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Training Programme
for the Staff of the Hungarian
Cleaner Production Center

Report

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1 Project background

Within the UNIDO/UNEP National Cleaner Production Centres (NCPCs) Programme a new NCPC has been established in Budapest in spring 1997.

The main task for the head of every NCPC is to create a network of people and organizations with cleaner production knowledge in the country. The centre should also initiate application of the concept in companies. Every centre uses four ways to reach its goal:

- through demonstration projects
- through training
- through dissemination and
- through influencing and assisting policy makers.

2 Project target

A prerequisite to start with CP demonstration projects is the ability to fall back on national experts - NCPC staff members and consultants - who are familiar with the basic principles of CP as well as with some tools and methods to implement CP programmes in companies.

To improve the situation STENUM realized a four-days training programme in Graz (24th - 27th September 1997) financed by UNIDO for the staff of the Hungarian CPC and some consultants who will be cooperating with the HCPC in the future. The main goals of this training programme had been:

- imparting fundamental principles of cleaner production
- introducing the ECOPROFIT method which has been applied in CP demonstration projects in Czech Republic, Slovakia and Brazil
- imparting the link between CP and Environmental Management Systems (EMS)
- discussing marketing strategies for CP

3 Training Programme

3.1 Content

To give the participants a general idea about Cleaner Production the trainers started with an overview of CP projects in Austria.

Later on we concentrated on the three most important parts of the ECOPROFIT methodology:

- cleaner production and waste minimization
- mass flow analysis
- energy analysis

Taking into consideration that many companies in Hungary, especially those which are export oriented, are interested in implementing Environmental Management

Systems (EMS) because of market demands the last training day was dedicated to the link between CP and EMS.

A detailed time schedule of the training programme can be found in Annex 2.

3.2 Course of events

To impart principles of CP as well as practical application of these principles each day of the training programme had a similar structure

- theory combined with practical examples
- interactive training in small groups with presentation of the results

By means of a virtual plastic material processing company the participants learned how to improve the production from a waste minimization point of view.

By means of a simple coffee maker they learned how to make material balances and to analyse mass flows through a system

At the end of each working session the groups presented their results

- final discussion about the topic

To demonstrate the successful application of the ECOPROFIT method in Austria company visits in 4 companies belonging to different industrial branches have been realized, mainly in the afternoon sessions.

3.3 Training materials

As training materials three booklets of the ECOPROFIT programme have been used. This booklets contain theory as well as practical examples and empty worksheets for practical application.

Each participant have got a file with this booklets, copies of all presentations and some additional informations like a brochure about successful CP projects.

One complete file with all training materials is added to this project report.

4 Project results and recommendations

In general it can be mentioned that the training programme was successful. In a final discussion all participants confirmed that the course was interesting and that they either have learned something new or have deepened their knowledge about CP and how to implement it.

The programme was originally intended as CP training for the staff of the Hungarian CPC only but has been extended to a training for both HCPC staff and consultants who will be working for the HCPC in demonstration projects. Most of the participants (see list in Annex 1) have been either staff members or will be working for the (planned) sub-centres in Miskolc or Veszprem.

Only two participants came from consulting companies alas. They are interested in Cleaner Production methods and will try to implement these ideas but their priorities are the implementation of environmental management systems in industrial companies fulfilling the requirements of ISO 14.001.

My impression is that the staff members, leaded by Prof. Kerekes, the head of the HCPC, are forming a good team where all members are familiar with the idea and principles of Cleaner Production in theory. But it is evident that not all of them have practical experience in implementing CP in companies. Thus external support provided by national and international experts with CP project experience is necessary to ensure widespread dissemination of CP in Hungary.

It is not possible to obtain whether a pool of skilled national experts in consulting companies familiar with CP is existing. Therefore from our point of view additional training seminars and the participation of national experts in some demonstration projects are highly recommended.

Annex 1

List of workshop participants

name	institution/company	profession
BARANYI Árpád	BUES	Ph.D. student
BEZEGH András	CONSACT	consultant
CSUTORA Maria	HCPC	staff member
DIELACHER Thomas	HCPC	staff member
GALLI Miklos	HCPC	staff member
GARAMVÖLGYI Ernő	Baylogi	staff member of CP sub-center in Miskolc
HOEGSTEDT Nils	UNIDO	
KEREKES Sándor	HCPC	head of HCPC
TAMASKA Lázló	Veszprem University	Ph. D. Student
ZOTTER Katalin	VITUKI	consultant
ZSÓKA Ágnes	BUES	Ph.D. student, works for HCPC

Annex 2

Time Schedule

24.9,	
8.30 - 9.00	Welcome at STENUM, introduction, organisational details
9.00 - 9.45	Cleaner Production in Austria - An Overview (H.Ferner)
9.45 - 10.00	coffee break
10.30 - 12.30	welcome in the city hall of Graz (city councilor for environment Dr. Weinmeister) ÖKOPROFIT video presentation of the „Ökostadt 2000“ and „ÖKOPROFIT“ concept
12.30 - 14.00	lunch
14.00 - 16.30	<i>company visit:</i> (H.Ferner, G. Engelhardt/STENUM) Styria (newspaper printer)
19.00	evening program

25.9	
8.30 - 12.00 incl. break	cleaner production strategies to reduce waste and emissions interactive training, discussion (Dr. J.Sage/STENUM)
12.00 - 13.30	lunch (at STENUM)
13.30 - 15.30	<i>company visits</i> (Dr. J.Sage/STENUM) Marienhütte (steel mill)
16:00 - 17.30	Konrad Wittwar GmbH (car repair shop)

26.9

8.30 - 11.00 incl. break	material flow analysis (H. Ferner/STENUM) interactive training, discussion
11:30 - 12:30	<i>company visit</i> (H. Ferner/STENUM) Leopold Pharma (pharmaceutic industry)
12:30 - 13:30	lunch
14.00 - 17.00 incl. break	energy flow analysis (H. Ferner/STENUM) interactive training, discussion
19:00	evening program: dinner in a Styrian „Buschenschank“

27.9

9.00 - 10.30	environmental management systems, ISO 14.001 (H. Ferner)
10.30 - 11.00	coffee break
11.00 - 12.00	marketing strategies for Cleaner Production (Prof. H. Schnitzer)
12.00 - 13.00	final discussion
12:30 - 14:00	lunch
14.30 - 16.00	<i>optional: guided city walk through Graz</i>