

CONCEPT PAPER

Project Title	Institute for Environmental Management Research And Development (IEMRD)
Requesting Agency	Suranaree University of Technology Ministry of University
Proposed Source of Assistance	Germany
Duration	5 years

1 Background Information

Thailand's rapid economic, social and industrial development is leading to wasteful use of natural resources, depleting the quality of water sources, forests, land, and air. One major cause of environmental pollution is the community, small and medium size industries, with little ability to control and manage such challenges according to scientific and technological principles. The problem is exacerbated by the lack of qualified environmentally trained personnel such as environmental engineers and scientists, leading to insurmountable obstacles in conducting governmental or private environmental projects. Environmental problems usually require specialists whose services can be quite costly, most of the time too costly for small and medium size industries, possibly affecting their production costs as well. However, the new environmental rules and regulations are being enforced on a wider scale, with the result that such industries face the possibility of closure.

Besides the aforementioned problem in the private and industrial sectors, the community environmental management problem remains to be addressed, such as garbage disposal, waste water and air management of municipalities and boroughs.

The establishment of the Institute for Environmental Management Research and Development (IEMRD) proposes to be part of the solution by training and consultancy by specialists, both from abroad and the Suranaree University of Technology (SUT), without consideration of profit. IEMRD's scope also includes research and development, as well as the application of high level technology from industrialized nations in suitable form for Thailand and South East Asia's developing countries such as Laos, Kampuchea, and Myanmar, for continual growth in environmental management.

2 Overall Objectives of IEMRD:

- 2.1. Environmental Pollution Management consultation and policy making, by national and international specialists for small and medium size industries, as well as for government bodies on the community level.
- 2.2. National environmental database construction.
- 2.3. Suitable environmental management technologies research and development.
- 2.4. Restoration and maintenance of water sources important to life, including policy making, research and development, both in the agricultural and industrial sectors, with ecological considerations of wetlands involved.
- 2.5. Increasing the number of environmental management specialists.

3 Project Outputs:

- 3.1 Technological development and transfer from already developed countries to Thailand and other developing countries in this region.
- 3.2 Consultation and solving of environmental problems faced by communities and small and medium size industries.
- 3.3 Various levels of environmental database networking.
- 3.4 Natural resource conservation.
- 3.5 Watershed area improvement and restoration.

4 Project Activities:

- 4.1 To offer the practical training, seminar continuous courses Environmental Management (e.g. Pollution control, Watershed area management, Biodiversity, Energy saving) and the appropriate technology to the communities for small and medium industries .
- 4.2 To provide the guidance and consultation for the pollution control and waste management technology focusing on the small and medium scale industries and communities.
- 4.3 To cooperate between government office and non government office (NGO) in order to reduce the severe pollution.
- 4.4 To appoint the environmental management specialists.

- 4.5 To create the National Environmental Database. Restoration and maintenance of damaged watershed area.

5 Target Groups:

IEMRO Project target groups are those small and medium scale industries and communities especially for the Thailand surrounding developing countries. The plan of the IEMRO Project are separated into 4 phases of work as show below:

- Phase 1 Eastern and North Eastern parts of Thailand (1997-1998)
- Phase 2 Central and Western parts of Thailand (1998-1999)
- Phase 3 Northern and Southern parts of Thailand (1999-2000)
- Phase 4 Whole parts of Thailand and Developing countries (from 2000)

6 Assistance Requested:

6.1. Supporting of international expertists for the technological transfer and development in various disciplines is needed there are:

International Specialists	Number
Solid Waste Management, Incineration, Landfill	2
Wastewater Treatment	2
Air Pollution Control	2
Industrial Waste Treatment and Management	2
Environmental Impact Assessment	1
Waste Minimization and Recycle Technology	2
Watershed Rehabilitation and Conservation	2
Environmental Database System	2
Biodiversity	2
Total	17

6.2 Equipment requirement

Equipment list	Number (set)
1 Mobile Laboratory (to analyze water, air and hazardous waste samples)	2
2 Environmental Management Models (i.e. waste incineration, wastewater treatment, air pollution control models)	1
3 Computer program in environmental management (i.e. surface water, reservoir, sea and ocean, ground water and air pollution dispersion models)	1
4 Computer	2
4 Gas chromatography	2
5 Four wheel drive car	2

6.3 Study and Training

Study and Training	Number
Doctoral Degree	12
Master Degree	12
Training and study abroad	10

7 Facilities provide by Suranaree University of Technology

- 7.1 Building and facilities
- 7.2 Accommodation for experts on campus
- 7.3 Laboratory (basic water analysis)
- 7.4 Scan electron microscope, Atomic absorption and Spectrophotometer
- 7.5 Area for installing the environmental models
- 7.6 Public relation and media to contact other government sectors
- 7.7 Staff and expertists in
 - Wastewater Treatment
 - Environmental Biology
 - Watershed/Wetland Management
 - Organization Management

8 Project Duration 5 years

9 Budget

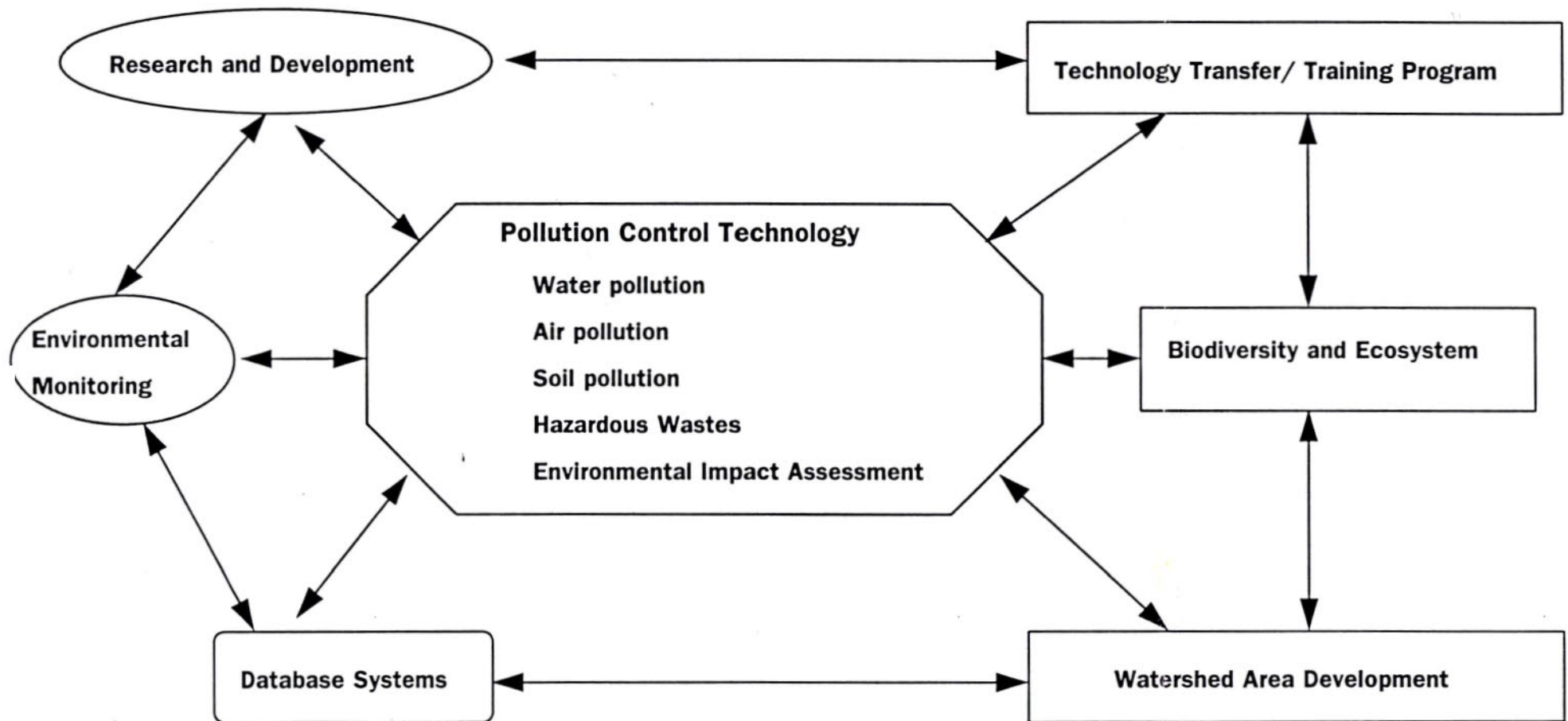
The first year operation	40	million baht
The second year operation	30	million baht
The third year operation	30	million baht
The fourth year operation	30	million baht
The fifth year operation	30	million baht
Total	160	million baht

10 Project Coordinator

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11 Project Leaders

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Components of IEMRD