

COUNTRY REPORT ON ENVIRONMENTAL INDICATORS IN THAILAND

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1 INTRODUCTION

Environmental management and administration in Thailand constructively started in 1975 with the establishment of the National Environmental Quality Enhancement and Conservation Act B.E. 2518 (1975). The translation of the act into policy, programmes, plans, and compliances was then undertaken in a compartmentalized, segmented manner according to the functional responsibility of each of the relevant government agencies. In 1992, a new Environmental Act was issued in order to reform the management of natural resources and environmental conservation, based on effective, transparent and accountable monitoring. The new Act also enhances public participation, decentralizing management authority to local authorities and uses the 'polluter pays' principle.

Since UNCED at Rio in 1992, most countries, including Thailand, pay specific attention to sustainable development so as to meet the recommendations in Agenda 21. At the same time, it was recognized that *indicators* should be developed to be an appropriate tool for evaluation of sustainable development and to measure the progress towards the goals of Agenda 21.

After the public sector reform in October 2002, the Ministry of Natural Resources and Environment was established under the Environmental Act 1992. Several resource-oriented departments were then established. The systematic monitoring and evaluation is conducted under the Office of Natural Resources and Environment Policy and Planning and is harmonized with the national monitoring and evaluation of government policy performance. Nationwide key performance indicators (KPI) have become the main issue in public administration and also in the field of environmental management.

2 THAILAND DEVELOPMENT INDICATORS

The *Ninth National Economic and Social Development Plan (2002-2006)* outlined the need to develop systematic monitoring and evaluation at all levels in order to ensure continuous plan implementation, greater transparency, and more opportunities for public participation in monitoring and evaluation

One of the strategies included in the Plan is the formulation of concrete and flexible development indicators to assess development outcomes, the efficiency of sectoral development and the efficiency of development strategies.

In 2000, the Office of Environmental Policy and Planning, Thailand, launched a project to report the progress and achievements of Thailand in implementing Agenda 21. The CSD indicators developed by the Commission on Sustainable Development have been applied in the project to evaluate the national progress towards Agenda 21, as stated above. However, the data available from principal Thai sources, namely, the National Statistical Office (NSO) and the Office of National Economic and Social Development Board (NESDB) as well as other available sources, were insufficient and incomplete to meet the requirements of the CSD model.

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The NESDB's indicators published in *Thailand Development Indicators 1990-1999* were found not sufficient as compare to the CSD indicators. The lack of data to support of the following sustainable development issues has been analyzed and reported:

~Gender equity	~Healthcare delivery	~Nutritional status
~Mortality	~Sanitation	~Drinking water
~Climate change	~Oceans, seas, and coasts	~Quantity and quality of freshwater
~Biodiversity	~Institutional capacity	

Similarly, NSO data and indicators were reported lacking to accomplished the CSD's for the following issues:

~Nutritional status	~Literacy	~Climate change and atmosphere
~Biodiversity	~Economic performance	~Institutional framework
~Healthcare delivery	~Oceans, seas, and coasts	~Science and technology
~Crime	~Disaster preparedness and response	
~Consumption and production patterns		~Quantity and quality of freshwater

The Office of National Economic and Social Development Board, in cooperation with the Office of Natural Resources and Environmental Policy and Planning, therefore, decided to launch a project to formulate the national Sustainable Development Indicators (SDI) in 2003 and expects to complete the project in the end of 2004.

3 PERFORMANCE INDICATORS

Since 2001, during the public sector reform period in Thailand, the Thai government has paid much attention to the development of performance indicators, especially outcome indicators, to evaluate results of government policy, programmes, plans and activities in various development sectors as well as on natural resources and environmental management. The work was done in parallel with the development of the information system under the ***national operation center***. The information system will serve as an important tool for monitoring and evaluating the performances of government policy, programmes, plans, activities and compliances. Every consecutive ministry and department must set up a ***ministry operation center*** and ***departmental operation center*** and provide the information necessary for decision making to the national operation center through GDX (Government Data Exchange). The data and information network will be very useful for developing performance indicators at the national level. Key performance indicators have also been applied in the budgeting and administrative process to follow-up on the effectiveness and outcomes of the government agency. Based upon this system, the performance indicators will be an effective tool to assist the monitoring operation, enhance the accountability, and help to assess the performance of each and overall government policy, programmes, plans, activities, and compliances as and to assist other target audiences, such as, ministerial and departmental authorities, general public, etc.

4 DEVELOPMENT OF ENVIRONMENTAL INDICATORS FOR EVALUATION AND MONITORING

Following the public sector reform in Thailand during 2001-2002, there is a need for an effective database and information system that will aid environmental monitoring and policy implementation. The Office of Natural Resources and Environmental Planning and Policy (ONEP) has launched a project to develop an environmental database system and environmental indicators to for monitoring the state of the environment in Thailand. This

database system and environmental indicators will also be used for effective monitoring of government projects related to environmental improvement, as part of the ***national operational system*** and national performance indicator analysis mentioned above.

At the initial stage, the benchmark indicators are taken from the goals and targets of the ***Policy and Prospective Plan for Enhancement and Conservation of National Environmental Quality, 1997-2016***, and the ***Ninth National Economic and Social Development Plan (2002-2006)***. The **Pressure-State-Response Framework** developed by OECD has been applied for developing the environmental indicators. A participatory approach is used for indicator development so that these indicators will be accepted by the relevant stakeholders. Moreover, this approach helps to create the possibility of the sharing of data and information among the relevant stakeholders.

Some specific criterion have been established during the study, such as:

- Indicators applied in the monitoring and evaluation process should be regularly revised according to the change of *pressure-state-impact*
- *Units*, both quantitatively and comparatively, should be clear, responsive and present the result of the indicators
- A chosen indicator should be technically and theoretically correct, e.g., the relevance between forestry and draught is not ecological fact and forest density could not be used as state<<->>response to rain because rain is under the influence of monsoon.
- Careful use of *flow* or *stock* data in a suitable situation is necessary by experts in relevant field.
- Most policy issues have no specific benchmark and it is difficult to set indicators

By the conclusion of the project, 65 state indicators; 60 pressure indicators; and 56 response indicators had been developed. These indicators will be used for evaluation of the Policy and Prospective Plan and for evaluation of the 5-year-Plan. Moreover, various set of SDA indicators have been developed to monitor the performance of implementing agencies for the overall and sectoral environment.

Not only has the information system been set, but the availability of data and information has also been considered by the stakeholders in the participatory pattern. It is expected that the indicator model will start to be test-run in early 2004 and will be revised by the end of 2004.

Ideally, the database and environmental indicators for environmental monitoring and policy implementing will be utilized by the Office of Natural Resources and Environmental Planning and Policy, as the core agency. Ultimately the benefit of this work will be in line with precautionary principle, i.e. to provide accountable and systematized information to the public and policy makers for adjusting the natural resources and environmental planning and policy of the country. At the same time, this project will be the seed activity for sectoral development of environmental compliance and enforcement indicators in the near future.