

# **ESP- Cleaner Production Implementation with Environmental Compliance Office (ECO) Support**

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It is important for any enterprise to reduce its waste of resources and lift its productivity. By doing so it will save energy (electricity, fuel), water (and waste-water) and in many cases also raw materials. At the same time the Occupational Health and Safety (OHS) situation will be improved and the enterprise will be a safer and better workplace.

The environmental impacts will be reduced due to the savings in materials and the reduction of waste. In most cases savings of 40-60 % in energy and water consumption can be achieved in the processes involved without investments or with very small investments. After the implementation the enterprise will have learned to work with environmental management and will be able to continue the work with improvements on its own.

The role of ECO and the consultant will be to plan, guide, help, inspire, maybe do the paperwork and push. The steps and the input from ECO are planning, good housekeeping and low cost/no cost options, conduct Environmental Management System (EMS), staff training, full environmental assessment, access to soft loan (Pilot project), workshops, and possibility for access to larger soft loans.

## **INTRODUCTION**

The Government of Egypt and the Government of Denmark initiated in 2001 the Environmental Sector Programme (ESP) in Egypt.

ESP is a six years framework for a broad assistance to national efforts within environmental management.

ESP is supported by Danish International Development Assistance (Danida)

Activities concerning industrial activities are implemented through Federation of Egyptian Industries (FEI) in the ACI component (Achieving Compliance in Industry) of the ESP.

The component supports the industry in improving compliance with environmental regulations through Cleaner Production (CP). CP is the combining term used to describe cleaner technologies involved, end of pipe abatement and good environmental management. But most of all through implementation of low- cost high- impact improvements in the daily work.

The ACI component has established an office in FEI which is called Environmental Compliance Office (ECO) with three co-ordinators serving four industrial sectors to work with in the first phase: Textile industry, food industry, engineering and metallurgical industry.

The focus is strongly on implementation in industry and less on producing more reports and guidelines.

The ECO will facilitate and support implementation of Cleaner Production and environmental management in more than 90 small and medium size (SMEs) enterprises by:

- Supporting the selected enterprises with consultancy
- Arranging workshops for industry
- Participate in training of factory staff
- Support investments in CP by grants or soft loans

The consultancy service will be given by selected Egyptian consultants supported by Danish specialists.

By selecting the geographical areas to work with, ECO has taken into consideration the previous CP-efforts of other donors, the activity of other ESP components and the obligation to maximise the effect on poverty alleviation and gender issues.

All industries that enter the CP implementation with ECO will have access to soft loans of max. LE 80.000 for smaller CP investments. Enterprises performing well will have access to larger soft loans for more capital-demanding investments.

Industries will benefit by the programme by having access to state-of-the-art CP-options and investment support. A certain financial contribution from the industry to have access to the programme is expected.

ECO will select enterprises with a high management commitment to work with CP. Implementing CP will guarantee that these enterprises will be very successful in saving resources and reducing their environmental impacts- saving money.

## **PHASES OF WORK WITH THE ENTERPRISES**

### **Introduction seminars:**

The first activity in a new geographical area will be a seminar with the purpose of introducing ECO and the idea of CP to the local industry.

All relevant SMEs in the area will be invited.

Based on interest demonstrated after the introduction seminar a number of enterprises will be selected for screening.

### **Screening:**

The purpose of the screening, which takes ½ day and is done by ECO staff, is to get an overall picture of the factories suitability to participate in the activities.

We will look at:

- Management interest and commitment
- Environmental impacts
- Options for CP
- General situation for the company

and collect as many relevant data as possible concerning production, raw materials, energy and water usage as well as environmental impacts.

Based on the screening, ECO will decide whether the company should be invited to continue. The factory input will be max. 4 hours from preferably the general manager.

**Pre-assessment:**

The pre-assessment will be done by local consultants in close co-operation with ECO staff and include one or two visits to the factory.

The purpose is to get a more detailed picture of the same issues that we touched during the screening with a special emphasis on the environmental issues and identification of CP options.

The factory will receive a short report with the findings from the pre-assessment.

The factory input will be 6-8 hours input from general manager, production manager and/or technical manager.

**Full assessment and implementation:**

The purpose is to implement relevant CP measures and a simple environmental management system. The work will take 6-12 month depending on the intensity of the effort.

The factory will receive 15-25 man-days of consultancy input from local consultants and ECO staff.

If needed training programme for managers and staff may be carried out.

The factory will have access to a soft loan of max. LE 80.000 for small environmental investments (monitoring equipment etc.).

The factory input will be significant if the implementation is to be successful. The top management should follow the progress and take the necessary decisions and promote the effort.

Middle managers should be available for discussions with consultants and for doing their own part of motivation and follow up. The whole staff may have to allocate a few hours for training.

**Sector model projects:**

Some of the most successful factories will have access to large soft loans (LE 1-2 mio.) to purchase equipment to improve the environmental performance.

**Financial implications:**

The implementation of CP will result in a significant saving of costs in the factories.

The screening and the pre-assessment are free of charge.

For the full implementation we anticipate that the factories will cover a part of the expenses.

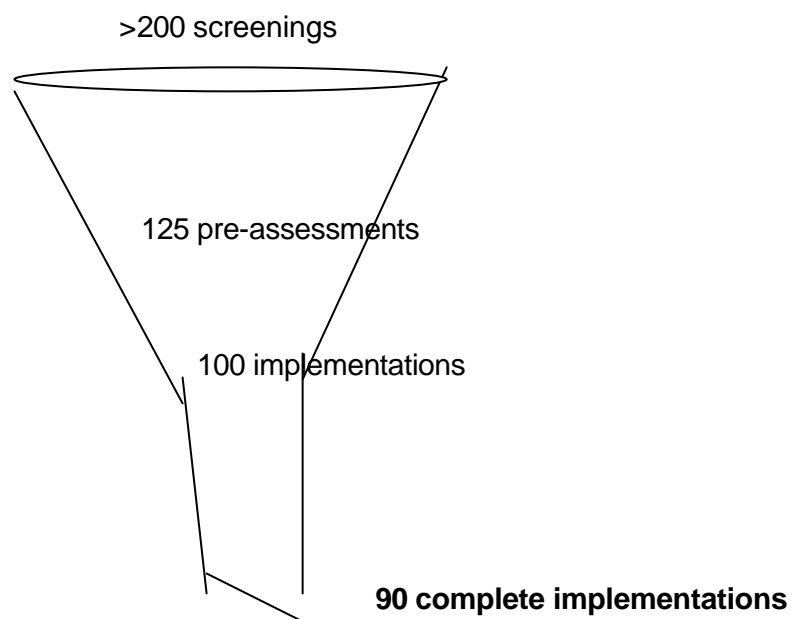
This will be negotiated in each individual case. The typical payment could be in the area LE10-15.000.

**The funnel approach**

ECO finds that strong commitment from management is conditional for a successful implementation. For this reason it is expected that a number of enterprises will be "lost" during the process.

The process can be illustrated with a funnel:

Funnel approach:



## **IMPLEMENTATION PHASE**

### **Target**

The successful implementation will result in the following:

The enterprise will reduce its waste of resources and lift its productivity.

By doing so it will save energy (electricity, fuel), water (and wastewater) and in many cases also raw materials.

At the same time the OHS situation will be improved and the enterprise will be a safer and better workplace.

The environmental impacts will be reduced due to the savings in materials and the reduction of waste.

In most cases savings of 40-60 % in energy and water consumption can be achieved in the processes involved without investments or with very small investments.

After the implementation the enterprise will have learned to work with environmental management and will be able to continue the work with improvements on its own.

## **Principle**

The principle for the implementation is:

The only ones who can implement anything at all in an enterprise are the management and the staff.

The role of ECO and the consultant will be to plan, guide, help, inspire, maybe do the paperwork and push.

## **The steps and the input from ECO during implementation:**

### **1. Planning**

The consultant will assist the enterprise in the formation of a project organisation (may be just one person) and assist with the draft of a work plan.

### **2. Good housekeeping and low cost/no cost options**

The consultant will point out the options for savings by reducing waste and improving normal working methods.

The consultant will help the enterprise with implementation of the improvements.

The consultant will help the enterprise draft an action plan to control the progress of the work

### **3. Environmental management system**

The consultant will assist the enterprise to establish a simple, non-bureaucratic EMS that will facilitate the daily work with environmental issues. The EMS will also be a good help in the relation to environmental authorities. These will realise that the enterprise has structure and plans to work in the direction of compliance with the law.

The EMS consists of minimum 4 elements:

- An environmental policy (Management commitment to do environmental improvements, one page).
- Monitoring plan (A description of what is measured, how, when and by who and how the results are communicated to the relevant people, - table: one –two pages)
- Action plan (A description of the activities decided by the enterprise included a plan for who does what and when, - table: one –two pages)
- Management review (A quarterly meeting where management checks the progress, assesses the monitoring results and sets the plans for the following period, one page).

With these 4 elements the enterprise will be able to conduct its environmental work – also after the consultant has left. And the documentation will be a great help in negotiations with the environmental authorities.

This skeleton can be developed further if the enterprise wishes so- it can even be developed to ISO 14.000 level.

#### **4. Staff training**

To support the effort of implementing good housekeeping we suggest that all staff receive a short training in this topic.

The training may be based on video-recordings from the enterprise showing what to do and what not to do.

The video-based training will take place in-groups of max. 30 persons and will take app. one hour per class.

ECO will supply the edited video recording and the trainer.

The video belongs to the enterprise for later use and will of course be considered as confidential by ECO.

#### **5. Full environmental assessment**

The pre-assessment report has pointed out a number of options for improving the environmental performance and economy of the enterprise.

Based on the enterprises own prioritisation, the consultant will do an analysis of one or two of these options- complete with cost benefit analysis and investment calculation. This work will be reported in a report that is enterprise property.

#### **6. Access to soft loan. (Pilot project)**

By participating the enterprise will get access to a soft loan of max. LE80.000 for small investments or monitoring equipment with the purpose to improve the environmental situation. The loan will be free of interest (0%), there is no collateral and the pay back can be negotiated.

#### **7. Workshops**

During the implementation period ECO will arrange a number of workshops. The topics will be technical options for environmental improvements in the sectors, good housekeeping and implementation of EMS. Hopefully it will be possible to present case stories from successful implementations and hopefully there will be a free exchange of experience between the participating enterprises.

The enterprises will be free to send as many participants as wanted to the seminars.

#### **8. Possibility for access to larger soft loans**

In each sector 5-10 enterprises will be selected to receive demonstration projects.

This means that the enterprise will get access to a much larger soft loan (up to LE3mio.) to support investment in Cleaner Production. The conditions will be the same as mentioned in section 6.

### **ECO SUSTAINABILITY**

The Danida support to the ESP will come to an end in 2008-09.

ECO at FEI will, however, continue its activities after that time. ECO has the plans and the resources to be a key player on the environmental scene in Egypt, acting in the role as the most important mediator between the industry and other environmental stakeholders.

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## **DISCLAIMER**

The opinions and conclusions stated in this paper are those of the authors and do not necessarily represent those of DANIDA, EEAA, or any of the consulting organizations associated with the implementation of ESP.

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