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INTER-AGENCY MISSION ON IMPACT STUDY ON THE ACTIVITIES OF U. N. SYSTEM IN SCIENCE AND TECHNOLOGY IN THAILAND

5 - 10 DECEMBER, 1988

REPORT BY

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CONTENTS

1. INTRODUCTION

Under the auspices of the United Nations Centre for Science and Technology for Development (UNCSTD), an Inter-agency Mission to Thailand was organised from 5th to 10th December 1988. The agencies represented and their nominees are listed below:

1) UNCSTD ... DR. SERGIO C. TRINDADE
MR. C B RAO AND
MS. HIROKO MORITA - LCU

2) UNDP ... MR. ABU SELIM

3) UNIDO ... DR. C V S RATNAM

4) ESCAP ... DR JOHN ELLIOTT

5) UNCTAD ... MR ASSAD OMER

6) UNCHS ... MS RITA PASQUALINI

7) ILO ... DR IFTIKAR AHMED

8) UNESCO ... DR J R E HARGER

9) UNU ... DR SANEH CHAMARIK

10) UNDTNC ... DR TYN MYNT-U

The members of the Mission assembled in Bangkok on 5th December 1988.

It was said that this initiative by UNCSTD was first of its kind.

2. BACKGROUND

Arising out of the Vienna Programme of Action for strengthening indigenous scientific and technological

capabilities in developing countries, it becomes necessary for UN Organisations to promote activities for the development of scientific and technological capabilities in those countries. Until now, each UN organisation has been dealing with countries separately or in association with other UN Organisations for carrying out specific projects in different developing countries.

The A.C.C. Task Force of UNCSTD at its 8th Session decided to focus future work towards specific country situations and for doing so carry out an assessment of work being done at country level by different UN agencies involved in scientific and technological activities and what has been the impact of those activities in those countries. Towards fulfilment of this task, an Inter-agency Mission to Thailand was contemplated. UNCSTD invited other UN organisations to send their representatives to participate in this Mission. UN Organisations as detailed earlier deputed their representatives to participate in this Mission. The Terms of Reference for the Mission were prepared by UNCSTD (annexure-I).

What was suggested in the Terms of Reference was to review all the activities of the UN system in Thailand, strengthening scientific and technological capabilities in that country from the view point of the country. The aim is to bring about "two combs" approach. This meant that from the country there should be an unified

approach to the United Nations system to secure assistance to build scientific and technological capabilities in the country. On the other hand, different agencies in the UN system, concerned with scientific and technological capability building in developing countries should coordinate their activities and present a unified programme for action by the UN system.

UN agencies should have a coordinated and agreed plan of action to meet the needs of the country for building its scientific and technological capabilities. This approach, it was thought, could better assess the total needs of the country in the areas of scientific and technological capability building and therefore UN organisations could function more effectively to meet the needs of the country.

It was felt that UNDP Resident Representative/ Resident Coordinator should have a coordinating role in bringing about coherence in the activities of United Nations System and in interfacing with the Royal Government of Thailand. The Mission is to explore how he can be assisted to play a more substantial role in ensuring efficient implementation of S and T capability building projects.

To assist the work of the Mission, UNCSTD commissioned Chula Unisearch, a consultancy group functioning in Chulalonkorn University, Bangkok to prepare a country

report. The Chula Group produced a Report on the activities of the United Nations system in scientific and technological activities in Thailand during 1980-87. This Report also contains an account of bilateral aid received by Thailand for this same purpose during this period.

The Country Report was made available to the Members of the Mission and this was used as one of the documents for carrying out discussions in ministries, departments and institutions in Thailand, which have been receiving assistance from the UN system to strengthen their scientific and technological capabilities.

3. ACTIVITIES OF THE MISSION

On the afternoon of 5th December 1988, the members of the Mission had their first meeting. December 5th, being national holiday in Thailand, it was not possible to meet anyone in the Royal Govt. of Thailand or in the UNDP.

The members of the Mission had a meeting in the UNDP on the morning of 6th December 1988. At this meeting, members of the Mission, Mr. Abu Selim, Deputy Resident Representative UNDP in Thailand and authors of Chula Unisearch Country Report were present.

The objectives of the Mission were discussed at the Meeting, the programme of activities of the Mission

were firmed up. The authors of the Country Report briefly presented their findings as detailed in their Report. The members of the Mission elicited from them further details regarding the activities of the UN system in Thailand and what had been the impact of UN aid and the need for further UN assistance in the country. One fact that emerged was assistance from UN agencies is only about one eight of bilateral aid received by Thailand in science and technology area.

The members of the Mission individually expressed their views on the activities of the Mission and what could be expected out of the activities of the Mission.

Starting from the afternoon of 6th December 1988, the Members of the Mission were engaged in visiting different ministries, departments and institutions in the Royal Govt. of Thailand dealing with matters in scientific and technological capacity building in the country and receiving assistance from the UN system.

The list of organisations visited by the Mission and the people met is given at annexure-2.

The members of the Mission had occasion to meet key officials in the Ministry of Science, Technology and Energy (MOSTE) Department of Technical and Economic Co-operation (DTEC) National Economic and Social Development Board (NESDB), Department of Industrial

Promotion, Regional Remote Sensing Agency, Metal working and Machinery Industries Development Institute (MIDI), Thailand Institute of Scientific and Technological Research (TISTR) and a quality assurance unit in the Department of Agriculture. The Mission also had an opportunity to meet representatives of Thailand Rice Mills Association and visited a rice field and mill. The Mission visited the factory of M/s. Thai Hoover Industry Company Limited manufacturing containers for perfumes and personal care products.

On 9th December, 1988 the members of the Mission had a meeting with Mr. T. Niwa, Resident Representative/ Resident Co-ordinator UNDP in Bangkok and gave him an account of the activities of the Mission in Thailand. Mr. Niwa expressed his interest in the activities of the Mission and said UNDP would like to do whatever was possible to enable achievement of the objectives of the Mission.

At a meeting in the afternoon of the 9th, there was a debriefing of the Mission. During a part of this discussion, the authors of the Country Paper were present.

During this meeting a project to improve effectiveness of Thailand's access to external assistance in S & T development was discussed. However, no document was presented.

The UNCSTD representatives were to prepare a brief report of the Mission in the next few days and give it to the members of the Mission.

4. THE COUNTRY SITUATION

Thailand is a newly industrialing country (NIC) and forms a part of ASEAN, Association of South East Asian Nations. The country has a land area of 514000 sq. km. of which 38% is cultivated. The forest cover is over 20% of the land. The population of Thailand is about 54 million, with the biggest metropolitan concentration being in Bangkok, with a population of about 6 million. Other towns are rather small. The country has a sub-tropical climate with not much difference between summer and winter temperatures. The language is Thai.

The economy of the country made great strides during the last 25 years. From an agricultural and primary products economy based upon a small range of export commodities namely rice, rubber, tin and teak, the country has now emerged as a newly industrialising country. While agriculture is still important, considerable diversification has made Thailand into one of Asia's main agricultural exporters. The country follows an open economic system promoting maximum private initiative.

Currently the government is engaged in implementing plans for reduction of rural poverty and maintenance of balance

between development and conservation, improvement of balance of payments through intensification of exports particularly by stressing on competitiveness of industrial production and promotion of activities for conservation of energy and development of alternative resources. In the current 6th plan period, 1987-91, the emphasis is on maintaining economic stability, expansion of industry and attainment of a measure of technological self reliance. During the last two decades and more, manufacturing sector in the country has increased rapidly. Currently 20% of the GDP is contributed by this sector. While processing of agricultural products and food industry continue to be the most important industrial sector, textiles, garments and chemicals are now becoming important. Development of more basic industries is somewhat limited. The country produces cement, sugar, petroleum products and passenger cars, mostly assembly. The manufacturing sector needs inputs of technological innovation. Little attention has been paid to material research to promote the use of local raw materials and intermediate products. The local knowhow has essentially been limited to assembly of imported components and inputs. Technical abilities to develop products from scartch have been limited.

Without domestic technological capability, import substitution strategy may impose a heavy burden on trade and balance of payments because local industries have to

spend large amounts of foreign exchange resources on imported items. In the long run this strategy of industrialisation may not be satisfactory.

Most of the present industry is concentrated in and around Bangkok. The outlyning regions need to be brought into this activity for providing employment to people living in those areas.

The country needs assistance in the area of small and medium scale industries in terms of management, training, marketing and common facilities services. In short for the country to sustain the recent growth, it should strengthen its capability in technology management.

5. ASSESSMENT

Deliberations of the Inter-agency Mission in Thailand indicated that the mechanism in the country for dealing with external aid was as follows.

In so far as dealings of the country with UN agencies was concerned, there was well established coordination among different ministries, departments and institutions in Thailand. The Department of Technical & Economic Co-operation (DTEC) acts as the nodal point for all assistance extended by external agencies including UN agencies. The DTEC in consultation with those who make proposals for obtaining external assistance, identifies projects for which Thai Government want to receive assistance from

external sources including UN organisations. The identification is based upon the policies of the Government that exist from time to time. For example, discussions the Inter-agency Mission had in DTEC revealed that the Thai Government preferred projects which had a short duration say three to five years, in any case not more than five. They would like to ask for external assistance depending upon the activities of the requesting organisations within the country, their capability to absorb external aid and implement the projects and the amount of aid available from outside. DTEC knew pressures were applied by different organisations in the Government of Thailand to get their projects identified as those deserving external assistance. This happened in all countries. Depending upon the policies and programmes of the Governement and its directives to DTEC, the projects were ultimately identified for external assistance. It is true that in Thailand there was no specific S and T Plan. One project they were contemplating was obtaining assistance for making a Science and Technology Plan.

The DTEC had certain priorities in S&T namely production management, marketing management and technology management, energy and environment.

It appeared that existing system in the country with regard to coordination of country programmes for receiving assistance from external sources including the UN system

might not be changed very much in the near future. They appeared to be satisfied with the existing way of doing things. They want to receive continued UN assistance, which they prefer. But they want delays to be reduced in approving and implementing UN projects.

UN System:

Practically all UN organisations are involved in giving assistance on specific projects in Thailand. The UNDP Report of 1987 and the Country Report prepared by Chula Unisearch list those projects. The Chula Unisearch Report divides UN supported projects into core and non-core projects. According to this Report, during the period 1980-87, 26 core projects and 125 non-core projects were implemented in Thailand. The Report gives criteria for such a classification. One could make an issue as to the way in which this had been done. For example, all projects intended for enhancing capabilities in specific technologies have been put under non-core sector. However, this did not make much difference in the deliberations of the Mission.

The proceedure for consideration of projects and their identification for assistance from the UN system is quite elaborate. Discussions take place between the representatives of UN organisations and the recipient organisations as to what assistance is required. For example, if assistance is required in the matter of upgradation of technological

capability by providing specific equipment to Thailand Institute for S & T Research (TISTR), there would be preliminary exchange of views between UN Organisations and the Institute. After identifying the projects, the project document gets prepared and processed through concerned ministries and DTEC. In the case of TISTR assistance for some projects is sought from UNIDO. The project which comes through DTEC will be considered in the UN system as to its relevance, funding etc. Sometimes a project could be of interest to more than one UN organisations. That would mean consultation among the concerned UN Organisations. There is generally a well understood proceedure for collaboration among UN Organisations for identification& implementation of projects in S & T area in Thailand. Even now, there are projects in which more than one UN organisation is involved. In such cases, already a system of consultation exists. It is to be seen what more needed to be done in this matter to make UN organisations more effective in Thailand.

Already there was a complaint in Thailand that it took a long time to get any project approved through the UN system and sometimes this took away the very importance of the project to the country. Generally more consultations mean more delays. How to avoid and reduce delays is a crucial matter. Another point for consideration is whether

more consultations among different UN organisations would really increase the effectiveness of UN assistance to the country. One has to clearly identify lacuna in existing system, devise better policies and lay down proceedures, which could be considered an improvement over the existing system in terms of quicker delivery of assistance and more effective implementation of projects. Unless a trial is made no opinion can be expressed. One could try such a proceedure on a few projects to see how it worked in practice.

In every country, UNDP provides a certain amount of coordination and also acts as an interface between UN organisations and the country. This is so in Thailand.

Another point which needs to be considered is that the total UN assistance to Thailand is certainly a very small part of the total external assistance being received by that country. In so far as the S&T sector is concerned, the bilateral assistance in 1986 is approximately 8.5 times more than assistance from the UN system. The UN assistance amounted to US $ 10.2 million whereas other external assistance amounted to US $ 87.7 Million. Because of the very nature of UN assistance, DTEC, ministries, departments and institutions expressed the opinion that they would prefer UN assistance and would like to have it in the future. There certainly will be

need by UN assistance in future. However the difficulties pointed out need to be eliminated or reduced.

6. ACTION PROGRAMME FOR UNIDO

In the light of the role UNIDO has already played in Thailand to strengthen scientific and technological capabilities in that country, interest shown by different ministries, departments and institutions, visited by the Inter-agency Mission for obtaining further assistance from UNIDO, the generally favourable reception UNIDO aid has had in the country and the present mandate of UNIDO to assist developing countries to strengthen their industrial and technological capabilities, it can be stated clearly that there will be an increasing role for UNIDO in assisting Thailand to further strengthen its scientific and technological capability. This is also borne out by the fact that the country has immediate plans for strengthening its scientific and technological capabilities.

A list of projects already assisted by UNIDO during the period 1980-87 those under implementation and projects in the pipe line are given at annexure-3. Some projects under preparation for obtaining UNIDO assistance are detailed below.

The Inter-agency Mission visited MIDI and found that assistance previously given in terms of equipment,

expertise and training was appreciated. MIDI was in the process of submitting a new project to UNIDO. The Department of Industrial Promotion, which also received UNIDO assistance earlier, was also in the process of submitting further proposals for such assistance. In the Thailand Institute for Scientific and Technological Research it was found that they too were preparing a project for obtaining assistance from UNIDO.

The Ministry of Science, Technology and Energy is contemplating a 20 year plan for the development of science and technology capability in Thailand. Currently there are some US aided projects in science and technology for development, rural industries and employment, Khonkaen University Research Development, (to conduct research appropriate to the development of North Easterr rural communities), micro/mini hydro electric projects etc. While funds will be obtained from USAID to implement these and other projects, UNIDO will have a definite role to play in those and related projects in terms of capability building in industrial technology development in Thailand. Other things which emerged during discussions the Inter-agency Mission had in Thailand were:

1) The Department of Industrial Promotion is contemplating establishment of an electron technology centre and a biotechnology centre, two areas of great interest to UNIDO.

2) The Department of Industrial Promotion is also wanting from UNIDO assistance for manpower development in technology, industry and computer aided decision making.

3) As mentioned in several discussions the Inter-agency Mission had in Thailand self reliance in technology is an objective of Thailand. UNIDO will have an important role to play in this area.

4) Small and medium scale industries are considered very important for the development of Thailand. Therefore UNIDO, as the prime agency in the UN system deeply interested in assisting developing countries in fostering small and medium scale industries, will have a significant role in this activity in Thailand.

5) An idea that is now being talked about in Thailand is the need for venture capital for establishing science and technology based industries. As of now, no venture capital is available in the country, except for small funding available from Ministry of Science, Technology and Energy. UNIDO can provide assistance to the Ministry of Science, Technology and Energy to review the position existing in the country regarding the availability of venture capital and work out a programme for the future.

6) The Inter-agency Mission considered a Project entitled "Improving effectiveness of Thailand's access to external assistance in S and T for development". UNIDO could consider supporting this project and make contribution by way of expertise and finance.

This programme of action suggested to UNIDO is in line with proposals detailed by the Director-General, UNIDO in his Reports Nos. IDB3/26 of 17 June, 1987, IDB4/9 of 27 July 1987 and IDB/4/5 of 3 August 1987 considered by UNIDO Industrial Development Board at its Fourth Session held in Vienna, 10-18 October, 1988. The programme for action covers development and transfer of technology, development of human resources and coordination and co-operation in the UN system at the inter-secretariat and country levels.

7. FURTHER ACTION BY UNCSTD

The Report of the Inter-agency Mission to Thailand will be placed before the ACC task Force in March 1989.

During the next few months UNCSTD will sponsor similar Missions to 4 or 5 more countries, probably, Jordan, a country in Africa, Columbia and a country in Europe.

UNCSTD will pursue the Project agreed to by the Inter-agency Mission to Thailand. This project "Improving

Effectiveness of Thailand's Access to External Assistance in S & T for Development" will be for a period of 4 years with a cost of US $ 400,000/-. Efforts are on to get this funding from UNDP country funds.

8. RECOMMENDATIONS:

1. Until now UNIDO's assistance to Thailand has been relatively small as compared to that given by UNESCO, FAO, IAEA, WHO etc. In the light of current plans in Thailand to strengthen its scientific and technologies capability in industrial development, with special reference to small and medium scale industries, UNIDO could plan for a more effective role in Thailand.

2. The UNIDO projects under implementation and in the pipeline are in the area of pharmaceuticals, natural products, Eastern seaboard development, standards and assistance to Federation of Thai Industries (FTI). These projects could be implemented quickly. New projects in the areas of electronics and biotechnology could be looked into. UNIDO could plan an important role in strengthening technology management capabilities in Thailand.

3. Technology transfer from R&D institutions to industry had not been very satisfactory in Thailand. UNIDO could think of assisting thecountry in strengthening linkages between R&D institutions and industry and for promoting

technology transfer from the former to the latter. In this connection Thailand will require assistance to organise venture capital institutions in the country.

4. One of the recurring complaints in Thailand was inordinate delays that occured in the approval and implementation of UN funded projects. UNIDO could reduce such delays. This will have a very favourable impact in Thailand.

5. It is appreciated that more effective collaboration should be brought about among different UN agencies functioning in science and technology area in Thailand. However, this coordination should not result in further delays in approving and implementing projects.

6. UNIDO could consider supporting the project prepared by the Inter-agency Mission in terms of expertise and finance.

7. UNIDO could consider participating in other country Missions that will be organised by UNCSTD in the next months.

9. CONCLUSION

The Inter-agency Mission sponsored by UNCSTD in a commendable initiative because its aim is to bring from the UN system more effective assistance to Thailand for

strengthening its scientific and technological capabilities. The Inter-agency Mission had in depth discussions with key personal in some ministries, departments and institutions in the Royal Government of Thailand, receiving assistance from UN organisations. The Mission also had an opportunity to visit two private industries, one a rice mill and another a unit making containers for perfumes and toiletries. It appeared from these discussions and visits that in Thailand, there is a reasonably well organised system for seeking external assistance, multilateral and bilateral based on S&T priorities of the country. Depending upon the leadership of those in charge of individual ministries, departments and institutions and their perceived needs some of them got more assistance than others. Also external assistances is channeled into projects which are approved in the country's plans. In the UN also coordination exists in approving and implementing projects in which more than one agency is interested. At the country level the UNDP Resident Representative/Coordinator plays an important role in bringing about a measure of harmony in the activities of different UN organisations in Thailand. In so far as UNIDO is concerned their representative in Bangkok, the Senior Industrial Development Field Advisor (SIDFA) is in touch with ministries, institutions and departments in the Royal Government of Thailand. He is also in touch with private industry to explore the need for UNIDO assistances in

strengthening industrial technology capabilities in Thailand. However, total assistance to Thailand funnelled through UNIDO is relatively very small compared to assistance provided by sister UN organisation like UNESCO, FAO, IAEA, WHO etc. In the light of the fact Thailand is emerging as a newly industrialing country and the country wants to strengthen its technological self-reliance, UNIDO will have many opportunities in the immediate future to provide meaningful assistance to Thailand in their national effort. UNIDO could explore these possibilities and implement projects which are of immediate importance to Thailand.

The Inter-agency Mission suggested a project "Improving Effectiveness of Thailand's access to external assistance in science and technology development" covering a period of four years and costing U.S.$ 400,000. This project will be coordinated by the UNCSTD. UNIDO could play an effective role in this project because what Thailand is really interested is in strengthening its capability in technology management in the field of small and medium scale industries.

10. ACKNOWLEDGEMENT

I would like to express my grateful thanks to UNIDO and Dr. K. Venkataraman, Director, International Technology Development Division, UNIDO for giving me this assignment.

My thanks are due to Mr. V.C. Lavides, SIDFA in Bangkok for his help. I express my appreciation to Dr Sergio C. Trindade, Executive Director, UNCSTD and leader of Inter-agency Mission and members of the Mission for the cooperation they extended to me in my task.

ANNEXURES

ANNEXURE - 1

Terms of Reference for the Inter-Agency Mission to Bangkok

Concept

The ACC Task Force, at its eighth session, decided to shift the focus of its future work towards specific country situations and, in line with this approach, to initiate country reviews on the impact of the United Nations system's activities on the development of endogenous capacity in science and technology. The inter agency mission to Thailand will take place from 5-9 December 1988. The concept is to review the totality of activities of the United Nations system, from the perspectives of Thailand, through dialogues with concerned senior officials of the Thai Government, as well as other end-users, designed to generate ideas on how the activities of the United Nations system as a whole in science and technology could have a better impact on solving the developmental problems of Thailand. The mission, at the conclusion of its visit, will formulate a report, detailing the conclusions reached which will be submitted to the tenth session of the ACC Task Force to be held from 13-16 March 1989.

The United Nations system's activities in science and technology in Thailand are multifaceted and respond to specific requests from the Government of Thailand. In many of them, science and technology is an important component but their main focus is to contribute to the development of a specific sector like agriculture, health, industry etc. (non-core activities). In some others, they not only respond to a sectoral or cross-sectoral need but also are meant to constitute the building-blocks of a sustained scientific and technological infrastructure and autonomous capability building (core activities). The focus of the mission would be to assess the impact, in particular, of the core activities, using as a basis, the report of the consultant, Chula Unisearch, especially the seven in-depth case studies in the report. The mission, in its discussions with Thai officials, might cover the following:

(1) Given the fact that strong linkages exist between the components of the United Nations system (e.g. FAO, UNIDO, WHO, ILO) and specific ministries (e.g. Ministry of Agriculture, Ministry of Industry, Ministry of Health, Ministry of Labour) in Thailand, what specifically needs to be done to bring about closer linkage, on one hand, among the components of the United Nations common system dealing with science and technology and, on the other, the various ministries and departments in Thailand dealing with science and technology?

(2) In the perspective of the above "two combs" approach, how do we bring about a closer coherence and co-operation between the United Nations system as a whole on one hand, and the scientific and technological system as a whole of Thailand, on the other?

(3) The central issue is how far core activities have substantively and significantly contributed to the endogenous capability building of Thailand and, in the process, respond to the demands of socio-economic growth and development.

(4) Thailand is a recipient of significant external assistance, almost 80% of which is bilateral. An important issue is how to bring about greater complementarity at the programme and project levels between development co-operation activities funded by different external sources.

(5) Injection of the technological dimension, in particular endogenous capability building, as an additional guideline in appraising the technical assistance projects funded by the United Nations system might be useful (e.g. impact on environment) in highlighting their impact on technological development.

(6) Given the wide range of core activities in science and technology, the scope for harmonizing and integrating different projects, particularly advisory services on technology transfer, science and technology plans etc., executed by different agencies, needs to be considered, with a view to a fuller integration of science and technology in national development.

(7) In view of the crucial role that Thailand is attaching to science and technology in its sixth and seventh Five-Year Plans, and the preparation of a 20-Year Master Plan, it might be useful to suggest specific actions to enhance the role of science and technology for Thailand by, for instance, including a separate section on science and technology activities in the next UNDP country programme of Thailand so as to reflect prioritized projects selected by Thailand.

(8) There is growing concern that technical co-operation activities (both bilateral and multilateral), conceived more than 20 years ago, might not adequately reflect the imperative of technological change and the impact of new technologies. How far the content, as well as delivery of these activities, might need to be adjusted is an issue to be considered.

(9) The UNDP Resident Representative/Resident Co-ordinator has a central role to play in bringing coherence in the work of the United Nations system, including in science and technology and in interacting with their Government. An issue to be considered would be how could the United Nations System collectively assist him to play a more substantive role in ensuring the effective implementation of the United Nations System's contribution to endogenous-capacity building.

ANNEXURE - 2

PLACES VISITED AND PEOPLE MET

	INSTITUTION	PERSONS MET
1.	Chula Unisearch	Dr. S. Charuay Boonyubo Dr. Chatri Sripaipan Dr. Woraphat Arthayukti
2.	Department of Technical & Economic Cooperation (DTEC)	Mr. Kittpan Kanjanapipatkul Director, External Co-operation Divison II
3.	National Economic and Social Development Board (NESDB)	Mr Thamarak Karnpisit Asst. Secretary-General
4.	Department of Agriculture	Dr. Tanongchit Wongsiri Dy. Director - General, Dr (Ms) Nongyow Thongtan Director, Agriculture Chemistry Division
5.	Ministry of Science Technology and Energy (MOSTE)	Mr. Kasem Sanitwongse Dy. Permanent Secretary, Mr. Chirapandh Arthachinta Director, Office of Policy & Planning, Office of Permanent Secretary Mr. Narong Rattana, Director, Technology Transfer Centre, Office of Permanent Secretary
6.	Department of Industrial Promotion, Ministry of Industry	Mr. Padetpai Meekuniam, Director Planning Division
7.	Regional Remote Sensing Prog., National Research Council (NRC)	Ms. Darasri Srisaengthong Chief, Data Analysis Branch
8.	Thailand Institute of Scientific & Technological Research (TISTR)	Dr. Smith Kampermpool, Governor, Mr. Chalermchai Hornak, Director, Office of Policy and Planning, Mr. Salaisophin Komarakul, Chief, Foreign Relations Division, Ms. Sasithorn Wasuwat, Executive Adviser and Director, Pharmaceuticals and Natural Products Department, Dr. Wiboonkiet Moleeratanond Director, Food Industries Dept.
9.	Metal Working & Machinery Industries Development Institute (MIDI)	Dr. Damri Sukhotanang, Director
10.	Thai Rice Mill Association	Mr. Niphon Wongtrangan, President
11.	Thai Hoover Industry Co Ltd	Mr. Voravit Damrongvatanapokin Asst. Managing Director

ANNEXURE - 3

UNIDO ASSISTED PROJECTS IN THAILAND 1980-87

Sl. No.	Project No.	Project Title	U.S.$
1.	THA/80/016/A/01/37	Energy Saving Scheme	
2.	RAS/85/023	Regional Network Development - Pesticides	on going
3.	DP/THA/82/006	Assistance in production of pharmaceuticals from the Thai traditional pharmacopoeia	263,800
4.	DP/THA/82/010	Pilot project for industrial expansion in the North East	492,875
5.	DP/THA/83/006	Advisory services to Map Ta Phut Industrial Complex	84,300
6.	DP/THA/83/009	Financial planning services for Eastern Seaboard	85,300
7.	DP/THA/84/005	Technical assistance to increase efficiency of pharmaceutical equipment in the Govt. pharmaceutical organisation	35,000
8.	DP/THA/84/008	Industry water supply system	66,200
9.	DP/THA/84/009	Advisory services for environmental pollution centre far Eastern Seaboard	100,740
10.	DP/THA/86/010	Development of Tool & Die Industry Development of tool and die industry	83,000

UNIDO PROJECTS - ON GOING

1.	DP/THA/87/008	Assistance to implement the Eastern Seaboard programme (approved in 1987)	123,350
2.	DP/THA/87/010	Modern pharmaceutical forumulations based on the Thai traditional pharmacopoeia (approved in 1987)	230,345
3.	DP/THA/88/020	Strengthening of the Federation of Thai Industries (FTI) to render TA to its members (approved in 1988)	24,000

UNIDO PROJECTS IN THE PIPE LINE

S.No.	Project No.	Title	Amount US.$	Status
1.	DP/THA/87/007	Assistance to the Economics & Planning Division, Office of Permanent Secretary, Ministry of Industry	410,550	Project under review by IO/ TIS/PLAN
2.	DP/THA/88/020	Strengthening of the Federation of Thai Industries (FTI) to render technical assistance to its members	300,000	Project Document under preparation
3.	DP/THA/87	Development of food industry through standardisation (Thai Industrial Standards Institute - TISI)	486,000	Project Document to be signed
4.	DP/THA/87	Assistance to the Office of Basic Industry Development in strengthening industrial project development and evaluation unit (OBID)	366,240	Project Document under preparation

ANNEXURE - 4

Report of the Inter-agency Mission on Impact Study on the Activities of the United Nations System in Science and Technology in Thailand (5-10 December 1988)

INTRODUCTION

The inter-agency mission to Thailand took place from 5-10 December 1988 as a follow-up to the decision of the "A.C.C. task force on science and technology for development" to operationalize co-ordination and to dynamically extend it at the country level. The composition of the mission and the itinerary are in the annex.

The mission found that its timing and approach were opportune and filled on expanding void, from the point of view of both the UN system and the perspective of Thailand. The UN system in recent years has been sensitized to the need to bring about greater coherence and synergism in the totality of its work in member-states, to sharpen and refine its tools for this purpose, to optimize resources and to enhance its image and impact. Co-incidentally, a new UN resident co-ordinator/representative has recently taken charge at Bangkok.

BACKGROUND

Thailand is currently at a critical stage in its economic development, having achieved a growth rate rare among developing countries. Its economic success is confronting it with crucial choices, that will affect the well being of its people. Its growth strategy, based primarily on exports and foreign investment, has led to a relative neglect of vulnerable target groups and the building blocks for long-term sustained development. In particular endogenous scientific and technological capacity has lagged while infrastructure and institutions have been built and policies formulated. However, gaps and inconsistencies remain in the process of replacement of a coherent strategic framework for translating the countries' capacity into capability into utilization. It is in recognition of this dimension that Thailand has given high priority to science and technology in the sixth plan (1987-1991) and, unique among developing countries, has embarked upon the preparation of a 20-year master plan. In the current plan it has decided to focus on three areas: genetic engineering and biotechnology; materials science; microelectronics and computers.

FINDINGS

The mission found that impressive as the resolve has been, there is little clarity or focus and the different elements of the S&T system seem to be pulling in different directions. In particular, there exists vast under utilization of capacities in S&T related services since conditions for absorption and utilization have yet to be created. In defining a strategy for

the future, a clear distinction between science and technology when considering capability building has to be made. As useful as it is, the formulation of a master plan for science and technology will be of no avail and could even be counter productive if it is not fully and organically integrated with socio-economic planning. There is a critical requirement to develop the instruments through which S&T projects or the scientific and technology component of such projects can be assessed not only in terms of the project objectives but also in relation to the impact on overall development.

The role of external aid in scientific and technology development has been, and will remain, important. While bilateral aid will continue to be the much larger component, multilateral aid has been acknowledged to be more flexible, responsive and catalytic. The mission was convinced, based on its interaction not only with senior Thai officials but also with the project personnel who have managed both types of aid projects, that both the content and delivery of UN system aided activities, have contributed significantly to Thai development and that their reach and impact has far exceeded the modest amounts involved (less than 10% of total assistance).

However, the UN system can do much better. There is a need to enhance coherence, to improve inter-agency communication and to develop a clear concentration on a few critical issues such as new technologies and capability building, particularly in small and medium enterprises. The mission became aware of cases where some activities executed by different agencies have covered similar, substantive ground and efforts to streamline them were not successful. Although the mission wishes to emphasize that these are exceptions rather than the rule, notice needs to be taken of this aspect in designing a framework for the future and in structuring the local UN management.

The mission, during its work, achieved a common understanding and perspective in its interest to make the work of the UN system in S&T in Thailand more responsive to the aspirations and needs of Thailand. It found satisfaction that this uncommon way of collectively visiting and looking at a particular country, to engage in a combined dialogue with the concerned stakeholders in the development process was well worth the effort. The fact that no organization advocated its particular interest or overly protected its turf was noteworthy. All representatives worked towards the single objective of collectively serving Thailand better. This attitude was appreciatively noticed by Thai officials and others.

CONCLUSIONS

The mission was firmly of the view that while its current visit to Thailand has ended, the work of the task force has just begun. It has to be continued and operationalized over a period of time in the form of a pilot project. A concrete continuation of the spirit of cooperation is necessary to ensure that all major initiatives in S&T in the context of Vienna Programme of Action, become inter-agency co-operative instruments with the UN CSTD, on behalf of the task force, to act as the operative arm. It was obvious to the

mission that Thailand would need help from the UN in the preparation and implementation of its master plan and to this end many of the Thai agencies requested direct involvement by the mission. While the precise nature of the response has to be spelt out, it will clearly be interinstitutional and intersectoral and as such will be amenable to a collective response from the UN system. The UNCSTD, through the UNDP Res.Rep. is requested to interface with concerned Thai officials, ascertain their needs and formulate appropriate proposals.

The mission was informed about the current status and process of the UNDP country programming. Thai officials informed the mission that S&T is one of the principal areas that they want to focus upon in the next country programme. Given the high priority attached by Thailand to science and technology and their increasingly critical role in the future, the country programme should adequately reflect such priority and necessary structural and programmatic changes would need to be made to facilitate this. Consideration might be given to including a separate section for science and technology and to supporting a project that more directly contributes to endogenous capability building.

RECOMMENDATIONS

To sum up, the mission recommends the following:

1) The spirit and process of inter-agency cooperation in science and technology for development in Thailand should be continued via practical actions.

2) Endogenous capacity building in science and technology should be supported as a major means of enhanced cooperation within the UN system, by launching an inter-agency project designed to mobilize and coordinate inputs from concerned organizations of the system. This draft proposal improving effectiveness of Thailand: access to external assistance in science and technology for development is shown in the annex. The UNDP should assume a leading role in supporting and financing the inter-agency project it referred to above in order to break new ground in inter-agency cooperation in the service of Thailand.

3) The next country programme of Thailand should include science and technology as a major area of concentration and such focus should also be considered in the context of the upcoming mid-term review scheduled to take place in 1989.

4) The CSTD should, on behalf of the UN system, continue to engage the Royal Thai Government in a dialogue to ascertain specific needs in the formulation and implementation of the Thai 20-year Master Plan. In this connection, the CSTD should speedily implement the national project on endogenous capacity building in Thailand as a means of stimulating a national policy dialogue among the state-holders in the development process.

Title	:	Improving Effectiveness of Thailand's Access to External Assistance in S&T for Development
Estimated Duration	:	4 years
Tentative UNDP Cost	:	US$400,000
Source of Funds	:	IPF/Agency Contributions

A. Development Problems to be addressed

1.0 At Sectoral Level

The UN system generates a wide range of projects having S&T component. However, their activities are often without apparent focus or theme. Furthermore, the Royal Thai Government has no clear-cut policy guidelines to deal with technological and scientific development with different agencies approaching the problem in an ad hoc and piecemeal fashion which results in failure to actualize the resulting S&T capacity.

1.1 Causes

The cause of this at the level of UN systems operation is that individual agencies compete with one another to obtain the status of implementing agency within and among sectors. This is then translated into project proposals which are bent into the shape required by the indicative profile.

At the level of government agencies the cause can be ascribed chiefly to (a) fractionation of policy responsibility among several government departments and divisions; (b) failure to develop and express clear-cut policy options in regard to overall development objectives; (c) failure to operationalize S&T capacity in concrete development applications.

The evidence for both causes indicated above has been elaborated:

(1) In the report entitled "Impact Study on the Activities of the United Nations System in S&T in Thailand (October 1988);

(2) Direct confirmatory statements elicited from policy-makers by the UN System Interagency Mission/ (5-9 December 1988) from the following Thai Government agencies: OTEC, NESDB, DOA, MOSTE, Ministry of Industry, NRC, TISTR, MIDI.

/ Inter-agency mission to assess the impact of the activities of the UN system on science and technology in Thailand.

2.0 At level subject to solution by the proposed project (micro level)

The problem at the micro-level concerns the failure of the UN system as a unit, to adequately focus its efforts in a coherent manner guided by strict policy considerations whereby the limited resources available can be used in breaking the ground and preparing the way for larger-scale follow-up action by both the Thai Government and by bi-lateral donors.

2.1 Causes

Difficulties in inter-agency co-ordination are well known and in particular mechanisms for cross-analysis of agency proposals do not currently work well mainly because no mechanism exists at present to allow a coherent and unified input to be made by all interested parties. Proposals are not made a priori with the clear intention to contribute towards established policy objectives nor are steps taken to ensure that project information can be cross-referenced and used as input to a larger analysis concerning the countries, future. Finally, the infrastructure arising from S&T related projects is not fully pressed into service to meet explicit development objectives.

2.2 Evidence

UN Agencies do not currently, in sufficient measure, interface with each other about their programming efforts in S&T within any one country. Thai Government agencies do not express a clear policy directive concerning potential UN input and many examples of unusual S&T capacity were inspected by or otherwise identified to the mission.

3. Concerned Parties/Target Beneficiaries

The concerned parties in this project will be the UN and Thai counterpart agencies concerned with the implementation of UNDP-funded projects impacting on S&T position of Thailand over the next 18 months.

3.1 The December 1988 Inter-Agency S&T Mission to Thailand has identified the problem after extensive consultation with the Thai Government. It has been brought to the attention of UNDP through the report tended by the mission at the end of its tenure.

3.2 The target beneficiaries are:

(1) All Thai Government agencies concerned with S&T policy/application;

(2) The UN Agencies active in Thailand in the field of S&T applications/assistance.

C. The Project Status

C.1 The preproject situation as far as the implementation and effects of UN system projects impacting on S&T are concerned has been covered by the foregoing discussion but can be summarized as unfocussed and having little or no cross-referencing.

C.2 The project will ensure (1) step-wise development of viable and tested policy-options in S&T applications for presentation to the Thai Government; (2) Coherent and rationalized project implementation on the part of the UN system as a whole; (3) Establishment of an inter-agency review committee which will meet at 6-month intervals to rationalize, provide focus and cross-reference (as necessary) prospective UNDP funded projects at some point shortly before their scheduled approval; (4) An on-going data-base reflecting the focus of UNDP S&T projects with respect to the overall input of assistance provided to Thailand versus other modes (bi-lateral); (5) At least 10 Thai Government officials will be trained in S&T policy formulation and the application of endogenous capacity in S&T.

D. Special Considerations

1.1 Special consideration will be given to maintaining the already high integration of women in the process of S&T policy formulation and practice.

1.2 A high order of priority will be given towards ensuring cross-project data acquisition and potential analysis through incorporation of Microcomputer Hardware and Software in all projects.

2.0 None.

E. Other Donors

No other donors appear to be active in this sphere of consideration in Thailand.

This project will be one of six proposed undertaken/proposed by UNCSTD (Thailand, Columbia, Nepal, Jordan, Tanzania, Kenya). The information and data generated from each project will be forwarded to the ACC Task Force on Science and Technology for Development at the end of a 2-year period from an extended and global pattern analysis in the field of S&T policy applications. The results of this analysis will then be used by the Task Force to formulate a set of policy guidelines to apply throughout the UN system to guide S&T related project implementation.

Particular attention will be focussed on development of practical S&T indicators with a measure of their estimated response ranges as well as the evolutionary definition of development-staged expectations and scenarios.

A computer simulator of the development process in relation to S&T policy options will be constructed.

Funding will also be sought from UN specialized agencies.

F. Development Objectives

The development objectives are to actualize S&T policy objectives in terms of assisting Thailand to better utilize external resources to build and actualize its endogenous capability in S&T.

G. Major Elements

Immediate Objective:

(1) To contrjbute to the preparation of the 20-year Master Plan of Thailand in science and technology. The success criteria will be:

1.1 Implementation of projects in an agreed policy framework such that S&T goals are explicitly defined and indicators will reflect progress (or lack thereof) in movement toward a common S&T policy goal.

1.2 Elaboration of clear-cut policy option S&T practice for presentation to the Thai Government.

1.3 Elaboration of performance indicators as data referencing structures.

Outputs	Activities	
1.1 Report to Thai Government as a contribution to its Science and Technology Master Plan	1.1.1.a. Studies and meetings as discribed below 1.1.1.b. To be formulated	
1.2 Common UN country-specific policy definition in S&T programming	1.2.1 3 meetings by inter-agency analysis team (IAAT)	UNCSTD to sub-contract to agencies as necessary
1.3 Policy options in S&T practice for development and definition of procedures for actualizing S&T endogenous capability.	1.3.1 Initial Policy formulation by IAAT subject to annual updating	

1.4 Definition of performance indicators	1.4.1 Contractual work to a) increase known data on projects/objectives b) define indicators
1.5 Experience/Data-base for global analysis input	1.5.1 Input by IAAT's analysis by ACC Task Force on S&T
1.6 Computer simulator of S&T policy option impact (Microcomputer)	1.6.1 Contractual work
1.7 Information systems cross-referring. Use "BETABASE" software (UNESCO/ROSTSEA) to build computerised reference compendium for project databases/data sets.	1.7.1 Build into all new projects

H. Project Stratety

H.1 The Direct Recipients are:

(1) Thai Government Agencies dealing with S&T policy/practice.

(2) UN system.

H.2 Target and Direct Recipients will be the same in the first instance (at the country level). At the global level the elaboration of general policy and practice in S&T application will affect all UN projects since the information will be gathered across projects and countries in a setp-by-step manner in terms of postulated effects and observed results.

H.3 Implementation to be primarily through UNCSTD and under the direction of UNCSTD with sub-division as required to specialized agencies.

I. All Thai agencies identified earlier have indicated a willingness to contribute resources and time to this project, particularly MOSTE.

K. Inputs

	External - US$
Personnel (Travel)	75,000
Subcontracts	75,000
Training	175,000
Equipment	50,000
Miscellaneous	25,000
	$ 400,000