

Establish Environmental Organization in Thailand

Reexamination on Environmental Research and Training Center

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タイ国における環境機構の構築

ERTCの役割機能の再検討

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概要

タイ国では、いま経済成長にともない市街地における大気、水汚染、騒音、ゴミ問題、また山岳地帯では、伐採、焼畑により森林の25パーセントしか残っていない現状である。タイ国政府は、環境政策のとして科学技術環境省を創設し、経済発展のよって発生した公害問題、環境問題を解決するために積極的に科学技術へ投資をおこなっている。

そして環境の保全、再生への具体的政策をすすめる為の中核機関として Environmental Research and Training Center (ERCT)が1992年に設立されたのである。このERCTは、(1)国家及び地方機関そしてNGOのスタッフに対する環境管理の専門教育 (2) フィールドにおける環境上の実用的な研究 (3) 国家環境基準を決定するためのモニタリングプログラムを担当している。しかし現在のERTCの持つ役割機能では、環境問題を解決していくためには不十分である。今タイ国で環境対策として必要なものは、国家、地方行政機関がその使命と現状を的確に認識し、より効果的な環境政策を推進していくための自ら行う環境政策評価である。タイ国の現状からは、新たに環境政策評価を担当する機構を設置するための財政支出が困難であれば、まずERTCに環境政策評価を担当させる役割機能を持たせることが必要である。

Key Words : Pollution(公害), Disruption(破壊), Protection(保全), Regeneration(再生), Evaluation(評価)

Introduction

Thailand's impressive economic growth over the last three decades fueled rapid industrialization and urbanization, intensified agricultural production and expanded the fishing industry. This growth relied extensively on the country's abundant and diverse natural resources. Consequently this has caused pollution of air and water in urban areas, degradation of land and water quality and loss of natural habitats.

The issues in the "green" environmental agenda are concerned in the rural areas of Thailand. This is evidenced in the decline in forest cover, which halved over the years to about 25 percent in 1998. However, due to measures taken by government in the late 1980 to prohibit logging have begun to pay dividends in late 1990s, when deforestation rate has substantially dropped to 0.2 percent per year. The rapid felling

has led to dryland, sedimentation of rivers, and loss of natural habitats.

In response to these problems, the Royal Thai Government has launched initiatives to improve air and water quality, reforest degraded land, adopt energy efficiency technologies and invest in pollution abatement schemes. To further its strategic objectives, the Government announced a 20-year policy and perspective plan for the environment in 1997 and strengthened the capacity development in environment by promoting the role of the Environmental Research and Training Center (ERTC) under the Department of Environmental Quality Promotion, Ministry of Science, Technology and Environment to supports the activities in the field of environment, not only within Thailand but also to expand its services to neighboring countries.

However the pollution and the environmental disruption in

Thailand are still going on. This study was analyzed about the role and function of ERTC again, and I considered whether that was effective against a solution of the environmental problems. As for the materials for the analysis, I investigated ERTC on Feb.20—26. 2000, Feb.25.—Mar.4. 2001.

I Role and function of the ERTC

The Environmental Research and Training Center (ERTC) was established in Pathumthani Province in March 1992. The ERTC is first operated by the Office of the National Environment Board (ONEB), under the overall jurisdiction of the Ministry of Science, Technology and Energy. After the new enhancement and conservation of National Environmental Quality Act B.E.2535 (1992), ERTC was operated by the Department of Environmental Quality Promotion (DEQP) under the Ministry of Science, Technology and Environment. The fundamental purpose of the ERTC is to carry out research and provide technical support in the implementation of environmental policy and environmental management initiatives in order to support the activities of all Departments concerned, in particular, environmental research, monitoring and training activities which are conducted nationwide.

The objectives of the ERTC can be summarized as follows :

- To undertake practical research programs on environmental management, particularly in the fields of water pollution, air pollution, noise and vibration, solid waste and toxic substances.
- To promote and encourage research studies on environmental quality in cooperation with educational establishments and other agencies.
- To strengthen environmental monitoring programs for use in the planning and determination of national environmental quality standards and to formulate guidelines for the improvement of environmental quality.
- To provide training programs in environmental management and environmental sample analysis for government organizations, local government and other organizations .
- To provide environmental education programs for staff at all levels and to train people with the appropriate technical expertise to be qualified instructors .

The activities of the ERTC are based on the principle that environmental monitoring, research and training cannot be undertaken in isolation of each other, rather these programs must be planned and executed through a systems approach,

treating each activity as an integral component of the whole environmental protection system.

II International Support for the ERTC.

The ERTC has been set up with support from the Government of Japan in a bilateral arrangement which represents a working example of technology transfer between developed and developing countries.

Since 1980, Japan and Thailand have been involved in a joint project called the Promotion of the Environmental Quality Analysis and Pollution Control Project¹. The purpose of this project was to identify effective means of promoting pollution control activities, to reinforce the function of environmental laboratory services at the national level, and to organize a system of research and training. This project emphasized the need to support basic research on the mechanisms of environmental pollution and its control, particularly in the context of the increasing need for, and complexity of pollution control in Thailand.



The success of this initial collaboration between Thailand and Japan led to proposals or the establishment of the ERTC and to a further bilateral agreement and technical and financial support for the ERTC project. The Government of Thailand have provided the land or the project, running costs and personnel salaries, while Japan has contributed significant funds for the construction of the buildings and installation of equipment, and will continue provide technical assistance in terms of long term and short term experts throughout the early years of the ERTC's operation. Some 40 Thai professionals are trained in Japan and 30 Japanese experts are stationed in Thailand. Over the longer term, seven Japanese experts are alternately resident in Bangkok for a period of seven years. The establishment of the ERTC with the assistance of the Japanese Government is an

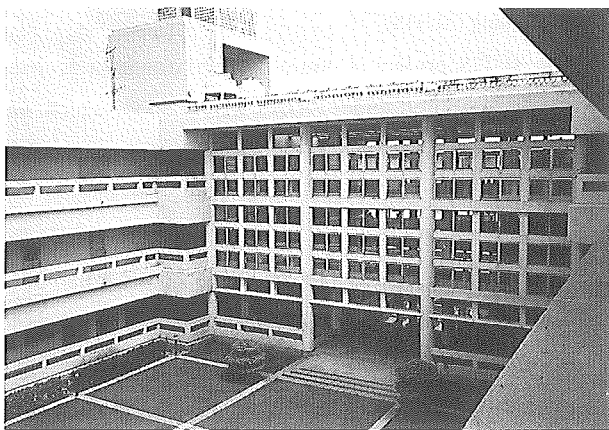
exercise in capacity-building which is very beneficial to Thailand.

III Activities of the ERTC in Sustainable Development

1) Research Programs

The ERTC performs practical and applied research studies in the area of environmental protection and resource management as a technical input to the development of government policy. The research arm of ERTC is able to provide the necessary information and data to assist government, perform field monitoring studies and carry out research and development in response to specific requests. These research will enable Thailand to develop its environmental policies in response to original research work on the particular factors affecting Thailand and neighboring countries. At present many of the environmental quality standards being adopted in the developing countries are based on those adopted in the industrialized countries, where environmental conditions are very different. There is clearly need for Thailand and other developing countries to have a sufficiently strong research base to be able to set their own environmental quality standards : the ERTC will help to support that need.

The ERTC also engaged as much as possible in joint projects and other forms of co-operation with other research institutes, both within and outside Thailand, in order to make maximum use of the research resources and to avoid duplication in research effort. Joint projects also maximize the scope for effective transfer of technology and knowledge between research institutes.



2) Training Programs

The ERTC has developed a fully integrated program of research and human resource education and training which

covers technical and administrative courses in the area of methodology for monitoring, different kinds of environmental sample analysis, environmental and natural resources management and public awareness. The training is focused on government, semi-government, non-government organization and private sectors ; about 30 training courses are conducted within and outside of ERTC. More than 7,000 Thai trainees and 300 foreign trainees are trained by ERTC. It is envisaged that ERTC plan to train 1,000 trainees per year. At present, there are high demand from different governmental departments and local government in requesting ERTC to provide human resource development programs (HRD).

The present needs of HRD in the field of environment in Thailand are as follows:

1. Environmental Management Plan
2. Solid waste Management
3. Public Awareness on Natural Resources and Environment
4. Environmental Laws
5. Environmental impacts Assessment
6. Environment and Development
7. Waste Water Treatment Technology
8. Man and the Environment
9. Environmental Information Management
10. Water Pollution Management
11. Water Resources Development
12. Agricultural Toxic Substance Management
13. Water and Waste Water Analysis
14. Forest Resource Development and the Environment
15. Environmental Education
16. Environmental information Management
17. Industrial Safety and Working Equipment
18. Waste Water Treatment Technology
19. Water Resources Development
20. Toxic Substances Analysis
21. Gis and Land Use Planning
22. Solid Waste Analysis
23. Noise Pollution Control
24. Forest Resource Development and the Environment
25. Air Quality Analysis
26. Gis and Landuse Planning
27. Instrumentation Management of Environmental Laboratories
28. Industrial Toxic Substance Management
29. Agricultural Toxic Substance Management
30. Analysis of the Quality of Air Emitted from Industrial Factories

31. Air Quality Management
32. Industrial Toxic Substance Management
33. Instrumentation Management of Environmental Laboratories
34. Coastal Resources Management
35. Noise Pollution Control
36. Basic Analysis of Heavy Metals
37. Fish Resources Management

Many of the courses will consist of a rolling programs of vocational training which will extend over several years. They are designed for a variety of professional levels, such as technical analysis, engineer operating waste treatment works, researchers, etc. One of the important tasks of ERTC under the jurisdiction of Cabinet Resolution in 1994 is to transfer know how to local government officials at different levels who are involving in formulating the master plan for environment and natural resource management. The cabinet provided a special budget for 1 million dollars to train the government officials in 3 particular courses such as

- Environmental Policy and Plan
- Pollution Control Technology
- Financial Mechanisms for Managing the Treatment Technology

Courses include lectures and practical sessions, to provide knowledge and hands-on experience of practical techniques. The training programs make good use of expertise from Japan available through the bilateral funding arrangements ; this is an ideal mechanism for technology transfer.

3) Regional Co-operation

(1) ASEAN: ASEAN Network on Environmental Monitoring

This network was formed in 1990 to establish regional cooperation among ASEAN countries in the field of environment through an agreement made during the Japan-ASEAN Environmental Experts Meeting (JAEEM) held in Tokyo in 1990. The project plan was also agreed to the ASEAN Senior Official Experts on Environment (ASOEN). The network covers the field of air pollution, noise pollution, water pollution and toxic substances. The work plan on air quality monitoring program was agreed to be implement as the first network. ERTC acting as the focal point of the ASNEM. The objectives of the project to establish ASNEM are to :

- Provide and exchange appropriate technology
- Study suitable technique for ASEAN region
- Standardize monitoring technique

- Study effective monitoring system
- Assess existing conditions
- Set up the action plan

(2) Sub-regional Environmental Monitoring and Information System (SEMIS)

The SEMIS project is one of the environment sector projects originally proposed under Asian Development Bank (ADB)'s regional technical assistance (RETA) to promote sub-regional economic cooperation among the Greater Mekong Basin (GMS) countries. The goal of SEMIS is to enhance the ~ capacity of the GMS countries to integrate and exchange environmental information to support decision making. The specific objective is to establish a sub-regional information exchange network with a minimum uniform and mutually compatible data set, which will enable governments to make informed decisions regarding sustainable development and will provide an early warning system for environmental management.

The SEMIS project is being implemented by ADB, UNEP EAP-AP, and the MRC, along with the environmental agencies in the six countries, and is expected to result in 17 concrete project outputs including, among others, a core data set definition, a conceptual spatial database design, meta-data standards for information to be held in national and sub-regional databases, and a workshop on data and meta-data standards. ERTC is responsible in coordinating as the focal point in the said program.

(3) Sub-regional Environmental Training and Institutional Strengthening (SETIS)

The SETIS project is one of the environment projects originally proposed under ADB's RETA 5535, which was endorsed by the Ministers at the Third Conference on Sub-regional Economic Cooperation in 1994. The project was approved by the ADB Board of Directors in May 1996. The objectives of the SETIS project are to improve the GMS countries' capacities to plan, formulate, and implement environmental policies and programs; to establish environmental and natural resource management training centers in the countries; to provide a forum for sharing experiences in environmental capacity building and to provide training in areas of critical environmental concern; and to formulate mutual agreement upon environmental standards and

natural resources management. The role of ERTC is to coordinate and help assist in formulating the plan for training and institutional strengthening in Thailand.

Conclusion

Successive national economic and social development plans have emphasized the use of natural resources as production inputs to manufacturing. However, their exploitation and indiscriminate use have resulted in environmental degradation and pollution, adversely affecting the quality of life. Many of our environmental problems are preventable, including those related to water, air, chemical pollution and solid waste. Successive administrations of the Royal Thai Government have sought to address these problems and have endeavored to find solutions through scientific study and research.

Since its establishment in 1992, the Environmental Research and Training Center (ERTC) has played a key role in efforts by the Royal Thai Government to ensure the country's sustainable development. The ERTC is under the overall jurisdiction of the Department of Environmental Quality Promotion, Ministry of Science, Technology and Environment. Established with support from the Government of Japan, based on a bilateral agreement attesting to the long-standing partnership between Thailand and Japan, the ERTC aims to be a center of excellence in the environment field in Thailand. In order to cope with demand from different government agencies, the private sector and non-government organizations at the national and local levels, the ERTC is expanding its services and activities.

The ERTC's main activities are as follows: to carry out research in various aspects of environmental management, to conduct professional and technical training for staff from national and local governments, international and regional organizations, and NGOs, and to provide technical support in the implementation of environmental policy and environmental management initiatives.

The purpose of research at ERTC is to support policy makers in formulating plans and policies. The results of ERTC research are submitted to the Pollution Control Committee and the Subcommittee on Environmental and Industrial Management Coordination under the Ministry of Science, Technology and Environment and the Ministry of Industry. Certain research results will also be reported directly to the concerned implementing agencies, such as the Bangkok Metropolitan Administration (BMA). Parts of the research will be published

in national and international scientific journals. Copyrights have been obtained for some of the research projects conducted, such as the Mathematical Modeling for Road Traffic Noise, which is now being used by the Office of the Environmental Policy and Planning in an environmental impact assessment and by related agencies. For the ERTC an important task ahead is to coordinate with different departments in conducting research and development, to certify environmental laboratories within the country, and to transfer technology that is related to environmental management, policies and plans, monitoring and on. So far, ERTC has expanded its responsibilities to cover global environmental research. It is expected that ERTC will be strengthened to become a center responsible for certification of environmental laboratories, environmental research and technology transfer in Thailand and throughout the region.

However, a solution of the environmental pollution problems is insufficient with the function that ERTC has. Now that mission and the present condition are recognized precisely, and the state, local administration is the environmental policy evaluation to promote a more effective environmental policy by the necessary thing as an environmental countermeasure in Thailand. Thai government should make it have the function that takes charge of environmental policy evaluation in addition to the function that it has in ERTC so far.

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