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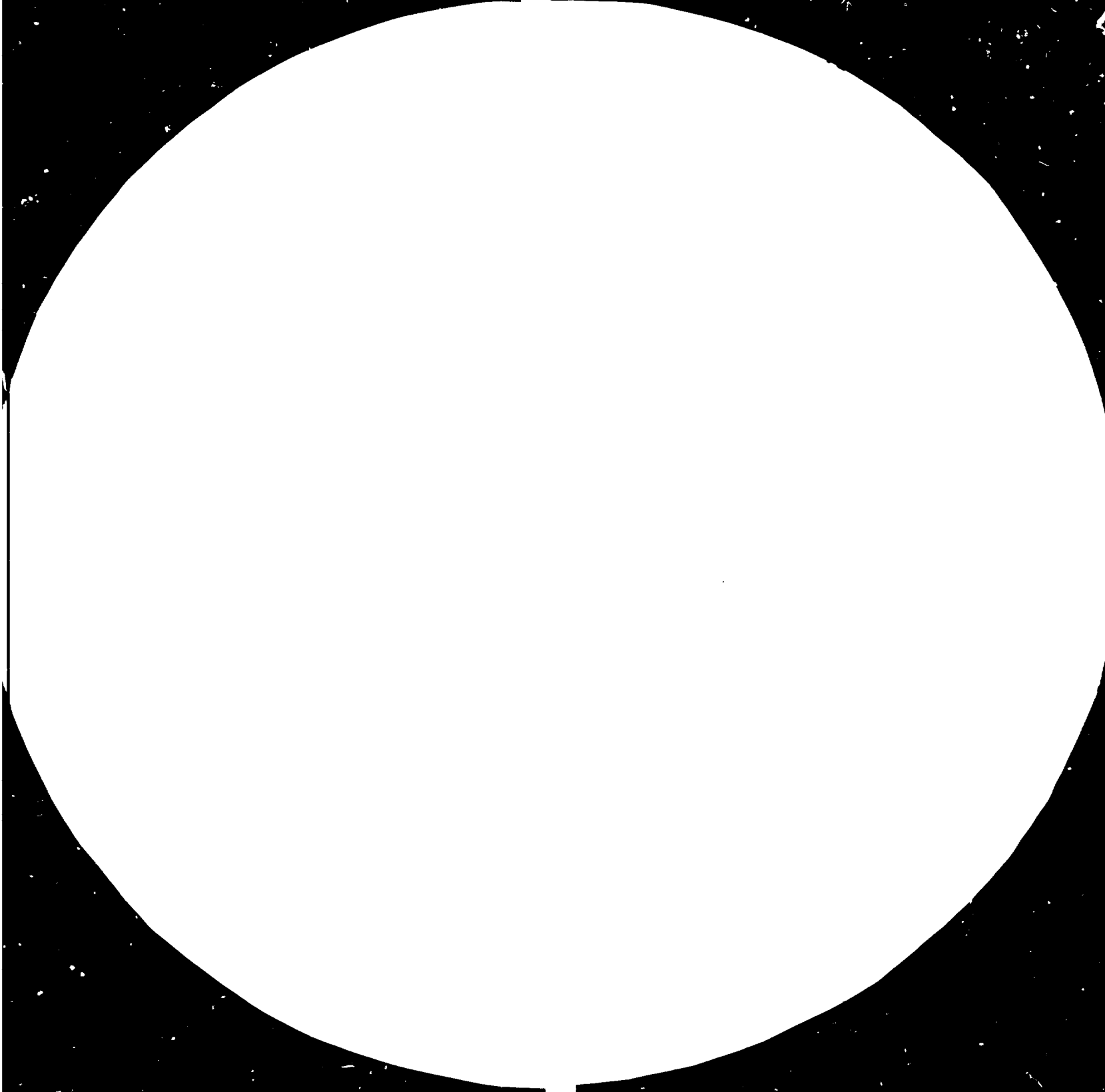
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PILOT PROJECT FOR INDUSTRIAL EXPANSION IN THE NORTHEAST

DP/THA/82/010

THE GOVERNMENT OF THAILAND

Report of the Evaluation Mission\*

Prepared for the Government of Thailand  
by the United Nations Development Programme and  
the United Nations Industrial Development Organization

United Nations Industrial Development Organization

Vienna

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### Summary

The project design, resting on the assumptions that 1) the area concerned was ready for rapid industrial development and only supporting services were needed for this to materialize, and that 2) the Government would take additional supportive measures, has proven to be over-optimistic. Also, a two-year period is short to expect a considerable number of new investments realized.

The approach specified in the project design: systematic opportunity studies, pre-feasibility and feasibility studies followed by assistance in implementation was not followed by the project. This methodology was considered by the NIDEP team as not suitable or effective. The approach chosen by the project team was to play a client-based, consultant role. While some deviations from the original project design were justified in terms of adapting to the perceived demands from clients, the "pilot" project - i.e., the experiment in active investment promotion from opportunity identification, pre-feasibility studies through finding a promoter, etc. - was not really tried. The original project design reflected DIP thinking at the time and the methodology is again proposed in plans for the reorganization of the Department. The project seems to have been meant partly as an experiment to guide decision-making. This experiment has not been carried out.

The results of the project in terms of accelerating investment and assistance to existing enterprises must be considered rather limited. However, these limited results cannot be blamed on the project team, which clearly worked very hard. The choice of the four provinces (all in very early stages of industrial development), the lack of a wider Government approach in terms of financing and incentives, as well as the downturn of the economy and the limited duration of the project, are major reasons for the limited results. At the same time, however, partial but important institution-building results were achieved. The highly competent national staff has certainly acquired important new skills, and is probably able now to continue many of the tasks alone. The results mentioned above and the experience acquired by the project are both very useful products of the pilot project, provided the staff, elements of the methodology and the experience are used by DIP in their future promotion activities.

The "consultant" approach could form the basis for a model of DIP field activities in the future, but the more active role of identifying and promoting viable projects should be integrated into this. DIP should certainly go ahead with a planned reorganization and streamline its operations. Also, a comprehensive national strategy for industrial development should be formulated. To be truly effective, the promotion activities need to be complemented by greatly improved access to long-term capital and a system of incentives compensating for the disadvantages of not being located in or close to Bangkok.

List of Abbreviations Used

- BDI - Board of Investment
- NESDB - National Economic and Social Development Board
- IFCT - Industrial Finance Corporation Thailand
- DTEC - Department of Technical and Economic Co-operation
- DIP - Department of Industrial Promotion
- SIFO - Small Industries Financing Organization
- ISI - Industrial Service Institute
- NIDEP - Northeastern Industrial Development Project

US\$ 1 = 28 baht (Feb. 1985)

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## INTRODUCTION

The project, approved in December 1982, effectively started operations in April 1983. It aimed at accelerating industrial development in four selected provinces in the Northeast of Thailand through systematic identification of opportunities, study of project feasibility, identification of entrepreneurs and techno-economic assistance. The project was considered a "pilot" effort which would test the validity of the approach for application in other regions of the country. The evaluation had already been foreseen in the project document to study the overall achievements of the project, assess the validity of the approach and recommend any changes in the methodology before application in other regions. The full Terms of Reference for the evaluation are attached as Annex 1.

The evaluation team consisted of:

- . Mr. Richard Sandler, UNDP Representative, consultant;
- . Mr. Nipon Sirivat, Government Representative, Technical Services Division, Department of Technical and Economic Co-operation;
- . Mr. Adrie de Groot, UNIDO Representative, UNIDO Evaluation Unit.

The team consulted with Government officials, as well as with UNDP and UNIDO staff in Bangkok. It also undertook a six-day mission to the project location where it consulted with the national and international staff of the project, with officials of Government and financing organizations, and with a number of entrepreneurs in the provinces concerned. A full list of persons consulted is attached as Annex 2. The mission would like to express its appreciation for the co-operation and assistance received during these consultations.

A final meeting to present the main findings and recommendations was held in Bangkok with the participation of DTEC, DIP, UNDP, UNIDO, the project team and the evaluation team.



## CHAPTER I. Formulation of the Project

### I.A. Objectives of the Project

The development objective given in the project document is as follows:

To reinforce the Northeast Region's efforts towards diversified and integrated socio-economic development through a programme of accelerated industrialization using existing natural resources, labour and infrastructure. The project is designed to support the national industrial expansion programme.

The immediate objectives given are:

#### 1. Industrial Projects Identification

Identify opportunities for new and expanded industrial enterprises in the pilot project area based on brief surveys of industrial resources, market, infrastructure and entrepreneurial interest. Emphasis will be placed on small and medium agro-related and engineering industries with favourable value-added and employment characteristics.

#### 2. Industrial Projects Preparation, Evaluation and Promotion

Depending on the nature of the projects identified and the needs of the interested sponsor/entrepreneur, prepare detailed opportunity studies or support studies such as market study, raw material study, etc., and assist interested sponsors/entrepreneurs to evaluate and promote industrial projects so that they can establish and put the new industrial enterprises into operation.

#### 3. Assistance to Existing Industrial Enterprises

Provide extension services to existing industries with emphasis on reactivating idle industries or expanding existing ones through additional investment in order to improve the efficiency of existing production capabilities and/or to modernize technology through development of new markets, as well as improvement in manufacturing and business operations, with special emphasis on marketing, distribution channels, cost accounting and pricing, product and product line design, quality control and energy management. Mobilize technical services from existing public (and private) institutions to supplement available capabilities.

#### 4. Access to Financial Resources

Assist entrepreneurs to gain access to investment and loan funds at reasonable terms.

#### 5. Public Information

Create widespread awareness, understanding and participation by officials and businessmen through a public information programme.

## 6. Training

Provide training for national project staff and entrepreneurs. National counterparts will receive in-service on-the-job training in accordance with individual needs, as well as brief formal training courses designed to fill skill gaps. Entrepreneurs will participate in study tours to other parts of Thailand or to other countries in the sub-region.

It is clear that the above given six items are not objectives but rather categories of activities. The immediate objectives of the project were not clear and this caused some confusion. The problems caused by weak design are discussed further in the next Section.

### 1.B. Socio-economic and Institutional Setting

#### Socio-economic Setting for Industrial Development

The Northeast region has long been identified as the problem area of Thailand. A third of the national population lives in the region, mostly engaged in farming of rice and several rain-fed crops exported by the country. Due to low and undependable rainfall and infertile soil, crop yields are low and highly variable from year to year.

By the late 1960s, the pressure of a growing population on limited rice land was becoming serious. Fortunately, the economy of the Northeast was stimulated, first by the several large air bases operated by the United States in the region during the Vietnam War. In the mid 1970s, the Northeast became the main supplier of several export crops. Most significant of these was cassava, in which Thailand very quickly gained 95 per cent of the world export market, based primarily on the growth of production in the Northeast's poor sandy soils. Just as the EEC began to put a lid on cassava exports, the third positive factor developed, which was the export of skilled and semi-skilled workers to the Middle East. Remittances estimated at six billion baht per year have had a great impact on disposable income in the region.

The region is nonetheless the poorest in the country with 1982 per capita income of 6559 baht compared to 17,450 baht for the nation and 47,826 baht for Bangkok. Fortunately, the young people of the region are traditionally highly mobile, and industry in and near Bangkok depends heavily on labourers from the Northeast.

During the project period, 1983-1985, the region's economy was depressed particularly severely by low crop prices and tight credit resulting from the global recession. This condition clearly inhibited the project's efforts to generate new investment.

Although in the country as a whole industry accounts for 21 per cent of GDP<sup>1/</sup>, rapidly approaching the share of the agricultural sector, in the Northeast, the respective figures are 12 per cent and 40 per cent. A large part of this industry consists of basic processing of farm commodities such as rice mills, and a few large factories for the processing of cassava, sugar and kenaf (into gunny sacks).

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<sup>1/</sup> All GDP figures are for 1982.

The province of Khon Kaen has been developed by the Government as the regional capital. Although Khon Kaen's resource base was perhaps no better than that of neighbouring provinces, investment in infrastructure, establishment of regional offices for many Government activities, good air service, and the establishment of a quality university have all facilitated the growth of industry in the town. Large investments have been made in a paper mill and a canning factory, and a number of smaller manufacturing enterprises have sprung up. Industrial share of GDP in the province, at 17 per cent, is the second highest in the region. The presently uncertain prospects of the two large ventures indicate the difficulty of establishing non-traditional industries of a large scale in the region.

Several other provinces in the region also have interesting special opportunities. One example is Nongkhai, one of the four provinces selected for the project. Here a large and efficient vegetable production area has grown up to supply the fresh vegetable market in Vientiane, across the Mekong River, with irrigation water pumped from the Mekong River. The area suddenly found itself without a market when Laos became a People's Republic in 1975. Producers here can be organized relatively quickly to produce a number of horticultural crops for canning, and one tomato paste factory appears to be highly successful.

On the other hand, the province of Udorn, chosen as the site for project headquarters, does not appear to have any such advantages. Per capita income of 7987 baht is average for the region; industry's share of GDP is 8 per cent. Other than the basic agricultural processing industries mentioned above, there are only a few factories of medium scale (assets of US\$ 200,000 to US\$ 1,000,000). At least two of these were assisted by the project and visited by the evaluation mission, one producing basic farm vehicles and another producing thread from locally-raised silkworms. Other than the above, there is only a small number of foundries, machine workshops, and shops producing concrete construction materials, furniture and simple processed foods.

#### Institutional Setting: Government Policy and Programmes

A principal thrust of the Fifth Plan (1981-86) was an attack on rural poverty to reduce the income gap between Bangkok and the regions. Although the main tools used to carry out this policy have been social and rural development facilities such as health services and small irrigation works, increased attention has also been given to development of cottage and small-scale industry in the regions.

With increasing population and agricultural productivity, growth of the labour force is now exceeding the growth of the non-agricultural sectors, causing increased unemployment, which will be one of the high-priority issues of the Sixth Plan (1987-91) now being prepared. The promotion of small-scale and regional industries will thus have a high priority in the near future. Recognizing that at present specific policies, programmes and agencies relevant to industry are not co-ordinated and focussed on the above objective, the Government has set up two high-level committees and, using a World Bank credit, commissioned local consultants to review the present structure and make recommendations for strengthening it. The Industrial Restructuring

Committee has the job of formulating detailed policy proposals and co-ordinating implementation through the various Ministries (Finance, Industry, Commerce) and agencies (Board of Investment, NESDB, Bank of Thailand, IFCT) involved. It is chaired by the Deputy Minister of Industry, with the Industrial Planning Section of NESDB as Secretariat. A second important committee is the Sub-committee for Rural Industry under the National Rural Development Commission. This Sub-committee is chaired by the Deputy Minister of Industry with NESDB as Secretariat.

Much of the preparatory work for policy and programme formulation has been assigned to the Industrial Management Company, a consulting company under IFCT, and draft proposals, including one for re-organization of the Department of Industrial Promotion (DIP) are presently under consideration. Two major problems being considered, and ones which clearly influenced the effectiveness of NIDEP are 1) the unavailability of financing for small-scale industry, and 2) the lack of incentives to encourage industrial growth in the regions. Until solutions to these problems are found, the benefits to be gained from technical assistance and financial advice will continue to be limited.

The DIP is the agency most active in the direct support and promotion of small industry. It is a relatively small Government Department with approximately 1,000 staff and an annual budget of 80 million baht. It is comprised of three divisions providing assistance to specific small industry sectors (handicraft, cottage and textile divisions), and five units providing services to entrepreneurs. These services include training (in both business and production techniques), financial and market advice, and consultation to solve specific technical and financial problems. Most DIP staff is working in Bangkok.

One DIP Unit, the Industrial Service Institute (ISI) in Chiangmai, has been judged in one objective evaluation to be a strong success.<sup>2/</sup> The ISI was started in 1972, and for six years was supported by UNDP/UNIDO assistance. The success was attributed to the motivation and skills of the young staff and their focus on appropriate local industries with real growth potential. Teamwork and the fact that an integrated set of services was offered also contributed. It is noteworthy that in some ways the approach to local entrepreneurs adopted by NIDEP was similar to that used at ISI. Rather than developing investment project proposals, both ISI and NIDEP focussed their energies on the needs and opportunities identified by business "clients" in their areas.

The main difference between ISI and NIDEP seems to be that, whereas the ISI Chiangmai provided designs, production techniques and marketing assistance to on-going (mostly crafts) businesses, the Udorn office supplied planning, financial and technical assistance to entrepreneurs with investment intentions which might or might not materialize. Both offices made extensive use of the resource personnel at DIP Bangkok, but, due to its large permanent staff, the Chiangmai Institute was able to provide intensive involvement over a long period with developing businesses. NIDEP gave more relative emphasis to financial services, whereas ISI was able to offer more comprehensive, integrated services.

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<sup>2/</sup> Jacques Amyot, Northern Regional Industrial Service Institute: Evaluation and Planning Perspectives, April 1981.

The Government's efforts to solve the financial problems of small and medium-scale industry are presently channeled through the IFCT, which has operated a regional office in Khon Kaen since 1976. The Small Industries Finance Office (SIFO), whose continued operation is presently in doubt, has insufficient resources to have much impact on rural industrialization. The evaluation mission was told, and confirmed for itself, that the commercial banks in the Northeast have little interest or incentive to make medium or long-term loans for small industry development. Here industries seem to get started by plowing back profits, continually rolling over working capital loans in the form of overdrafts, and selecting projects with the shortest pay-back period.

#### I.C. Project Design

##### The logical structure.

As stated in A above, the statements given under objectives actually are categories of activities. Under "outputs", these same categories of activities are repeated with slightly more detail. Only for the first three has a general quantified target been given.

Under "activities" the same six categories have been repeated, with slightly more specification, and with a general indication of some target dates given.

It is clear that with the "activities", "outputs" and "immediate objectives" all the same, a large part of the logical structure of the project is missing. While in general terms the type of activities to be undertaken by the project team is given, the targets for and types of specific results expected and a clear objective of the project more specific than "accelerated industrial development in the Northeast" have not been given. Also, the primary "function" of the project, where "industrial development" was erroneously given in the project document, did not help clarify the objective.

##### Critical Assumptions

A major assumption was made when designing the project, and this was implicitly given in the Background and Justification Section. The project design assumed that the area concerned was ready for rapid industrial development, and only skills in project identification, preparation and evaluation, as well as other services and access to finance, were required for this to materialize. The project would provide these missing elements.

A second assumption was that other supporting activities would be initiated and developed by the Government, including a mixed public/private Advisory Group that to monitor the project and increased IFCT financing activity.

Both assumptions proved to be over-optimistic. The provinces concerned were not ready for rapid industrialization. Of eighteen "opportunities" identified in a preliminary study of Udorn Thani done before the project start, none have materialized. Instead, the project has had to work alone, without accompanying Government measures, new financial channels, or an Advisory Group.

The project design was also deficient in that it did not specify the primary function of the project, or the priority/balance between direct support to industries by the experts and the efforts required to establish a capability in the DIP. This "institution-building", in the view of the evaluation team, should have had a higher priority, certainly in view of the intention to replicate the approach in other areas, and the long-term nature of the need that the project tried to address.

It must be added that the project design did not relate the project to the emerging Government structure for industrial development, nor show specifically how the project would contribute to the development of Government policy or programmes.

It should further be mentioned that the two-year and three-month duration of the pilot project was too short to provide very clear information concerning the effectiveness in terms of new investment created. The cycle from identification of a project opportunity to implementation of the project and starting operation takes quite some time even for smaller industries, and even more time in relatively underdeveloped regions.

It seems that the project was part of a more or less conscious and agreed attempt by DIP to experiment with different operational-level approaches that could provide models for improving the effectiveness of the Department. The basic approach used by the project was described in 1981 working papers of the Centre for Applied Economics Research of the Kasetsart University as activities that the Regional DIP organizations (then ISI) should develop further. At the same time, DIP had another "experimental" Bangkok-based project on "promotion of small industries" funded through bilateral channels. Certainly if the project is seen as part of these experiments, the four provinces selected were not the best choice. The area chosen should have offered a better chance for a success with the approach tested.

CHAPTER II. Project Implementation

II.A. Delivery of Inputs

		<u>Original Budget</u>		<u>Latest Budget (Rev. G)</u>	
11-01	Team Leader	27	190,000	27	192,319
11-02	Industrial Engineer	24	168,400	24	138,991
11-03	Short-Term Consultants	6	51,000	5	33,000
13	Administrative Support				6,975
15	Expert Travel		6,000		17,000
17	National Consultants	12	15,600		6,700
<hr/>					
19	Total Personnel		431,200		394,985
20	Subcontract				5,000
32	Group Training		20,000		21,000
41	Expendables/Supplies		5,000		5,000
42	Non-expendable		7,000		7,000
51	Operation/Maintenance				11,200
52	Reporting Cost		2,500		2,500
53	Sundry		5,000		5,000
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99	GRAND TOTAL		470,700		453,585

As can be seen from the above table, as far as the UNDP/UNIDO inputs are concerned, the project was implemented almost as designed. Only minor shifts and changes have occurred. The utilization of budgeted short-term consultants was delayed but some are now under recruitment. Much of the budget for national consultants was not used. The training budget for the training of entrepreneurs as well as counterpart staff was used primarily on counterpart staff.

The same is valid for the major Government inputs. After only minor delays, the four professional staff have been assigned to the project. Good office accommodation and facilities were provided. Only the planned funds for short-term local consultants were not used.

II.B. Implementation of Activities

According to the project document, the following activities would be undertaken (paraphrased):

1. Project identification missions to the four provinces identifying a number of opportunities;
2. Identification of sponsors and evaluation of investment proposals. This would include screening, evaluation, preparation of proposals, acquisition of finance and arrangements for implementation;
3. Assistance to existing enterprises (at least two per province), the carrying out of diagnostic and remedial consultancies; entering into agreements with "resource" institutions and using these resources in assisting enterprises;

4. Assistance to entrepreneurs with loan applications, identification of financial resources and evaluation of projects, and the conducting of discussions with financial institutions on how to improve the availability of financial resources;
5. Public information activities, including press releases on provincial reports, project profiles, etc., and meetings with business groups, etc.; and
6. The training of national staff, mainly on the job, but supplemented by courses and study tours.

The project team did not follow this approach, which begins with systematically identifying industrial opportunities. They consider that other studies and organizations such as the BOI had already identified opportunities and prepared a large number of project profiles and pre-feasibility studies, and that this approach obviously had not worked, the problem being the identification of sponsors for these projects.

Instead, they adopted a client-based consultancy role whereby, after public information activities to inform potential entrepreneurs of the services of the NIDEP office, the project would offer the services wanted by the entrepreneur.

The project organized meetings at the offices of the provincial governors for local businessmen, with the Rotary and Lions organizations, with financial organizations, as well as general publicity through direct mail of a brochure, small articles in newspapers, radio announcements, etc. (This more or less complies with Activity 5 of the project document.)

As a result of this, to date at least 60 contacts have been made with actual or potential entrepreneurs. After a contact with an entrepreneur is made, an interview is held, sometimes structured, using an "X-Ray Form"; other times unstructured, with only a limited Note for the File as a record. These interviews attempted to establish:

- identification of the entrepreneur's problems and requirements for assistance;
- the client's real capability and "level" of interest in new investment;
- area or project of interest;
- available finance.

After the initial contact, the NIDEP office would try to assist the client in solving his specific problem(s). These problems, and the NIDEP involvement, can be grouped by the type of assistance given, as follows:



Financial and investment advice:

Work with the client to help prepare application forms for IFCT, SIFO and commercial banks. This includes the preparation of an initial financial analysis, for which the team uses a "PFS" (pre-feasibility study) form. It may also include advice on the exact composition of the finance required, the suggestion of sources, as well as actual assistance in dealing with these. Check interest in joint ventures.

Technical advice:

Selecting machinery, obtaining quotes, discussing the possibility of acquiring know-how through partners, etc., as well as diagnostic studies of production problems and recommendations for change.

Marketing advice:

Assist clients in doing market studies; help to find buyers for the products. (Market studies mainly done by clients themselves; NIDEP did not undertake any studies alone.)

The NIDEP team usually tries to involve the client in the work by making him do a number of things for himself, such as collection of market information, data on his existing operation, etc. This also helps determine the extent of the client's interest. If the client is considered to be seriously interested, the client and main data are added to a regular monitoring and follow-up system in which the status of all projects is reviewed by the NIDEP staff about every two weeks, and follow-up actions are decided upon.

While regular monitoring of progress takes place, no pressure is exercised on clients, as this is considered likely to be counter-productive.

While the project did not follow the sequence of the originally planned methodology, the NIDEP office is now gradually doing the provincial opportunity studies. Also, the office has on its records a number of product ideas for which no sponsor has yet been identified. The team now considers that both methods, starting from project identification and starting from clients, can be used simultaneously.

The experts in the project also conducted a number of short training sessions for the national staff on a large variety of issues in industrial economics, the project cycle, industrial engineering and data processing, to a total of at least 200 hours. In addition to this, a lot of on-the-job training was done, and a study tour to observe consultancy operations was undertaken.

If considered necessary, the NIDEP team did not hesitate to call on other sources for technical support. In a number of cases, Khon Kaen University and ISI Bangkok were called in to assist. This certainly was a positive feature of the project.

If taken activity by activity, one could say that the project implemented almost all planned activities to some extent. It deviated, however, from the overall methodology and planned sequence of activities. These deviations were not discussed explicitly at the two Tripartite Review meetings that were held during the project; instead, progress was discussed in very general terms. In implementing activity 2, the project did not follow the prescribed (in the job descriptions of the experts) UNIDO methods and standards of analysis for pre-feasibility studies. This deviation and the reasons for it were never adequately discussed, and certainly not agreed.

It is unfortunate that the more active "opportunity study - preparation - finding a sponsor" approach was not seriously tried, but dismissed by the team as not suitable. Certainly now when such an approach is again being discussed as part of a re-organization of DIP, operational experience of the "pilot project" would have been very relevant.

### CHAPTER III. Project Results and Achievements of Objectives

As noted in the section on project design above, the approach taken by the project varied considerably from that outlined in the project document. This section will review first the results achieved according to the outputs anticipated in the project document and second, additional achievements made using NIDEP's own approach. Where relevant, the mission's suggestions of possible ways to improve effectiveness will be added.

#### III.A. Outputs Anticipated in the Project Document

Output 1. Provincial opportunity studies. The author of the project document, together with a larger team of Thai officials, prepared a sample opportunity study for Udon Province which was available at the outset of the project. This was an interesting and useful document, but the specific projects identified were, as noted above, not immediately viable. During the project, the three other provinces were also studied, but only for Loei was a full report prepared. The document, prepared only in Thai, varied in content and quality from the Udon study. The Loei study included a more complete presentation of relevant statistics, but less interpretation of these statistics and their implications for investment. Whereas the Udon document was quite optimistic for investment opportunities, the Loei study was more neutral.

Output 2. Project preparation and promotion. It is NIDEP's assumption that investment studies not originating from or linked to entrepreneurial interests are unlikely to be productive. Thus, while the project collected the large number of existing investment opportunities which have been prepared by BOI, USAID and others over the last two decades, only two additional studies were prepared using project resources. These two were for high-quality dried chili peppers (for further processing) and peanut oil. Project funds were used to hire Industrial Management Consultants, a branch of IFCT, to produce these pre-feasibility studies. In addition, NIDEP promoted and obtained foreign funding for studies of 1) a 700 million baht complex for production of gasohol and industrial sweeteners from cassava; and 2) a 40 million baht project to produce construction material (Bacrete) from bagasse (sugar cane waste).

While accepting that the experience of DIP personnel at ISI Chiangmai gives validity to NIDEP's assumption, the evaluation team is not convinced that, if properly done, the investment identification approach may not have some usefulness. This approach requires staff who possess practical understanding and empathy with businessmen and their decision processes. At the very least, project studies would be an effective training mechanism for new and inexperienced DIP staff.

Output 3. Assistance to existing entrepreneurs. It was in the third category of outputs that the project concentrated its efforts. Achievements of the "consulting bureau" established are difficult to evaluate. The evaluation team had two sources of information from which to analyze the nature and success of NIDEP's consulting services to date:

- the "print-out", a file of clients' project ideas showing details and a record of activities for each; and
- interviews of twelve clients by the evaluation team.

The attached tables (Annexes 3 and 4) summarize the information available from these sources. Because the mission's study of individual cases was too brief to be conclusive, the figures cited must be considered indicative only.

Number of clients. The "print-out" shows 47 private and four public sector clients. It can be assumed that the total number of contacts made during the project is greater than this. On the first day of the mission's visit, no less than three clients were observed to visit the office. It may also be assumed that the number of clients requesting service will continue to increase as the availability of the service becomes better known, and particularly if the presently poor investment climate improves. As one client explained to the mission, the region's economy is now very bad and for an entrepreneur, "Without money in his pocket, his brain does not work."

Types of service. It would appear that five basic services were provided, as follows:

- a) Assistance in evaluating investment ideas. Examples: peanut oil factory, cotton medical supplies, tapioca products and mung bean noodles. No investment has been completed as a result of this service, although as many as six projects are in the final stages of discussion and may go ahead. Decisions to invest cannot be clearly attributed to project assistance and advice.
- b) Assistance in selecting and obtaining appropriate new equipment or factory sub-systems. Examples: corn dryer, tomato paste filling machine, lignite-burning furnace. Four clients adopted project recommendations and additional cases are likely.
- c) Design of factory and work system. Examples: small farm vehicles, foundry. Three clients appear to have adopted plans painstakingly made by NIDEP and DIP engineers.

- d) Assistance in obtaining loans from IFCT and SIFO (ranging from 30,000 baht to expand a foundry, to 3.5 million baht for a farm vehicle factory). Five loans have already been approved, and at least three more are likely. Bringing the SIFO loan officer to the NIDEP office for several days each month has had excellent results in facilitating small loans and bringing clients to the office. It is unfortunate that little contact and co-operation could be established with commercial banks. Given SIFO's limited resources and IFCT's relatively cumbersome procedures and conditions, it may be concluded that the long-term solution to the financing problem must be provided by the commercial banks or new private institutions yet to emerge.
- e) Market contacts. Examples: export market for tomato paste, Bangkok outlet for ginger tea. One clear success was a Japanese order for 1 million baht of tomato paste.

Of the roughly 59 requests received from 47 clients, it would appear that, as of March 1985, 13 had been successfully answered, 22 unsuccessfully, with results still pending on 24. Reasons for unsuccessful cases include loss of interest by client, client not agreeing with recommendation, refusal of loan application, and unfeasible investment idea.

The extent of firm results from NIDEP's consulting service at this stage must be considered limited. No new investment projects have yet materialized as a result of project activities. Several project ideas, such as the 700 million baht cassava venture, may not materialize. Several years ago the Government made a firm decision not to support several proposed gasohol projects, and this decision is unlikely to change without the re-emergence of upward pressure on oil prices.

Type of client served.

Large concerns with international contacts who would have access to and be able to pay for professional services with or without NIDEP assistance. These companies, however, could be receptive to investment concepts developed by the project.

Medium-size entrepreneurs with businesses of roughly US\$ 200,000 to US\$ 1 million asset value. These entrepreneurs seemed to be most suitable for project assistance. They tend to be either well-educated themselves or, if less educated, have a quick grasp of financial and technical issues and, therefore, appreciate the advice which NIDEP professionals can offer. At the same time, their financial resources and scope of contacts limits their access to information they might need to solve problems or make investment decisions.

Small to very small businesses, say US\$ 3,000 to US\$ 100,000 asset value. These people have a high requirement for project assistance, but are generally more interested in access to loans or markets than suggestions on financial planning or plant lay-out. With a low level of education, they tend to have a practical but ad hoc approach to business expansion. They are suitable clients for a narrow range of technical and financial services.

Output 4. Access to financial resources. This was treated by the project as one of the packages of services provided as assistance to existing entrepreneurs. See above.

Output 5. Public information. Under this category of outputs, the project document set the idealistic goals of awakening the national Government to the need for improved incentives and finance, and improving the investment climate. To achieve the first goal would require expert assistance in Bangkok, where policies and programmes are presently being considered. As for the investment climate in the Northeast, it is presently depressed by poor crop prices and scarce liquidity, and cannot be substantially improved in the long run without appropriate Government policies and programmes.

NIDEP's own goals for public information seem to have included 1) advertise its consulting service; and 2) influence DIP and Government programmes to promote industry. Interviewing entrepreneurs, it became clear to the mission that the project had effectively used many different means to inform the public. Asked how they learned about the project, clients mentioned radio announcements, brochures, provincial meetings, training programmes, and recommendations by the Provincial Industry Office. The national project chief and the consultants were active in maximizing their personal contacts with the business community, and have clearly maintained good relations with all parties involved. The only criticism which might be made in this regard would be the absence of a systematic programme for the dissemination of reports, use of media, and personal visits. The suggestion in the project document of a campaign to actively attract investment in the region might have some usefulness in the long term.

Output 6. Training. Whereas the project document anticipated training for both project staff and entrepreneurs, the project concentrated on the former. Training of project staff was accomplished through study tours abroad and formal and on-the-job training by the experts. The level of skill and motivation attained by project staff is one of the outstanding achievements of the project. Interviews of project staff indicated confidence in their work, clear knowledge of the step-by-step approach, as well as a good knowledge of consulting techniques such as how to work with clients, financial analysis, identifying outside resource personnel, and uses of a desk computer. The staff seems to have a high appreciation of the training it has received from the experts.

Once again, however, the mission would suggest a more systematic approach. If training activities could be incorporated into a long-term training programme and written up along with training exercises, materials, etc., it would be useful for the extension of successful techniques to other offices of DIP in the future.

III.B. Results Not Specified in the Project Document.

1. Institution-building. The establishment in a relatively short time of a suitable office, equipping it with adequate facilities, and recruitment of well-qualified staff must be considered as one achievement of the project. Procedures were established for identifying, evaluating and servicing clients, and for recording results and ensuring follow-up. The system established is potentially effective in assisting entrepreneurs in solving problems, expanding their enterprises, or starting up new ventures. The staff was trained and motivated to such an extent that officials are confident that they would be able to establish such an operation in a new location.

One element, however, is missing in the institution-building process. This is the manualization of objectives and procedures, including forms for various types of assistance, formats for work planning, and regularized means of attracting clients. Writing up the present system in the form of an operations or procedural manual would have several uses, as follows:

- a) It would enable the project to identify any gaps in its system;
- b) It would define and describe jobs in such a way that the objectives of staff training would be more clear;
- c) It would ensure that the system which has evolved would not be lost if the project ended or, as frequently occurs, present staff were transferred to other activities; and
- d) It would provide a basis for DIP to design and improve the operation of existing and planned field offices.

The "manual on industrialization of developing regions" which has been produced is primarily a textbook on economic and industrial development using Thailand as a case study. It contains very little material to guide staff in their day-to-day tasks. Only three forms were seen by the mission: a preliminary client interview "X-ray" form, a brief form for the evaluation and planning of an investment, and a simplified pre-feasibility study showing profit/loss in an "average year". In the opinion of the mission, there should be additional forms, and the above forms could be improved.

Other elements of the "consulting bureau" were not developed as systematically as they could have been.

- a) Client and project files were established, but the contents were not always orderly. Perhaps too much reliance is placed on the computer print-out, which does not always provide sufficient detail; and
- b) No system has been established to build up a file of outside resource personnel at universities, institutes, consulting organizations, other aid projects, etc.

The project provided funds for establishing regular relationships with outside institutions, but these funds were not used. It would be most useful to prepare an inventory of the resources at the various departments of Khon Kaen University and establish an annual budget to involve University personnel in industrial promotion. Some of the lecturers are themselves eager to assist, knowing that practical experience will improve their effectiveness in the classroom.

## 2. Recommendations on Government Policy and Programmes

Recognizing that there were serious missing elements in the Government's efforts to promote regional industry, the CTA prepared several proposals. These included:

- a) Classifying all Thai provinces into development zones according to need and potential for industrial development;
- b) Providing preferential loans to the most deprived zones; and
- c) Establishment of an equalization fund to compensate investors for regional disparities in costs of inputs such as fuel and construction materials.

These proposals were discussed with high-level officials in DIP, and some aspects incorporated into DIP proposals to the Restructuring Committee and Sub-committee for Rural Industry.

While the evaluation team would support efforts by UNDP/UNIDO experts to assist the Government in policy and programme formulation, it would also suggest that such assistance would be most useful if it harmonized with the positions presently emerging from the two responsible committees (see Part II.B.), their staffs and consultants. Such proposals should be made from the vantage point of a thorough understanding of what is politically acceptable and within the ability of the present bureaucracy to effectively administer. Such a vantage point can only be gained by an expert or consultant based in Bangkok.

### III.C. Factors Affecting Achievement of Project Objectives

Major factors which helped or hindered the project have all been referred to in one or another of the above sections. They may be summarized as follows:

#### Positive factors:

- strong national staff;
- timely provision of adequate facilities;



- clear commitment by DIP;
- past experience of DIP, particularly at ISI Chiangmai.

Negative factors:

- absence of an overall Government programme to overcome the obstacles to the development of small-scale and regional industry;
- regional recession due to low crop prices and scarcity of liquidity;
- flaws in the project design, including selection of Udorn as project site;
- inadequate time to build up an office and produce concrete results.

III.D. Contribution to the Achievement of Development Objectives

Due to the many inhibiting factors, especially the absence of a co-ordinated Government programme, the project has so far made little visible progress toward achievement of the project's development objective of accelerating industrialization in the Northeast. Despite the obstacles faced, however, there are indications that, with adequate resources, preferably concentrated in a single regional centre, progress towards this objective could be achieved. The project demonstrated that properly-trained and motivated officials can provide useful services to entrepreneurs and facilitate and probably accelerate new investment. It was also demonstrated that there is at least some demand for these services on the part of entrepreneurs at all levels and in a variety of enterprises.

## CHAPTER IV. Conclusions and Recommendations

### IV.A. Conclusions

The project design, resting on the assumptions that 1) the area concerned was ready for rapid industrial development and only supporting services were needed for this to materialize, and that 2) the Government would take additional supportive measures, has proven to be over-optimistic. Also, a two-year period is short to expect a considerable number of new investments realized.

The approach specified in the project design: systematic opportunity studies, pre-feasibility and feasibility studies followed by assistance in implementation was not followed by the project. This methodology was considered by the NIDEP team not useful as it would be difficult or impossible to find entrepreneurs for the project studied. Also, the entrepreneurs, mainly interested in small-scale industries, as well as the financing organizations, are said not to want nor require a detailed feasibility study. The approach chosen by the project team was to play a client-based, consultant role. While some deviations from the original project design were justified in terms of adapting to the perceived demands from clients, the "pilot" project - i.e., the experiment in active investment promotion from opportunity identification, pre-feasibility studies through finding a promoter, etc. - was not really tried. The original project design reflected DIP thinking at the time and the methodology is again proposed in plans for the reorganization of the Department. The project seems to have been meant partly as an experiment to guide decision-making. This experiment has not been carried out.

The results of the project in terms of accelerating investment and assistance to existing enterprises must be considered rather limited. However, these limited results cannot be blamed on the project team, which clearly worked very hard. The choice of the four provinces (all in very early stages of industrial development), the lack of a wider Government approach in terms of financing and incentives, as well as the downturn of the economy and the limited duration of the project, are major reasons for the limited results. At the same time, however, partial but important institution-building results were achieved. The highly competent national staff has certainly acquired important new skills, and is probably able now to continue many of the tasks alone. The team as a whole also operated using the consultant approach, which seems to be well understood and appreciated by the national staff. The results mentioned above and the experience acquired by the project are both very useful products of the pilot project, provided the staff, elements of the methodology and the experience are used by DIP in their future promotion activities.

The "consultant" approach could form the basis for a model of DIP field activities in the future, but the more active role of identifying and promoting viable projects should be integrated into this. To be truly effective, however, the promotion activities need to be complemented by greatly improved access to long-term capital and a system of incentives compensating for the disadvantages of not being located in or close to Bangkok.

IV.B. Recommendations

To the Government

Industrial promotion in the way the project has applied it for the four provinces is useful, but in order to make it effective, the following measures are recommended, several of which are already under consideration:

1. Re-organize the various DIP activities and divisions into a system of functional specialization and co-operation instead of the present situation where parallel activities are implemented by different divisions. Ideally, the NIDEP office activities should be brought together with the technical and training support functions as developed by the Northern Industrial Promotion Centre (ISI);
2. Focus the activities on provinces with better opportunities for industrial development (e.g., Khon Kaen or Song Kla). This is in accordance with the present Government "secondary city" development plans;
3. For the time being, concentrate scarce staff and other resources in regional centres rather than scattering them in a too-rapid expansion of provincial offices. The Khon Kaen regional office should be strengthened considerably in terms of manpower before it can be considered well established;
4. Offer services like the NIDEP office provided, in conjunction with technical and training services, as a "package" from one location. Organize and budget for the use of DIP Bangkok-based expertise to back up the field offices;
5. Consider providing incentives for all sizes of industry at least to mitigate the disadvantages of the regions compared with Bangkok (utilities, transport, etc.);
6. Improve the availability of finance for regional industries, both for investment in fixed assets, as well as working capital. A loan guarantee scheme and/or "venture capital funds" that combine (equity) financing with technical and managerial support should be considered. Financing for industry by the commercial banks should be encouraged, possibly by a mechanism similar to the present requirement that a percentage of total deposits be used for lending to the agricultural sector; and
7. Develop a national plan for industrial development as a framework for the above promotional schemes, including regional priorities for different types of industry.

To UNDP/UNIDO

The evaluation team considers that in the remaining period the project team should spend part of its time preparing a systematic operations manual recording all main activities in the office in terms of description of

methods, job descriptions, checklists and guidelines (for opportunity studies, screening of projects, pre-feasibility and feasibility analysis, market studies, each type of consultancy service). Insofar as applicable, standard UNIDO methodologies should be used, and, if necessary, adapted and abbreviated to suit the size and complexity of the projects being studied. This would strengthen the institution-building achievements of the project, as well as facilitate the transfer of methods to other offices and new staff.

UNDP/UNIDO should, if requested, consider

1. Assisting the Government in the design of specific national programmes, particularly incentives, assistance (extension), and financing mechanisms, for regional and small-scale industry;
2. Assisting DIP in analyzing the experiences obtained from the various activities it has been conducting in the promotion of regional industry;
3. Helping to draw up a clear organizational structure with division of responsibilities between Bangkok-based activities and back-stopping and regional-based activities, as well as a system of co-ordination. At present, DIP is working on this re-organization.
4. Co-operating in strengthening of the regional centres, concentrating at first on one site. A logical follow-up would certainly include the North Eastern Regional Centre in Khon Kaen.

While 1-3 above are small but urgent direct support activities, the building up of regional centres should clearly be an institution-building effort, including programmed on-the-job training, and may take several years.

ANNEX 1

Tripartite In-depth Evaluation of

DP/THA/82/010

Pilot Project for Industrial Expansion in the Northeast

Terms of Reference

I. Background

The Fifth National Economic and Social Development Plan adopted an export-oriented development strategy. It also called for the Government to "promote small-scale industry into the basic foundation for the country's industrial development and at the same time ..... speed up industrial decentralisation to provincial areas in order to disperse economic activities and the use of local natural resources".

For the Northeast region, covering 170,000 km<sup>2</sup> and with about 16 million inhabitants, or about one-third of the country, the Government decided to provide special services to the entrepreneurs and enterprises to speed up the industrial development which, for a number of complex socio-economic reasons, had lagged behind the national development. The Northeast traditionally is mainly agricultural but it possesses a number of natural resources.

At the beginning of the project, which was aimed at four of the 16 provinces in the Northeast region, it was considered that the main conditions for "economic take-off" had been created and that the main limitations of growth were the lack of skills in project identification, preparation and appraisal, technical and business know-how, market research and distribution, as well as access to finance. The project, which was designed as a pilot effort in four provinces of the region, listed the following objectives:

1. Industrial Projects Identification

Identify opportunities for new and expanded industrial enterprises in the pilot project area, based on brief surveys of industrial resources, market, infrastructure and entrepreneurial interest. Emphasis will be placed on medium and small agro-related and engineering industries with favourable value-added and employment characteristics.

2. Industrial Projects Preparation, Evaluation and Promotion

Depending on the nature of the projects identified and the needs of the interested sponsor/entrepreneur, prepare detailed opportunity studies or support studies such as market study, raw material study, etc., and assist interested sponsor/entrepreneurs to evaluate and promote industrial projects so that they can establish and put the new industrial enterprises into operation.

3. Assistance to Existing Industrial Enterprises

Provide extension services to existing industries with emphasis on reactivating idle industries or expanding existing ones through additional investment in order to improve the efficiency of existing production capacities and/or to modernize technology through development of new markets, as well as improvement in manufacturing and business operations, with special emphasis on marketing, distribution channels, cost accounting and pricing, product and product line design, quality control and energy management. Mobilize technical services from existing public (and private) institutions to supplement available capabilities.

4. Access to Financial Resources

Assist entrepreneurs to gain access to investment and loan funds at reasonable terms.

5. Public Information

Create widespread awareness, understanding and participation by officials and businessmen through a public information programme.

6. Training

Provide training for national project staff and entrepreneurs. National counterparts will receive in-service on-the-job training in accordance with individual needs, as well as brief formal training courses designed to fill skill gaps. Entrepreneurs will participate in study tours to other parts of Thailand or to other countries in the sub-region.

In order to assess the overall achievements of the project and to study validity of the approach for application in other regions, it had been agreed by all parties concerned to undertake an in-depth evaluation (See project document page 22.).

II. Scope and Purpose of the Evaluation

In accordance with provisions contained in Chapter 3470 of the Policies Procedures Manual (PPM) and the relevant guidelines described in UNDP/PROG/FIELD/150 of 30 September 1982, the primary purpose of the evaluation mission is:

1. Assess the achievement of the project against the set objectives, targets and expected outputs - how much the on-going project has already achieved or is expected to achieve these in terms of (i) project identification, (ii) project preparation and promotion, (iii) assistance to existing entrepreneurs, (iv) access to financial resources.

2. Examine the extent to which the results/achievements achieved by the project have contributed towards rapid development of industries in the region with greater participation of the private sector.
3. Identify and assess the factors which facilitated the achievement of the project's objectives or deterred the fulfilment of the project objectives, including the methodology and approach chosen by the project and to what extent the project adapted the approach to deal with the difficulties encountered.
4. Make recommendations for future action or follow-up.

As part of the above tasks, the mission will specifically review:

- (a) How far the outputs were achieved with details, how many projects were identified, on what basis and how many pre-investment studies were conducted, and further, on what basis and how many industrial projects were developed together with entrepreneurs.
- (b) How far the identified industrial projects are near to realization. Several new enterprises should be carefully reviewed and analyzed and project's contribution to them evaluated.
- (c) Review to what extent the many assumptions of the project design concerning infrastructure, availability of finance, the advisory group (NIEAS) were correct and what influence these had on the project success.
- (d) Review the extent to which the project succeeded in bringing in the financial institutions and/or the Government to provide the financial assistance to entrepreneurs.
- (e) How far the project succeeded in improving the investment climate in the region covered to remove or mitigate the disadvantages of the region, and to what extent the project has managed to build on local advantages to overcome these.
- (f) Examine if the results of the project to date validate the approach chosen, if the results could be improved, and how the methodology should be adapted before being applied in other regions.

While the mission will mainly review the past of the project, the evaluation is also expected to lead to general suggestions for further assistance to Thailand, specifically concerning application of a similar approach to other provinces.

III. Composition of the Mission

The mission will be composed of the following:

- One representative of the UNDP
- One representative of the Government of Thailand
- One representative of UNIDO

These representatives should not have been directly involved in design, appraisal or implementation of the project.

IV. Consultations in the Field

The mission will maintain close liaison with the UNDP Resident Representative in Bangkok, the concerned Government organizations, and the project's national and international staff.

The mission is also expected to visit at least the four provinces covered by the project and make intensive contact with the entrepreneurs that have been supported by the project.

Although the mission should feel free to discuss with the authorities concerned all matters relevant to its assignment, it is not authorized to make any commitments on behalf of UNDP or UNIDO.

V. Time-table and Report of the Mission

Insofar as required, the UNDP and UNIDO representatives will receive briefings at their respective headquarters. Upon arrival in Bangkok, the mission will be briefed by the UNDP Resident Representative, who will also provide the necessary substantive and administrative support. The mission will attempt to complete its work within two weeks, starting on 18 March and ending on 30 March. Upon completion of its work, it will be debriefed by the UNDP Resident Representative. At the end of the mission, the UNDP Resident Representative will organize a meeting involving senior Government officials where the mission will present its initial findings, conclusions and recommendations, and be ready to discuss these.

The mission will complete its report in draft in Thailand and will leave behind a copy of the draft with the Resident Representative.

The final version of the report will be submitted simultaneously to UNDP and UNIDO headquarters, which, in agreement, will transmit the report to the Government of Thailand through the Resident Representative.



ANNEX 2

List of Persons Consulted

Government Officials

- Mr. Visith Noiphan, Director-General, Department of Industrial Promotion  
Mr. Padetphai Meekhun-iam, Director, Planning Division, DIP  
Ms. Ratana Smachat, Programme Officer, DIP  
Mr. Thongchai Choochuang, Director, UN Sub-Division, Division 2, DTEC  
Mr. Chakramon Phasukavanich, Chief, Industrial Planning Sector, Economic Projects Division, NESDB  
Mr. Channaronk Chandrachoti, Centre for Integrated Plan of Operations, NESDB  
Ms. Orapin Werawut, Director, Industrial Economics and Planning Division, Ministry of Industry  
Mr. Vim Roongrout, National Project Director, NIDEP  
Mr. Woramit Krutto, Economist, NIDEP  
Mr. Theerapol Pramualgidja, Industrial Engineer, NIDEP  
Mr. Thanate Makelai, Industrial Engineer, NIDEP  
Mr. Suwit Sitnaren, Chief, Northeast Regional Industrial Promotion Office, Khon Kaen  
Mr. Somdi Supamala, Provincial Industry Officer, Office of Ministry of Industry, Sakon Nakorn

UNDP/UNIDO

- Mr. Winston R. Prattley, Regional Representative, UNDP  
Mr. Niranjan J. Desdai, Deputy Regional Representative, UNDP  
Mr. Mohammed A. Siddiqui, SIDFA and Special Representative of the Executive Director of UNIDO to ESCAP  
Mr. Tadashi Kondo, UNIDO, JPO, Bangkok  
Mr. Meir Peled, Team Leader of the project  
Mr. Anthony Corrigan, Project Expert, Industrial Engineer  
Mr. William Kugler, UNIDO Expert, Eastern Seaboard Project

Financial Organizations

- Mr. Staporn Kavitanon, Deputy Secretary-General, Office of the Board of Investment, Bangkok  
Mr. Swai Nilprohm, Branch Manager, IFCT, Khon Kaen  
Mr. Vichai Suwanapichon, Deputy Manager, Siam Commercial Bank, Udorn Thani

Actual or Prospective Entrepreneurs

- Mr. Somsak Aonjittikul, General Manager, Srchiengmai Agricultural Industry, Ltd. Part., Srchiengmai, Nong Kai (tomato paste factory)  
Mr. Sawat Srihamontree, Investor, Thabo, Nong Kai (tomato paste factory)  
Ms. Pronpimol Teekathananont, Manager, Udorn Charoenpol Ltd. Part., Muang, Udorn Thani (manufacture of farm vehicles)

- Mr. Klomkling Wongsrichai, Factory Owner, Pattana Factory, Muang  
Udon Thani (producer of ploughs)
- Mr. Chumpol Wattanagrai, Manager, Jenepol Co., Muang, Udon Thani  
(changing to new modern kiln)
- Mr. Boorua Fahgrajang, Manager, Boorua Thai Silk Ltd. Part., Muang,  
Udon Thani (silk spinning factory)
- Mr. Vijit Tulawan, Factory Owner, Songserm Factory, Kumphawapi,  
Udon Thani (producer of ploughs)
- Mr. Samrerng Sakonthawat, Investor, Apiwat Factory, Muang, Sakon Nakorn  
(setting up of peanut oil extraction plant)
- Mr. Tepwichai Tiapiyakul, Manager, Sahguan Karn Chang Ltd. Part., Muang,  
Sakon Nakorn (reduction of production cost)
- Mr. Wachara, Contractor, Sakon Nakorn (dried chili project)
- Mr. Tananchai, Grain Trader, Udon Thani
- Mr. Boonpong, Rice Mill Owner, Udon Thani

Others

- Mr. Jeffrey Evans, USAID
- Mr. George D. Hooker. Industrial Market Research Services
- Mr. William R. Fathergill, Consultant to BOI, Bangkok
- Mr. Somnuk Choosilp, Deputy of Agricultural Engineering,  
Khon Kaen University

ANNEX III

Summary of Interviews of Twelve Entrepreneurs

1. How did you learn about the project?

word-of-mouth	1
DIP training programme	2
NIDEP visit	1
Provincial meeting	3
radio	1
saw office sign	1
Provincial Industry Officer	2

2. What problem(s) did you have?

looking for investment opportunity	2
financial evaluation of energy-saving equipment	1
investment capital	6
improve efficiency of factory system	2
overseas market for product	1
select appropriate new machinery	3

Total

15

3. Services received:

	Incidence	Success	No Success	In Process
investment study/idea	2	-	1	1
equipment recommended/evaluated	5	1	1	3
access to loan	6	3	2	1
market contact	1	1	-	-
plant system/design	1	1	-	-
Total	15	6	4	5

4. Where would you have gone without the project?

private consulting engineer	2
own personal contacts	6
other Government contacts	3

ANNEX 4

Summary of Information in the Print-out\* of NIDEP Clients

<u>Service</u>	<u>Incidence</u>	<u>Success</u>	<u>No Success</u>	<u>Likely</u>	<u>In Process Uncertain</u>	<u>Not Likely</u>
investment idea	21	-	9	-	6	6
equipment/sub-system	13	4	4	3	2	-
loan	15	5	5	1	2	2
market	4	1	2	-	-	1
plant/system design	5	3	2	-	-	-
BOI	1	-	-	-	1	-
Total	59	13	22	4	11	9

Number of private clients: 47  
Number of public sector contacts: 4

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\*Results recorded in the print-out are subject to considerable interpretation.  
Above numbers are at best indicative.

