OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.

DISCLAIMER

FAIR USE POLICY

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
Tel: (+43-1) 26026-0 · www.unido.org · unido@unido.org

21501

Distr.
RESTRICTED

FMD/R.26
6 March 1996

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

ORIGINAL: ENGLISH

INDUSTRIAL POLLUTION REDUCTION PROGRAMME

DG/SRL/91/019

Report of the OOPP Workshop*

Prepared by J. Navratil
Evaluation Section

* This document has not been edited.

V.96 81364

TABLE OF CONTENTS

INTRODUCTION

The project DG/SRL/91/019 "Industrial Pollution Reduction Programme" (budget $ 2,157 mil) has been under implementation since 1992. The Central Environmental Authority (CEA) is the executing agency. After a rather slow start the project has proceeded in carrying out activities in two sectors (textile and distilleries) and started activities in the metal finishing sector. The Tripartite Review Meeting in 1995 decided that an OOPP workshop be held to review the project strategy and involve more parties in its implementation.

The workshop was held on 6 and 7 February at the Trans-Asia Hotel in Colombo. It was opened by the Chairman of CEA and moderated by J. Navratil, Senior Evaluation Officer, UNIDO. The workshop was attended by 25 participants, three participants representing the industry (see Annex 1).

Preparatory consultations with the CEA staff were held by the moderator on Monday 5 February 1996; they revealed that the project had been facing constraints in cooperation with both major parties concerned: industrial companies and advisory/consulting companies. Industrial companies have been reluctant to apply pollution reduction measures or even to participate in audits to identify them; some of them withdrew their earlier commitments to participate in the project. Consulting companies and R&D institutes have had limited staff resources to engage in the project.

However, the moderator had the possibility to participate at one of the seminars on cleaner production conducted by the project for industry people from the textile sector (prior to the workshop). The presentation by a member of the CISIR team on their experience and findings derived from the technological audit conducted by them demonstrated plausibly high effectiveness of the audit as a learning process. This proved that there is a potential to develop local advisory capabilities on pollution reduction measures if appropriate strategies are applied.

2. LFA AND OOPP METHODOLOGY

Except for one person none of the participants have been exposed to the OOPP techniques and terminology. A brief explanation of the project planning matrix (PPM) and the terms used served the purpose of establishing a common language.

3. PROBLEM AREA

Problem area was given by the existing and valid project document: industrial pollution. CTA explained the scope and variability of pollution reduction measures.

4. PARTICIPATION ANALYSIS

The organizations, agencies and companies were categorized by primary functions (mandate). It was allowed to include each entity under more than one function. (See Annex 2.)

At a later stage the consulting companies/organizations were asked to describe their current capabilities using the UNIDO service module for institution building outputs. This structured

presentation (on flipcharts) proved to be a very useful base for the first assessment of strengths and constraints of the organizations.

5. OBJECTIVES ANALYSIS

The development objective was taken over from the existing project document ("reduction of industrial pollution"). [There was a clear understanding among the main parties to the project that the development objective should be maintained.] The discussion revealed that there are three ways how to reduce industrial pollution:

- reduction of production
- sectoral restructuring in favour of less polluting sectors
- application of pollution reduction measures by industrial companies

The workshop agreed that the project should aim at the third objective only. It became the Purpose of the programme. (Later, after the workshop itself, the Purpose of the programme was refined as follows: "Cost-effective pollution prevention and abatement measures are becoming accepted and applied in industries in Sri Lanka". The following Indicator for the Purpose was formulated: "Five companies have contracted the advisors trained under the programme to undertake industrial waste reduction audits within one year after completion of the project".)

After agreement on the Purpose of the project the workshop participants identified factors (means) influencing the achievement of the Purpose. More than 50 cards with objectives supporting or important for the achievement of the Purpose were presented. (Implicitly, by identifying means to achieve the purpose, the participants were addressing problems they considered important.) Through clarification of individual cards and elimination of duplications the total number of objectives was reduced to 28. They were divided in several clusters (see Annex 3):

- Legislation and monitoring
- Policy coordination
- Awareness raising
- Advisory services
- Accreditation
- Information on technology
- Demonstrations
- Networks for sharing experience
- Financing
- Education

6. SCOPE OF THE PROGRAMME

The amount of money available for the completion of the UNDP support programme (approx. $ 1 mil.) influenced indirectly the scope of the programme of the national partner(s): objectives which could not be supported by UNDP under this programme were left out and included under Assumptions, if considered important. Prior to this scoping exercise information was provided about

- the current status of the programme (main activities on cards, for each Output, by NPC)
- similar activities carried out under other projects/by other agencies (World Bank, bilateral agencies such as USAID-TIPS, the Dutch, etc.)

With due consideration of the above information it was decided to include under Programme Assumptions the objectives from the cluster INFORMATION ON TECHNOLOGY (not to duplicate the functions of ITMIN), EDUCATION (addressed by an ADB project), ACCREDITATION (addressed by SLSI) and FINANCING (addressed by a World Bank interest-free loan). However, the decision was not unanimous. In particular the issue of financing was considered as insufficiently addressed by the current administration of the World Bank loan by the local banks, including the National Development Bank. As a solution, an objective was added under the cluster of POLICY COORDINATION, analysing the mechanisms of accessing the available funds and proposing improvements, if needed. Similarly, there were doubts about the type of data to be made available at ITMIN. An activity was, therefore, included to coordinate the information requirements with ITMIN. (A concern was also raised that the information provided by ITMIN may be too expensive to be accessible by SMEs; however, the recommendation to establish a new information centre did not find general support.)

For the planning purposes, the clusters were re-arranged in three groups:

- Policy, legislation and coordination (main partner: CEA)
- Advisory services (main partner: consulting companies and institutes)
- Demonstrations (main partner: industrial companies).

A new strategy for developing/upgrading local advisory capabilities was presented by the BSO (generic training of a larger group of consultants, small sub-contracts for sectoral reviews/studies, screening of results and selection of consultants and industrial companies for technology audits, limited subsidies by project for the "learning" audit, limited financial support for implementation of reduction measures). After some clarifications the Output indicators (targets) were agreed upon (at least 20 people to be trained, at least five additional consulting companies/institutions to be strengthened, 10-15 audits conducted).

The project document itself was reformulated after the workshop. Whenever possible, the original text was kept for administrative (approval) reasons.

7. PROGRAMME MANAGEMENT

Given the existence of several partners the project supporting several partners can be considered to be a programme, with each partner responsible for its project. However, in view of a large number of advisory companies and industrial plants to be involved there is a need for a tight coordination and a central management of the programme. The programme management unit (PMU), which is located at CEA, is entrusted with this task. To ensure effective coordination a Board was

proposed by the BSO. Through screening of a long list of Board members proposed by the workshop participants the workshop agreed on the following composition:

FCCISL (Federation of Chambers of Commerce and Industry of Sri Lanka)
CISIR (Ceylon Institute of Science and Industrial Research)
MOI (Ministry of Industrial Development)
MSTHRD (Ministry of Science, Technology and Human Resources Development)
MIP (Ministry of Plantation Industries)
DFCC (Development Finance Company Ltd.)

8. WORKSHOP EVALUATION

Evaluation of the workshop (individually, on cards) expressed in most cases satisfaction with the OOPP method and the result. In one case the duration (2 days) was considered to be "too long for senior executives". In another case more frequent use of the overhead projector was desired.

9. LESSONS LEARNED

9.1 The most important result of the workshop is the identification of problems/objectives by the participants, their clarification and common understanding. Establishment of the means-end relationships among them is less important and, if the time available for the workshop is as short as 2 days, hardly feasible.

9.2 Not all project strategies/solutions can be derived from a problem tree converted into an objectives tree: there may be solutions based on experience from other areas/situations. Problem and objectives trees should therefore structure primarily the higher layers of the objectives, including the outputs and assumptions at the purpose level, not necessarily all the activities.

9.3 OOPP workshop is suitable in particular for the planning purpose. It can complement the evaluation of an on-going project by performing the forward-looking function of evaluation. However, for an objective assessment of the past performance individual interviews with the parties involved may be more effective in revealing the problems and constraints as perceived by individual parties concerned. This is particularly true in case of cultures which dishearten discussion of failures or problems in public.

9.4 Projects supporting two or more partners, each of them responsible for their projects/programmes, can be viewed as UNIDO [integrated] programmes supporting national programmes. Guidelines need to be prepared to advice on the options how to structure this complex network of relations and responsibilities.

LIST OF PARTICIPANTS FOR OOPP WORKSHOP HELD ON 06TH/07TH FEBRUARY '96 AT THE KING'S COURT, TRANS ASIA HOTEL, 9.00 A.M. - 5.00 P.M.

Ministry/Institute/Company	Representative	Designation
Ministry of Industrial Development	Mr. Asitha K Seneviratne	Deputy Director
USAEP	Mr. Thiruchelvam	Environmental Specialist
Sri Lanka Association for Advancement of Science	Dr. D Nesaiah	Enviroumentalist
Resource Organization & Management Int(Pvt) Ltd	Mr. Susil Somasiri	Consultant
National Development Bank	Mr. Deepal Peiris	Senior Project Engineer
Ministry of Science, Technology and Human Resources	Mrs. P G P Abeyratne	Senior Asst. Secretary
National Engineering Research Development Centre	Mr. P A S Fernando	General Manager
Ceylon Institute of Scientific Industrial Research	Dr. A Mubarak	Head/CETD
Development Finance Coporation of Ceylon	Mr. H K Willarachchi	Programme Officer
Federation of Chambers of Commerce & Industry	Mr. C J Embuldeniya	General Manager
Rubber Research Board	Mr. Thurul Warnakula	Assistant Biochemist
Sugar Research Institute	Mr. W K N Shanthichandra	Research Officer
Institute of Engineers	S A S Perera	Chairman/Chemical Engineering Section
World Bank	Ms Sriyanai Hulugalle	Industrial Economist
Disitilleries Company of Sri Lanka	Mr. D C F Abeysekera	Production Manager
	Mr. T D Ekmon	Chief Chemist
Oacianic Knitters	V Viswanathan	Finance Manager
UNDP	Ms Manel Jayamanne	Programme Officer
Environmental Technology	Dr. V J Emmanual	Managing Director
Central Environmental Authority	Mr. G K Amaratunga	Chairman
	Dr. V U Ratnayake	Director General
	Ms Ramani Ellapola	Director (Protection)
CEA/IPRP	Mr. K G D Bandaratilake	Deputy Director General (Technical)/NPD
	Mr J K A B Wijegunasekara	Assistant Director (Protection)/NPC
UNIDO/IPRP	Mr. Andrew Milsted	Chief Technical Advisor
	Mr. Tien Pham	Associate Expert
UNIDO	Mr. Enno Heijndermans	Backshopping Officer
	Mr. Navratil	Moderator

Annex 2

PARTIES INVOLVED - CATEGORIES BY FUNCTION

INDUSTRY

- Federation of Chambers of Commerce and Industry
- Distilleries Company of Sri Lanka (DCSL)
- Oacianic Knitters

REGULATORY

- Central Environmental Authority (CEA)

not present:
- *Sri Lanka Standards Institute (SLSI)*
- *Urban Development Authority (UDA)*

INDUSTRIAL POLICY AND COORDINATION

- Ministry of Industrial Development
- Ministry of Science, Technology and Human Resources Development

not present:
- *Board of Investment (BOI)*

ADVISORY SERVICES

- Sugarcane Research Institute
- ROMIN
- Environmental Technologies Ltd.
- The Institute of Engineers
- CISIR
- NERD
- Rubber Research Institute of Sri Lanka
- University of Moratuwa

not present:
- *Industrial Development Board (IDB)*

FINANCING

- World Bank
- National Development Bank (NDB)

not present:
Development Finance Corporation of Ceylon

PUBLIC AWARENESS

- CEA
- Sri Lanka Association for the Advancement of Science (SLAAS)
- CIWEM

OTHERS

- UNIDO
- UNDP
- USAID

Annex 3

OBJECTIVES

Development Objective:

Reduction of industrial pollution

Purpose:

Industry applies cost-effective industrial pollution reduction measures

Clusters of objectives:

LEGISLATION AND MONITORING

- Completion of Outputs and Activities from the current project document

POLICY COORDINATION

- Exposure to environmental policy/incentives schemes in the neighbouring countries
- Feedback on constraints to the Government
- Advice ITMIN on information required for IPR measures

AWARENESS RAISING

- Guidelines for SMEs on IPR
- Consumption/waste norms established
- Publications on IPR
- Training of trainers on creating awareness on IPR
- Directory on ENV services
- Dissemination of the list of accredited consultants

ADVISORY SERVICES

- Invite institutions and consulting companies to participate in training
- Select institutions and consulting companies to participate in training (5-10 teams, 20- 25 people)
- Provide training
- Identify industry willing to pay (50%) for conducting waste audits
- Conducting waste audits on contract basis by institutions/consulting companies (trained by the project)
- Preparation of IPR options
- Selection of proposals (selection of industrial plants for IPR)
- Implementation of proposals for IPR, with support of the advisory teams and (limited) financial support of the project

ACCREDITATION

- Selected laboratories are accredited by SLSI
- Directory of accredited laboratories is prepared by SLSI
- Selected consultants are accredited by the Ministry of Environment

INFORMATION ON TECHNOLOGY

- Information on technology available through ITMIN

DEMONSTRATIONS

- 10-15 additional demonstrations carried out (process: see ADVISORY SERVICES)
- Dissemination of the results

NETWORKS

- Indian experience evaluated
- 6 companies from the textile industry invited to establish a working group
- Additional 2 working groups initiated

EDUCATION

- Curricula include the concept of cleaner production

FINANCING

- Funds on concessionary terms are available for IPR measures