



# Profiting from Cleaner Production Resource Kit for Training

## Trainers' Guide

Adapting, using and presenting courses



United Nations Environment Programme  
Division of Technology, Industry and Economics



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UNITED NATIONS ENVIRONMENT PROGRAMME  
DIVISION OF TECHNOLOGY, INDUSTRY AND ECONOMICS

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## Introduction

Within the framework of a global project implemented in 1999-2002, UNEP DTIE has developed and presented a series of awareness raising and skills training courses on Cleaner Production financing in five developing countries. In these five countries (Guatemala, Nicaragua, Tanzania, Vietnam and Zimbabwe), communication and relational skills courses were also held for persons selected to present these courses.

In addition, workshops for senior management and bankers have been held at central locations.

Based on the experience gained in adapting and delivering the courses in the five countries, generic versions have been designed for use in other countries. They have been published on a CD-ROM and on the UNEP/DTIE/Production & Consumption web site.

The objective and format of this Trainers' Guide is to:

- Summarize the format and the content of these courses;
- Provide future trainers with guidance on using and presenting the material;
- Provide guidance to trainers who may wish to adapt the material for different training objectives.

In addition to the event based training, other training support has been developed. These include:

- Profiting from Cleaner Production: Towards Efficient Resource Management
- Profiting from Cleaner Production: Checklists for Action

These are also summarized in this Guide.

With continued review and evaluation of experience, we expect to maintain the Guide as a working and up-to-date resource.

This Trainers' Guide was developed within the context of the project "Strategies and mechanisms for promoting Cleaner Production investments in developing countries", financed by the Royal Government of Norway.

## A Current Training Courses

Currently there are seven event-based courses.

### Three Executive Briefings

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Business and government leaders and decision-makers are very busy people. Ways of informing and influencing them of the benefits of investing in Cleaner Production must:

- Be short and illustrative.
- Be seen to be immediately relevant to their activities and responsibilities.
- Be presented by a knowledgeable and respected professional.
- Provide high quality information and guidance as a follow up.

The three briefings are *Profiting from Cleaner Production - Short Presentations for Senior Executives*:

- For business leaders or owners of enterprises who might consider investing in Cleaner Production CP Exec 1.
- For senior executives of banks and other financial institutions who might fund Cleaner Production projects CP Exec 2.
- For state and local government officials who can promote or directly support investment in Cleaner Production CP Exec 3.

### Four Skills and Capacity Building Courses

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Four longer skills and capacity building courses, two introductory and two advanced have been designed for:

- Enterprise managers wishing to know more about Cleaner Production processes.
- Enterprise managers developing a Cleaner Production project proposal.
- Accountants preparing a Cleaner Production project application for funding.
- Banks' credit officers and others who must assess and approve Cleaner Production funding applications.
- Consultants assisting enterprises in developing Cleaner Production programmes or projects.

The two Introductory Courses are:

- *Introduction to Cleaner Production Concepts and Practice CP1*
- *Introduction to Capital Budgeting and Funding of Capital Projects CP2*

and the advanced courses are:

- *Profiting from Cleaner Production CP3*
- *The Cleaner Production Investment Process CP4*

All four courses have been pilot run and then fully presented and adapted by the five countries. It is from these courses that the wider training events such as Distance Learning described later have been developed.

A summary of all seven courses is given in **Annex 1**.

### Other Audiences

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Selected material from these courses would be also suitable for adaptation to present to:

**Facilitators** These include executives and officials of organizations which can facilitate Cleaner Production investments such as Academic Institutions, Industry Associations and Non-Government Organizations.

**The Media** The media, press, radio and television, are both receivers and providers of knowledge and form a very important link between all other parties.

The media require access to:

- Knowledgeable people
- Current knowledge and application of Cleaner Production
- Examples of good and less good applications
- Information on important events, including training activities
- Research papers, which they can use or quote from

In exchange they provide:

- Wide exposure both to good and bad practice
- Publicity on developments and key events
- Outlet to influence behaviour in improving production methods

## **B** Other Training Support

### **1. Profiting from Cleaner Production: Towards Efficient Resource Management – Illustrative Booklet**

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This 8 page illustrative booklet highlights the business case for Cleaner Production, primarily to business decision-makers, but also to financiers and government officials. It conveys in a clear and concise manner the Cleaner Production message, values and objectives, also by illustrating available tools, techniques and main actors in this field.

### **2. Profiting from Cleaner Production: Checklists for Action – Practitioner Checklists**

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A separate guide of checklists has been developed. These checklists help in the four phases of Cleaner Production:

- Identifying the barriers to Cleaner Production;
- Implementing Cleaner Production investment projects;
- Investment decision-making;
- Applying for and securing project finance.

### **3. Training Techniques Guide**

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The aim of the short guide is to:

- Provide guidance in adapting the event-based courses for particular audiences.
- Provide a reference when deciding on the best approaches and techniques for the presentation of the training courses.
- Act as a guide before, during and after training sessions.

The content of this guide is given in Annex 3 and the whole document is on the United Nations Environment Programme (UNEP) web site on Cleaner Production Financing.

<http://www.financingcp.org>

### **4. Online Information**

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The website for the UNEP Cleaner Production Financing Project that funded development of these courses has the full content of all training courses including slides, the Training Techniques Guide and information about other Cleaner Production Investment activities.

The United Nations Environment Programme (UNEP) web site on Cleaner Production Financing: <http://www.financingcp.org>. The same is accessible through the UNEP DTIE Cleaner Production general web site <http://www.uneptie.org/cp>.



## Selecting the Appropriate Training Approach and Support Materials

The following matrix proposes matching probable audiences referred to above with the available training courses and support materials.

Audience or Trainees		Training Events or Courses	Profiting from Cleaner Production: Towards Efficient Resource Management	Profiting from Cleaner Production: Checklists for Action	Distance Learning	UNEP DTIE website
<b>Short Courses</b>						
Executive Management or Proprietors of Enterprises	CP Exec 1	Yes				
Executive and Senior Management in Banks and Financial Institutions	CP Exec 2	Yes				
Senior Officials in Public Sector Ministries or Agencies	CP Exec 3	Yes				
Executives of Trade Associations or Professional Bodies	CP Exec 1	Yes				
Media	All	Yes				Yes
<b>Longer Courses</b>						
Managers in Enterprises including Financial Managers and Accountants	All	Yes	Yes	Yes	Yes	Yes
Technical and Financial Staff in Public Sector Ministries or Agencies	CP1, CP2 and CP3	Yes	Yes	Yes	Yes	Yes
Banks and Financial Institutions – Loan and Credit Officers	CP1, CP3 and CP4	Yes	Yes	Yes		Yes
Consultants and Field Staff in Consulting Practices	CP1, CP3 and CP4	Yes	Yes	Yes		Yes
<b>Additional Courses</b>						
New Trainers	CP1 to CP4	Yes	Yes	Yes	Yes	Yes
Students	CP1 to CP4	Yes		Yes	Yes	Yes

## D Distance Learning Programme

### Concepts

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Selected material will be available in a format suitable for those who would like to study towards a longer certified training programme and cannot attend event based training courses.

Such programmes could take two forms:

- A mix of event based and distance learning courses.
- A pure distance learning programme.

### Mix of distance learning and limited event

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This could take the following format:

#### A) Pre-registration seminar or workshop

This could be a voluntary half-day event, at which the participants would take part in an "Introduction to CP and CP Investment Options".

- This course would use parts of CP1 and parts of CP4 with our Level 1 Guide and Level 2 (local material supplement) as support.
- Individual banks and public sector departments could be asked to nominate persons for this course.
- The course would be given by trained trainers, or one of the staff of a Cleaner Production Centre.

Following the workshop the participants could then decide whether they wanted to register to complete the DLP full study course.

#### B) The distance learning course itself

This course, to be completed in within a period of two months, would require the "student" to complete:

- A background reading course.
- Use and complete selected checklists on-the-job, using past loan applications from their bank or department as studies.
- Submit a short paper on the application of the Checklist and other techniques and the issues highlighted during their use.

#### C) Individual student interviews and final study sessions

This evaluation and review session would involve:

- The review of the work completed by each student participant.
- A half-day revision event, in which the DLP would be reviewed, questions answered, advanced issues covered and other guides distributed.

#### D) Accreditation

A duly performed certificate or some other accreditation could be awarded to completing participants, together with a letter to their bank or department, confirming the completion of the DLP.

### Pure distance learning programme

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#### A) The distance learning course itself

This course to be completed in within a period of six months, would require the "student" to complete:

- A background reading course.
- Use and complete selected checklists on-the-job, using past loan applications from their bank or department as studies.
- Submit of a short paper on the application of the primers and the issues highlighted during their use.

#### B) Individual student interviews and final study sessions

This evaluation and review session would involve:

- The review of the work completed by each student participant.
- A half-day revision event, in which the DLP would be reviewed, questions answered, advanced issues covered and other guides distributed.

#### C) Accreditation

A duly performed certificate would be awarded to completing participants, together with a letter to their bank or department, confirming the completion of the DLP.

## Annex 1 Details of Event Based Training Courses

### A. Format of Executive Presentations or Briefing

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Each presentation lasts one hour and takes the following format:

1. Introduction and objectives by presenter;
2. Slide based presentation illustrating:
  - What is Cleaner Production, with examples;
  - Relevance to the roles and responsibilities of the audience;
  - Opportunities of Cleaner Production;
3. Observations or questions time;
4. Distribution of the booklet Profiting from Cleaner Production: Towards Efficient Resource Management;
5. Thanks and close.

The three presentation briefings have their own guide as to key objectives and how to run the sessions.

### B. Longer Introductory Education and Skills Modules

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These courses are a combination of slides base presentations, group discussion, case studies, and exercises/ games/quizzes.

Each course can be adapted for specific countries:

- Case studies used to illustrate the various topics;
- The types of costs that tend to be the most important (e.g., might be energy costs in one country, water costs in another...);
- Types of cleaner production technologies typically available;
- Accounting practices;
- Legal guidelines for equipment depreciation and income tax calculations;
- The use/value of different profitability indicators in different types of economic systems (e.g., less vs. more market-led) and economic conditions (e.g. low vs. high inflation periods);
- Description of sources of funding typically available.

#### CP1: Introduction to Cleaner Production Concepts and Practice

Length - 7 hours over 1 day

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CP1 is an awareness-raising course on the cost of waste and the benefits of Cleaner Production for three main stakeholders: industrialists, financial institutions and the public sector.

##### Topics:

- Environmental strategies, from reactive to proactive;
- The cost of waste;
- Cleaner Production practices;
- Cleaner Production benefits and barriers;
- Cleaner Production procedures;
- Cleaner Production benefits for governments;
- Cleaner Production benefits for financial institutions;

##### Case studies

Four real case studies are provided for review and discussion among the participants after the slide presentation. These are from different countries and different business sectors and illustrate the economic value of CP investment projects.

#### CP2: Introduction to Capital Budgeting and Financing of Capital Projects

Length - 7 hours over 1 day

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CP2 covers two main topics - Capital budgeting and financing of capital projects. This course, or familiarity with the topics covered in it, are prerequisites to taking CP4.

##### Topics

- Investment projects
- Investment projects and company value
- Typical project types & goals
- Capital budgeting

- Capital budgeting definition and main implementation steps
- Cost identification
- Estimating project profitability with Net Present Value (NPV)
- Time value of money & discounting
- Alternative profitability indicators: NPV, IRR, Payback
- Project financing
- Discussion of course participant experiences with project financing
- Types of investment and financing decisions
- Different types of funding sources
- Bank information requirements
- How to demonstrate credit-worthiness

#### **Case study**

The case study is a real electroplating company named Acme for the purpose of the course. Throughout the course participants will encounter three group exercises on cost identification and estimation for a Cleaner Production project.

### **CP3: Profiting from Cleaner Production**

Length - 14 hours over 2 days

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CP3 covers in more detail the same two topics as CP1 The Cost of Waste and Cleaner Production with the addition of Cost Identification and Estimation and Project Profitability Assessment.

#### **Topics**

- The cost of waste and Cleaner Production
- Cost identification and estimation
  - Review of conventional cost accounting practices and systems (e.g., classification of costs as fixed or variable, use of cost centres, allocation practices, scope and nature of data captured and processed, etc.)
  - Cost data that may not be readily available from the accounting records - with a focus on CP-relevant cost data (e.g., costs hidden in overhead accounts, opportunity costs, future costs, less tangible costs, etc.)
  - Other data collection, estimation, and processing approaches (e.g., original data records, mass balances, vendor expertise, ABC, etc.)
- Capital budgeting:
  - Basic cash flows of capital projects
  - The time value of money and related concepts
  - Sensitivity analysis
  - Key profitability indicators: NPV, IRR, Payback period...

#### **Case study**

The case study for CP3 is a printing company named PLS, carrying out a CP investment project for which the participants will conduct a profitability analysis. It is recommended participants bring a calculator to the course.

### **CP4: Cleaner Production Investment Process**

Length - 14 hours over 2 days

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This course is designed to help participants prepare a 'bankable proposal' - i.e. a proposal for CP investment project financing to which a banker or other potential financier could be expected to give serious consideration. It also provides notions on sustainable banking and eco-criteria for decision-making for bankers.

#### **Topics**

- Appreciate the variety of types of potential investments in CP and other projects through the exchange of experiences with other participants
- Be aware of and understand the factors which are likely to be considered by prospective financiers in evaluating the economic feasibility of potential projects
- Integrate these factors with the financial evaluation in order to construct and present a "bankable proposal"
- Understand the need for and various methods of post-funding control of projects, and the potential role of accountants in the process
- Be aware of new banking trends towards sustainable banking and eco-criteria for investment decision-making

#### **Case study**

The case study is a real electroplating company named Acme for the purpose of the course, the same company used in CP2. Throughout the course participants will encounter three group exercises:

- **Part 1** is the main activity in the course, and asks participants to prepare, in small groups, an application for finance on behalf of the company, addressed to a bank. On the course, this will be presented to the banker who has been recruited to participate in this way, for him/her to evaluate each group's application and provide feedback on it and suggestions on how the applications could be improved.
- **Part 2** asks participants, again working in small groups, to consider other possible sources of finance as an alternative to a commercial bank, to select one particular source, and make suggestions on how Acme could make an application to it.
- **Part 3** asks each group to plan for the implementation and subsequent management of the project

#### **Arrange for a banker to participate**

- The banker will be required to attend the course on the afternoon of Day 1 and the morning of Day 2, as a minimum (but can attend for longer if he/she is able to).
- The individual invited should be someone with experience in assessing and deciding on applications by firms for project finance.
- The appropriate person will usually be from a commercial banking background, but this depends on particular national circumstances and which are the most important sources of project finance for firms in the particular country.
- Get a firm commitment in writing from the banker that he/she will in fact attend, and that if unforeseen circumstances make this impossible he/she will provide a replacement.

## **Annex 2** Profiting from Cleaner Production: Checklists for Action

### **A - Barriers to Cleaner Production checklist**

#### **B - Cleaner Production implementation checklists**

B1 - Scope for Cleaner Production

B2 - Cleaner Production enterprise strategy options

B3 - Government intervention to promote Cleaner Production investment

#### **C - Cleaner Production investment proposal checklists**

C1 - Cleaner Production investment data sources

C2 - Cleaner Production investment decisions: Detailed cost checklist

#### **D - Cleaner Production funding checklists**

D1 - Funding options

D2 - Funding application format

D3 - Checklist for bankers on Cleaner Production issues

D4 - Information needs of banks and credit institutions when evaluating applications for finance

D5 - Checklist for credit officers on Cleaner Production issues

D6 - Risks in lending to smaller businesses

### **E - Complementary tools for further improvement of environmental performance**

## Annex 3 Training Techniques Guide

### Objective of the Guide

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The aim of this manual is:

- To provide a written reference and guide on the study and practice of selected adult training approaches appropriate to Cleaner Production.
- To develop the training skills of the trainers required to deliver the training courses.
- To act as a reference during training sessions.

### Contents

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#### A - Introduction

1. What is learning?
2. What is training?
3. Techniques used in Cleaner Production Training:
  - Presentation including the use of Slides;
  - Discussions Questions;
  - Case Studies;
  - Use of Experts;
  - Self-Learning Courses.

#### B - Designing or Adapting Training Courses

- Determine the level of knowledge and skills required by the participants;
- Set the training objectives;
- Design the appropriate course or programme;
- Design and write individual modules or sessions;
- Determine the performance criteria by which the success of the training will be measured.

#### C - Running the Training Course

- Course Accommodation and Equipment;
- Participants Registration and Welcome;
- Running the Course;
- Evaluating the Results.

#### D - Appendices

- Example of Course Needs Analysis;
- Example of Course Marco Design;
- Sample Assessment Forms.

The Trainer Techniques Guide is available in pdf format in the CD-ROM, or for download on the Internet at the following address:

<http://www.uneptie.org/cp>

## For further information

### Training material

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To meet training needs, various types and sources of assistance have been developed:

***Profiting from Cleaner Production: Short presentations for senior executives***

Awareness-raising modules for senior executives, in the form of 45- to 60-minute briefings

1. ***Companies*** CP EXEC 1 – for business leaders
2. ***Financial Institutions*** CP EXEC 2 – for bank executives
3. ***Government Agencies*** CP EXEC 3 – for government officials

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***Profiting from Cleaner Production: Resource Kit for Training***

Training modules designed for different audiences and events (on CD ROM)

1. ***Introduction to Cleaner Production Concepts and Practice*** CP 1 – 1 day introductory programme
2. ***Introduction to Capital Budgeting and Funding of Projects*** CP 2 – 1 day introductory programme
3. ***Profiting from Cleaner Production*** CP 3 – 2 day skill development programme
4. ***The Cleaner Production Investment Process*** CP 4 – 2 day skill development programme

A Trainer's Guide accompanies the programmes. ISBN 92-807-2201-8

***Profiting from Cleaner Production : Towards Efficient Resource Management***

8-page illustrated booklet. ISBN 92-807-2199-2

***Profiting from Cleaner Production: Checklists for Action***

A set of checklists for businesses, government, and banks to facilitate financing Cleaner Production investments. ISBN 92-807-2202-6

### Websites

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UNEP/DTIE Cleaner Production:  
[www.uneptie.org/pc/cp](http://www.uneptie.org/pc/cp)

UNEP/DTIE Cleaner Production Financing:  
[www.financingcp.org](http://www.financingcp.org)

United Nations Industrial Development Organization:  
[www.unido.org](http://www.unido.org)

Sustainable Alternatives Network (SANet):  
[www.SustainableAlternatives.net](http://www.SustainableAlternatives.net)

### Cleaner Production-related publications

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***Cleaner Production: A Guide to Sources of Information*** The fourth edition of a popular resource showing where and how to find organizations, publications, electronic resources, training courses, etc., on Cleaner Production. ISBN 92-807-1696-4

***Financing Cleaner Production: A Study on Past Investment Practices*** The results of the first phase of a UNEP project on strategies and mechanisms for promoting Cleaner Production investments in developing countries. ISBN 92-807-1951-3

***International Declaration on Cleaner Production*** The implementation guidelines for signatories include more than 300 activity suggestions to assist in implementation of the six principles in the declaration. Three volumes. Companies: ISBN 92-807-2094-5; Government: ISBN 92-807-2093-7; Facilitating Organizations: ISBN 92-807-9095-3

All publications can be ordered online at [www.earthprint.com](http://www.earthprint.com)









This document is a summary of a comprehensive series of training courses developed by UNEP DTIE to promote the integration of preventive strategies and efficient resource management into investment decision-making processes. The objective of this Guide is to:

- Summarize the format and the content of these courses
- Provide future trainers with guidance on using and presenting the material
- Provide guidance to trainers who may wish to adapt the material for different training objectives

A variety of information and advice is available from the United Nations Environment Programme at:

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