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To P. Ben (IDR)
in 1-74 (IDR)

Progress Report

1 March - 30 June 1995

**The Execution of Services Related to the Energy and
Environment Information System (Phase II)**

Project No: XP/INT/94/014

Submitted to

**UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
(UNIDO)
Vienna, Austria**

By

**Center for Library and Information Resources (CLAIR)
(formerly: Library and Regional Documentation Center (LRDC))
Asian Institute of Technology (AIT)
G.P.O. Box 2754
Bangkok 10501, Thailand**

August 1995

The Execution of Services Related to the Energy and Environment Information System (Phase II)

AIT Team

Project Investigators:

**Dr. R.D. Stueart
Director, CLAIR/AIT**

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(ENSIC) and Regional Energy Resources Information Center
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Information Officer:

Ms. Supaluk Sookpath

The Execution of Services Related to Energy and Environment Information System(Phase II)

Progress Report
1 March - 30 June 1995

1. Introduction

In 1991, the United Nations Industrial Development Organization (UNIDO) Environment Program commissioned a study to assess the current supply of industrial information to developing countries, with particular focus on energy and environment information for small and medium industries (SMIs). Four in-depth national studies, based on the findings of the 1991 survey, were undertaken in Hungary, Peru, Thailand and Zimbabwe and were completed in early 1993. To follow-up these national studies, pilot information systems are being developed in those countries.

UNIDO Industrial and Technological Information Bank (INTIB), in response to findings and recommendations of the 1991 study and based on the recommendations contained in the consultant's report "INTIB Energy and Environment Information System: Thailand" (April 1993) has supported the Center for Library and Information Resources (CLAIR, formerly: Library and Regional Documentation Center (LRDC)) of Asian Institute of Technology (AIT) of Thailand in the pilot phase of Energy and Environment Information System (EEIS) to initiate the delivery of industrial energy and environment information to SMIs in Thailand. The EEIS is intended to be an extension of the Industrial and Technological Information Bank (INTIB) network.

The EEIS provides a number of services including the provision of relevant, and up-to-date information, and the institution of high impact mechanisms for commercialization, distribution and promotion of information, which correspond to each participating country's capabilities in disseminating information. The EEIS is a non-profit venture, but operates on a fee-paying basis.

The UNIDO contract No. 94/102 between the United Nations Industrial Development Organization (UNIDO, Vienna) and the Asian Institute of Technology (AIT) of Thailand for The Execution of Services Related to Energy and Environment Information System (Phase II) was signed by UNIDO on 23 December 1994 and by AIT on 20 February 1995.

CLAIR/AIT is the Primary Contact Point (PCP) of EEIS Network in Thailand. This progress report summarizes the activities carried out by CLAIR/AIT during the first 4 months of contract operation.

2. The First Meeting of the EEIS Network in Thailand

The first meeting of the EEIS Network in Thailand was organized by CLAIR for UNIDO on 8 December 1994 at the Asian Institute of Technology (AIT), Bangkok.

The meeting was intended to inform the potential Secondary Contact Points (SCPs) of the background information of EEIS and for all potential partners to discuss the potential activities and network of EEIS in Thailand. A demonstration of UNIDO's databases was also conducted by Mr. P. Pembleton of the Industrial and Technological Information Section, UNIDO, Vienna.

The minutes of the meeting, the list of organizations invited to the meeting, and the list of participants are included in Annex A.

3. Possible Roles and Benefits of Secondary Contact Points (SCP) in the EEIS

The main function of an SCP is to mediate between end-users and the providers of information and related services. This could be in the form of either 3.1) or both 3.1) and 3.2) below.

3.1) Promotion

SCPs are expected, as a minimum, to play a pro-active, promotional role, vis-a-vis their target audience – especially in respect to industrial energy/environmental conservation issues. As part of this promotion, they could also provide advice on where information seekers may go (the PCP or specialist SCPs) for assistance.

Such a contribution should not be seen as a commitment, if that is all that an organization can offer (e.g. a government body and some NGOs may not be able to generate an income but must nevertheless offer services to their user-group) – in such a case, the SCP may be an end-user of EEIS information itself or simply a promoter.

An SCP is expected to have existing communication channels with their user-group (e.g. newsletters, electronic bulletin boards, seminars) which could be low-cost promotional channels for the EEIS. The PCP should not itself incur costs in using these channels, as economies of scale in reaching potential end-users are essential

Part of the promotion may be aimed at identifying national funding mechanisms (apart from charging for information services) to support continuance of the EEIS activity beyond its pilot phase.

3.2) Information intermediaries

SCPs may, in addition to promotion, act as information distribution nodes. In such a case, they would generate, collect and forward requests to the PCP, thereby acting as information intermediaries.

In addition, some SCPs (e.g. consulting companies, educational and research organizations, even regulatory bodies) will be in a position to make use of EEIS information themselves as part of their programme. In such cases, they would be adding value to the raw data by interpreting it for their own ends, for the local conditions or a customer.

Effective communication channels between PCP and the SCPs should be established so that queries from end-users can be promptly serviced.

3.3) Possible benefits

SCPs could be given increased credibility, visibility and attractiveness through the introduction of new, enhanced services.

Serving as a distribution node for the EEIS will be an additional resource for them and will enhance their effectiveness in achieving their programme targets.

Taking on distribution of the EEIS will strengthen their existing services and boost their client base as well as increase their credibility with local enterprises and enable them to meet a demand they cannot presently meet through providing technical advice.

SCPs are expected to develop a charging mechanism (e.g. as a charge per usage of the service, or as part of annual membership fees) for providing an information service, in order to generate an income. This may also be in the form of a mark-up whenever information is built into a wider 'product' such as a consultancy service. Such information, provided in a 'packaged' form will enhance its usefulness and justify a higher mark-up.

Promotion and marketing materials can be provided through the PCP.

4. Operational Procedure and Guidelines

Based on the discussion made with Mr. P. Pembleton during his visit to AIT in December 1994, the AIT Team has developed the operational procedure

and guidelines for implementing the project. The proposed operational guidelines are presented in Annex B.

5. Visits to Potential SCPs.

In May 1995, the AIT Team visited two potential SCPs, namely the Technical Information Service (TIS) at the King Mongkut's Institute of Technology, Thonburi and the Technical Information Access Centre (TIAC) of the National Science and Technology Development Agency.

The proposed operational guidelines, possible roles and benefits were discussed with TIS and TIAC. Both organizations have agreed to serve as SCPs of the EEIS network in Thailand.

6. Marketing and Information Dissemination Activities

For marketing and demonstration purposes, the PCP requested UNIDO to supply sample copies of the "Energy and Environment Series" and the "Industrial and Environment: A Guide to Sources of Information". Demonstration diskettes were also provided by UNIDO. A list of publications received from UNIDO and publications distributed to SCPs is included in Annex C.

In June 1995 two thousand sets of EEIS factsheets were distributed by TIS to the network members of TIS. PCP distributed 150 sets of the factsheets to small and medium industries in Thailand (Annex D). Fifty sets of the factsheets were distributed to consultancy firms and academicians who are potential consultants involved in energy and environment fields (Annex E).

7. Future Work Plan

The following activities will be carried out during the next four months:

1. Continue the marketing and promotion of the EEIS system.
2. Visit three more potential SCPs.
3. Monitoring the effectiveness of promotional materials.
4. Monitor and account the use of the data provided by INTIB.
5. Organize a meeting at CLAIR at the end of project to discuss the possibilities for the sustained operation of an EEIS in Thailand and to outline problems encountered.

Annex A

First UNIDO-EEIS Meeting
8 December 1994, 9:30 AM - 3:30 PM
CLAIR, Asian Institute of Technology
Bangkok, Thailand

I. Attendance:

Fourteen participants from eight agencies/organizations involved in energy, industry, environment, and information service attended the meeting (See attached list).

II. Highlights of the meeting:

1. The meeting formally started at 9:30 AM with the welcome remarks of CLAIR Director, Prof. R.D. Stuart. Mr. P. Pembleton of UNIDO was the main presenter in the meeting. In his first session, he oriented the participants on the activities and roles of UNIDO, INTIB, and EEIS in today's economic development and environment. In the second session, he demonstrated the retrieval facilities of the databases (IDA, METADEX, EMA, MBF) which will be used in the EEIS networking. Discussions followed the demonstration.
2. The importance of information technology and the productive use of information in sustainable development were emphasized with reference to UNCED's Agenda 21. One of UNIDO's major goal is technology transfer through information dissemination hence the development of INTIB and EEIS network project. Mr. Pembleton stressed UNIDO's need for partners (e.g., PCPs and SCPs) in disseminating the relevant information. He expressed that there is no funding for the operation of the EEIS network and its sustainability would depend much on the cooperation of the participating agencies/organizations and collection of service fees. The UNIDO-EEIS would still be in a pilot project stage and flexibility in charging service fees would be practiced; some services would be paid, others not, depending on the agreement of network members. Other ways of fund raising to sustain the EEIS are through membership fees, donations, or subsidies. Information charges or service fees would take care of expenses in searching and reproducing the information needed and not for profit.

3. Since UNIDO-EEIS would be in the pilot stage, the main concern would be to establish the need for the information network. This could be done through promotion, i.e. informing end-users about the presence of the information system and how it could be accessed. Promotion could be done through the existing media (e.g., company/organization newsletters, reports, or journals) for information updates at minimal costs; through lectures or presentations in seminars or workshops; or through consultancy.
4. On the issue of charging fees for non-useful information given to the customer, majority agreed that clients should not pay unless he/she is satisfied with the results given. However, the information center/researcher will lose in this case since operational costs will come in right from the start of searching and this could not be recovered from unsatisfied clients.
5. In the case of NGOs (like Thailand Environment Institute - TEI) and government agencies, they could not charge service fees to the clients so they would have a problem of unrecovered costs and lack of fund for the EEIS. It was suggested by Mr. Acosta to find another way of charging, e.g., through suppliers or donors.
6. On the question about the role, responsibilities, and benefits of the SCPs, it was pointed out that they will help much in the promotion (and marketing) of EEIS since they have direct contact with the end-users; hence their role as channels of information transfer. The primary benefit will be the SCPs increased profile in terms of better services to their clients. Despite discussions on these issues, there is still a need for clarification and definition of responsibilities and benefits.
7. Regarding their willingness to be SCPs only the representatives from the Technical Information Access Center, the Industrial Estate Authority of Thailand, and the International Institute for Energy Conservation affirmed their participation. The TEI representative also expressed her interest in the EEIS. The representative from the Department of Energy Development and Promotion would discuss first with the office higher ups before making any decision. The decisions of the others are still to be solicited.
8. A second meeting will be organized for the SCPs (participating agencies/organizations) to discuss the strategies for EEIS.

**List of participants who attended the 1st Meeting of EEIS Network in Thailand
8 December 1994, Asian Institute of Technology, Bangkok**

1. Mr. Joseph E. Acosta
Energy Analyst
International Institute for Energy
Conservation
Racquet Club Building
8 Sukhumvit Soi 49/9
Bangkok 10110
2. Ms. Amornwan Resanond
Thailand Environment Institute
Bangchak Refinery Building
210 Sukhumvit 64
Prakanong
Bangkok 10260
3. Ms. Daruna Somboonkun
Associate Director
Center for Library and Information
Resources
Asian Institute of Technology
Bangkok
4. Ms. Antonita R. Grospe
Research Associate
ENSIC/RERIC
Asian Institute of Technology
Bangkok
5. Ms. Jintana Laoruchupong
Senior Environmentalist
Office of Energy Study, Research and
Development
Department of Energy Development and
Promotion
Rama I Road
Bangkok 10330
6. Mr. Naoki Kojima
Asian Representative
New Energy and Industrial Technology
Development Organization
8th Floor, Sindhorn Building, Tower II
130-132 Wittayu Road
Bangkok 10330
7. Mrs. On-Anong Suraniranat
Manager, Information Centers
ENSIC/RERIC
Asian Institute of Technology
Bangkok
8. Ms. Praditta Siripan
Information Specialist
Technical Information Access Center
National Science & Technology
Development Agency
6th Floor Vidhayapattana Building
Chulalongkorn Soi 12
Phaya Thai Road
Bangkok 10330
9. Ms. Franee Kiriyanant
Librarian
Thailand Environment Institute
Bangchak Refinery Building
210 Sukhumvit 64
Prakanong
Bangkok 10260
10. Dr. Prapat Wangskarn
Senior Engineer
Department of Energy Development and
Promotion
Rama I Road
Bangkok 10330
11. Mr. P. Pembleton
United Nations Industrial Development
Organization (UNIDO)
Vienna
Austria
12. Dr. Somchart Paisamrat
Information Specialist
ENSIC/RERIC
Asian Institute of Technology
Bangkok

13. Prof. Robert D. Stucart
Director
Center for Library and Information
Resources
Asian Institute of Technology
Bangkok

14. Dr. Verapong Chaiporn
Head
Environmental Impact Assessment
Section
Industrial Estate Authority of Thailand
618 Nikom Maktasan road, Rajdevec
Bangkok 10400

**List of organizations invited to participate in the 1st Meeting of EEIS Network in
Thailand
8 December 1994, Asian Institute of Technology, Bangkok**

- | | | | |
|----|--|-----|--|
| 1. | Acting Director
Department of Energy Development and Promotion
Work Programme and Budget
Coordination Division
Rama I Road
Bangkok 10330 | 7. | Director
Industrial Estate Authority of Thailand
Environmental Control & Safety
Division
Environmental Enhancement Center
618 Nikom Makhasan Road, Rajdevee
Bangkok 10400 |
| 2. | Director
Department of Industrial Promotion
Industrial Service Division
ISI Building, Soi Treemit
Rama IV Road, Kluey Nam Thai
Bangkok 10110 | 8. | Managing Director
International Institute for Energy
Conservation
Racquet Club Building
8 Sukhumvit Soi 49/9
Bangkok 10110 |
| 3. | Director
Department of Industrial Works
Office of Quality Development on
Environment
75/6 Rama VI Road, Rajthavee
Bangkok 10400 | 9. | Director
National Science and Technology
Development Agency
Technology Information Access Center
18th Floor, Gypsum Metro Politan
Tower
539/2 Sri-Ayudhya Road, Rajdevee
Bangkok 10400 |
| 4. | Engineering Department Manager
Energy Conservation Center of Thailand
c/o Department of Energy Development
and Promotion
Rama I Road
Bangkok 10300 | 10. | Director
Technical Information Access Centre
National Science and Technology
Development Agency
Room No. 602, 6th floor, Vidyabathana
Building
Chulalongkorn University
Phya Thai Road
Bangkok 10330 |
| 5. | Deputy Executive Director
Federation of Thai Industries
394/14 Samsen Road, Dusit
Bangkok 10300 | 11. | New Energy and Industrial Technology
Development Organization
8th Floor, Sindhorn Building, Tower II
130-132 Wittayu Road
Bangkok 10330 |
| 6. | Director
Industrial Environmental Management
Program
2nd Floor, St. Gabriel Old-Students
Association Building
412/4 Samsen Road, Dusit
Bangkok 10300 | | |

12. Director
Rural Industry Information Services Unit
3rd Floor, ISI Building
Soi Kluary Nam Thai
Rama 4 Road, Prakanong
Bangkok 10110
13. Technical Information Service
P. O. Box 51
Bangmod, Rasbura
Bangkok 10140
14. Director
Thai Institutr of Scientific and Technical
Research
Thai National Documentation Center
196 Phaholyothin Road, Chatuchak
Bangkok 10900
15. Director
Thailand Development Research Institute
Natural Resources & Environment
Division
15th Floor, Rajapark Building
163 Asoke, Sukhumvit Road
Bangkok 10110
16. President
Thailand Environment InSTITUTE
Bangchak Refinery Building
210 Sukhumvit 64
Prakanong
Bangkok 10260

Annex B

Proposed Operational Procedures and Guidelines

Factsheet No.	Name	Description	Number of records/pages	Cost/item	PCP	SCP	Cost to user	Order	Delivery	Payment
1	IDA - data base	Industrial Development Abstracts--20,800 abstracts of UNIDO documentation, 1965 - to date	Diskette of dataset (500 records each)	Developed Countries US\$ 75. Developing Countries US\$ 50 per set	15 % of sale	10 % of sale	Developed Country US\$ 75. Developing Country US\$ 50 per set	SCP and PCP collect orders and send to UNIDO	UNIDO sends invoice & diskettes to user directly	Payment made to UNIDO. UNIDO will send payment to PCP or SCP two times per year
2	IDA - paper & microfiches	Paper copies or microfiches of full document of IDA abstracts	less than or equal 10 pages	US\$ 15	20 % of sale	10 % of sale (if SCP collects the order for PCP)	-	PCP collects orders from SCPs and users and sends to UNIDO	UNIDO sends invoice & papers to user directly	Payment made to UNIDO. UNIDO will send payment 20 % of sale to PCP and 10 % to SCP if SCP collected the order for PCP
			less than or equal 50 pages	US\$ 30						
			less than or equal 100 pages	US\$ 45						
			more than 100 pages	US\$ 0.75 per page						
3	Industrial and Environment: A Guide to Sources of Information	Book, Published in 1991. 50 data bases are in English	290 pages	Airmail Europe US\$ 176.0 Airmail overseas US\$ 190.0	more than 50 copies receive 10% of sale; between 50 and 100 copies receive 15% of sale; between 100 and 150 copies receive 20% of sale; over 150 copies receive 25% of sale	-	Airmail Europe US\$ 176.0 Airmail overseas US\$ 190.0	PCP collects orders from SCPs and users and sends orders to UNIDO	Publisher sends book and invoice to user directly	-

Annex B (Cond.)
Proposed Operational Procedures and Guidelines

Factsheet No.	Name	Description	Number of records/pages	Cost/item	PCP	SCP	Cost to user	Order	Delivery	Payment
5	Energy and Environment series	Publication on energy and environment issues in Industry and Technology: list of publications	140 pages	£ 55/US\$ 100 (US\$ 66 in Developing Countries)	more than 50 copies receive 10% of sale; between 50 and 100 copies receive 15% of sale; between 100 and 150 copies receive 20% of sale; over 150 copies receive 25% of sale		£ 55/US\$ 100 (US\$ 66 in Developing Countries)	PCP collects orders from SCPs and users and sends orders to UNIDO	Publisher sends book and invoice to user directly	
		Energy Conservation in Industry No. 1	170 pages							
		- Hazardous Waste Management in Industry	164 pages							
		- Industry Safety	190 pages							
		- Effluent Control in Industry	181 pages							
- Energy Conservation in Industry No. 5										
6	MICRO - METADEXplus *	Metallurgical data base	3,000 records	US\$ 395+US\$ 7			30 % discount for developing countries	send to UNIDO	UNIDO sends invoice and the data set to user directly	Payment made to UNIDO.
		- Environment/scrap/recycling	3,500 records							
		- Gold & Silver production /recycling	3,600 records							
		- Foundry technology	3,500 record per year							
		- welding	700 records							
- Beneficiation										

* METADEXplus: One year records of the database is available at PCP. The charge per useful record is US\$0.80. PCP will receive US\$0.40 per record if the user comes to PCP directly. SCP will receive US\$0.20 per useful record if the user requests the search through SCP. UNIDO and the "Data Owner" will each receive US\$0.20 per useful record.

Annex C

List of publications received from UNIDO and distributed to SCPs

No.	Title	No. copies received from UNIDO	No. copies distributed to TIAC	No. copies distributed to TIS
001	Industry and Environment: A Guide to Source of Information, UNIDO, 1991	7	1	1
002	INTIB Energy and Environment Series No. 1: Energy Conservation in Industry, UNIDO, 1992	3	1	1
003	INTIB Energy and Environment Series No. 2: Effluent Control in Industry, UNIDO, 1993	6	1	1
004	INTIB Energy and Environment Series No. 3: Hazardous Waste Management in Industry, UNIDO, 1994	8	1	1
005	INTIB Energy and Environment Series No. 4: Industry Safety, UNIDO, 1994	8	1	1
006	INTIB Energy and Environment Series No. 5: Energy Conservation in Industry, UNIDO, 1993	6	1	1
007	IDA demo diskettes	6	1	1
008	Clean Product No.8, 9 and 10	50 copies each		
009	Genetic Engineering and Biotechnology Monitor, UNIDO, 1994	2		
010	Environmental Technology Monitor, UNIDO, 1994	2		
011	A Training course on Ecological Sustainable Industry Development, UNIDO, 1994	50		

Annex D

List of Small and Medium Industries to Whom the EEIS Factsheets Were Sent

Type of Industry	Number
1. Agricultural Products & Commodities	
- Processing or preservation of food	17
- Corn Products	1
- Sugar	1
- Grain mill products	1
- Other food products	3
2. Minerals, Metals & Ceramics	
- Processing of metal	10
- Casting of non-ferrous metal	5
- Ceramic products	2
3. Chemicals & Chemical products	
- Chemical products	11
- Acetylene black products	1
- Petrochemical products	5
- Pharmaceutical products	1
- Fertilizer	1
- Paints or similar products	3
- Pulp, paper and paper board	5
4. Mechanical & Electrical equipment	
- Production/Assembly of engine	4
- Production/Assembly of machinery or electrical equipment	7
- Engine/Mechanical/Electrical equipment component and part products	6
- Production of vehicle components or part	5
- Production/Assembly of electric products	43
5. Other products	
- Manufacture/Assembly of sport equipment, musical instruments or toys	4
- Production of ready made garments for export	2
- Plastic or plastic-coated products	5
- Rubber tree products	1
- Manufacture of plastic in primary form and synthetic rubber	3
- Tanning of leather	1
- Finishing of textile	1
6. Service	
- Natural gas transport	1
Total number of manufactures	150

Annex E

List of Academicians/Researchers/Consultants to Whom the EEIS Factsheets Were Sent

Institutions	Number
1. Chulalongkorn University - Faculty of Environment Science	10
2. King Mongkut's Institute of Technology, Thonburi - School of Energy and Materials - Department of Environment Engineering	5 1
3. Mahidol University - Faculty of Environment and Resources Studies	5
4. Kasetsart University - Department of Environmental Engineering	4
5. Ching Mai University - Department of Environmental Engineering	1
6. Consultancy companies involved in energy and environment activities	24
Total number	50