The Shannon Airport Export Free Zone
Service Industries Programme;

Joint Ventures;

Small Industries Programme;

Product and Process Development (R.&D.).

Project Identification Scheme.

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IRISH REPUBLIC

INDUSTRIAL DEVELOPMENT AUTHORITY

1. Aims

The Industrial Development Authority has national responsibility for industrial development in Ireland.

Its main functions are :-

- (i) To act under the Minister for Industry and Commerce as a body having national responsibility for the furtherance of industrial development.
- (ii) To provide and administer grants and other facilities for industry.
- (iii) To construct and administer industrial estates and factory buildings.
- (iv) To provide houses for employees in industries.
- (v) To foster the national objective of Regional Industrial Development.

2. Organisation

The IDA has a total staff of about 470. The headquarters office is located in Dublin. There are 9 Regional offices within the country and 12 overseas offices.

3. Industrial Incentives and Services

The IDA administers an extensive range of incentives and services which fall under three headings :

- New export — based manufacturing industries or major expansions of existing ones.
- Re-equipment of existing manufacturing industries.
- New or existing small industries.

The IDA promotes throughout the world the suitability of Ireland as an industrial location.

4. Involvement of Other Organisations

The IDA works with many other organisations which provide services and facilities for industry. These include Government Departments, State Agencies, Trade Unions and Employers' Associations.

5. Achievements

Since 1960, the Irish economy has undergone the transition from being a predominantly agricultural economy to one with a strong industrial sector. Home based manufacturing industry has been extensively modernised. Exports of manufactured goods totalled £588 million in 1974 compared with £71 million in 1964, and accounted for over half of total exports. By the end of 1974, more than 500 new industrial projects had been set up by or with the help of overseas companies. These will provide employment at full production for over 100,000 people.

6. International Development Co-operation

The IDA participates in the work of providing technical advice and assistance to developing countries in relation to industrial development. It is a member of the Irish State Agencies Development Co-operation Organisation (DEVCO) which has been set up to co-ordinate the projects of technical assistance operated by Para-statal Agencies in Ireland and to promote co-operation by such bodies in joint projects of this kind.

DEVCO was established as a consequence of the belief that the Irish experience in economic development is particularly relevant to developing nations. It now has 26 member agencies covering a wide range of skills and experience. These agencies are prepared to share their experience with people in the developing world.

The IDA also participates in the work of the Development Centre established at Shannon Airport, Ireland, by the Shannon Free Airport Development Company Limited. The aim of the Development Centre is to facilitate the transfer to developing countries of the Irish experience in the operation of an export-oriented industrial free zone.

The Shannon Airport industrial free zone for export industries was the first of its kind in the world. Similar free zones have since been set up in other countries.

The Shannon Development Centre provides study courses in the planning, establishment, marketing and operation of free zones. In addition to training activities, the Centre can sometimes make available senior executives from Irish State Agencies for short assignments to assist developing countries to plan and implement industrial free zone projects.

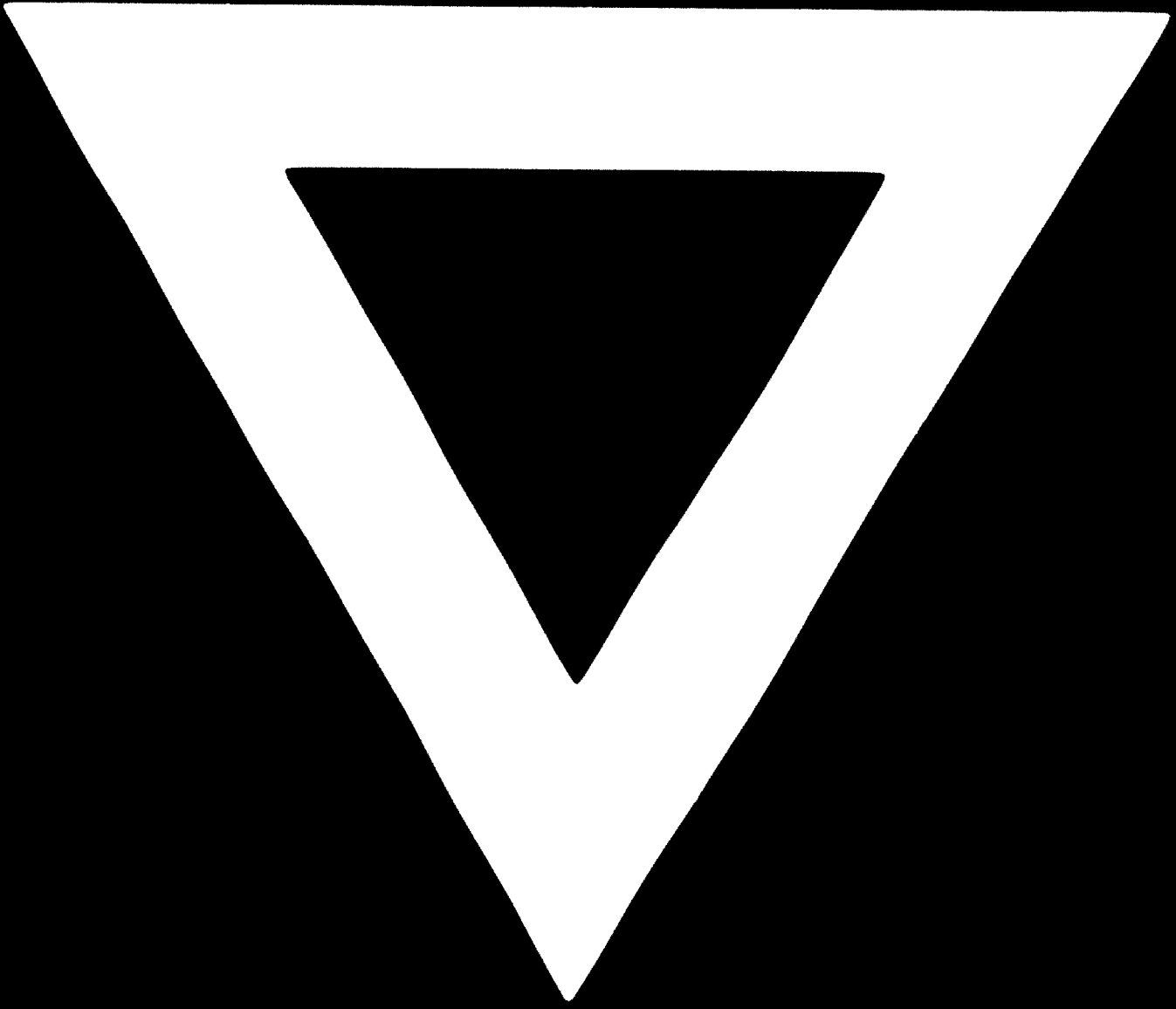
ANNEX V

LIST OF DOCUMENTS

- ID/WG.225/1 Technical assistance provided to 8 Asian countries by UNIDO
UNIDO activity in the least developed countries
- ID/WG.225/2 UNIDO investment follow-up programme
- ID/WG.225/3 Project document on establishment of a prime mover industry
for the land-locked countries
- ID/WG.225/4 The role of ESCAP in promoting co-operation in industry among
the developing countries of the region
- ID/WG.225/5 Review of existing co-operative arrangements among the
developing countries with special reference to the Mekong
countries
- ID/WG.225/7 Institutional arrangements among developing countries for the
acquisition, adaptation and development of technologies
- ID/WG.225/8 Review of existing co-operative arrangements among the
developing countries with special reference to Asia
- ID/WG.225/9 Technical co-operation among developing countries in the
ESCAP region in the field of agro- and allied industries
- ID/WG.225/10* Industrial planning in India
- ID/WG.225/11* Co-operation among developing countries. A profile of India's
offer
- ID/WG.225/12* Participation of the Council of Scientific and Industrial
Research, India, in the programme of co-operation with the
developing countries in industrial technology and industrial
research and development with special reference to UNIDO-India
Agreement
- ID/WG.225/13 Experience of the APO in productivity programmes with
particular reference to manpower development

Most of the above documents are available from UNIDO upon request. Those marked with an asterisk were reproduced in very limited quantities because of their length and can be consulted in the UNIDO Library.

Additional publications on Indian Industrial Development were distributed at the Seminar by the Indian Delegation. They can also be consulted in the UNIDO Library.



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