

Executive Summary

Introduction

The CP strategy aims at developing an integrated framework for implementation of CP in the Egyptian industry within the overall context of national policy. The document presents the concept of CP adopts the definition of the United Nations Environment Program (UNEP), which states that:

“Cleaner Production means the continuous application of an integrated preventative environmental strategy to processes, products and services to increase efficiency and reduce risks to humans and the environment”

The document presents the benefits as well as the barriers facing the effective implementation of CP on a wider scale.

The CP strategy is mapped out to encourage the adoption of CP in the Egyptian industry sector and to establish, mainly by the Egyptian government, an enabling environment that would facilitate and promote its implementation by the Egyptian industry. Therefore, the primary target organizations for the CP strategy are the various governmental organizations as a result of their competency to overcome barriers and solve problems confronting the implementation of CP. This implies a pivotal role for the Ministry of Industry and Technology and the Egyptian Environmental Affairs Agency. However, the success of the implementation of the strategy and action plan is greatly dependent on the cooperation and partnership of the Egyptian industries which are the actual implementers of the required measures. In this regard, the Federation of Egyptian Industries plays a key role as the institutional umbrella of the Egyptian industries.

Scope

The main focus of the strategy and action plan is the industrial production processes. This is mainly because the industrial sector in Egypt contributes to about 20% of the Egyptian GDP and employs approximately 15% of the workforce. Moreover, it is a source of various and high environmental impacts. The scope of the strategy and action plan encompasses the manufacturing processes and other related internal activities including on-site recycling and reuse of waste. Although off-site recycling of generated waste addresses an important environmental problem, it comes as a second phase to waste prevention and is not part of the issues addressed by this strategy together with the end of pipe treatment practices that should be considered as a last resort after CP to achieve legal compliance and minimize the adverse impacts on the environment.

The strategy and action plan do not only focus on large industrial establishments, as some action items are also applicable to small and medium enterprises (SMEs). Targeting SMEs is especially critical since establishments having less than 50 employees represent more than 99% of industrial establishments in Egypt.

It does not, however, address issues related to the deep-rooted financial problems facing large state owned industrial establishments, nor the illegal status of unregistered SMEs to which CP concept would be applicable. These issues would require political interventions of a different nature outside the scope of the document.

Vision and Goal

Cleaner production contributes significantly in realizing two main national visions corresponding to the aims of the political leadership; the modernization of Egyptian industry to improve the quality of life with industry being the engine towards that end as well as sustainable development achieving a healthy environment for the current and future generations.

“ By the year 2022, Egypt is to become a leading industrialized country in the MINA Region (Middle East and North Africa) being an investment magnet in the region and is positively integrated in the world economy.” (*Green Paper of Industrial Policy in Egypt, 2003*)

“Egypt is also to balance between its economic and industrial development needs and at the same time strive to overcome the environmental challenges resulting of such developments. This is to be carried out within the implementation framework of the Egyptian Agenda 21” (*NEAP, 2002*)

Within this context the goal of the CP strategy is:

“The performance of Egyptian industries is improved to become in line with current international developments through the wide and accelerated adoption of CP in the Egyptian industries”.

Goal Indicators

The main indicators for realizing this goal is the continuous improvement in material efficiency. This means decreasing specific consumption of input materials, as well as decrease of the generated waste for unit production. The quantitative targets set according to the national benchmarking of industries determine the extent of improvement. Therefore a fundamental and crucial activity is to identify the current status of Egyptian industry and compare it with international norms.

The performance indicators would be calculated for each industrial sector based on the inputs and waste characterizing this sector, with particular focus on priority areas which are mainly related to scarcity of resource and/or the degree of hazard of the generated waste. Taking into account the wide range and various characteristics of the different industries, one overall indicator can not be developed for the Egyptian industry sector as a whole.

It is worth mentioning that ISO 14001 is selected as an indicator for realizing the goal, although its nature differs from the other indicator types. This is mainly because

the adoption of EMS in the establishments should reflect a deeper change in attitude which should support sustainability and continuity of the adoption of CP. Although ISO 14001 is not the only possible one of such systems, it is certified and hence information for indicator calculation is available and accessible. Moreover, the number of certified establishments is expected be proportional to the number of establishments implementing environmental management systems.

Policy Statement

Currently, there is no Egyptian policy on cleaner production. However, previous experience shows that declaration of commitment from top officials in Egypt, on similar high profile concepts, have been effective in bringing the issues of interest to the forefront of the community interest. Therefore, signing the international CP declaration by the Prime Minister would ensure the flexibility of its implementation. The declaration is a voluntary public statement of commitment, thus there is no legal commitment on Egypt for signing it but rather an ethical commitment. The policy statement would pave the way for implementing the strategy for which the framework is developed.

The Strategy

Achieving the objectives of the strategy depend on various tools that contribute to overcoming different barriers facing the implementation of CP and establishing encouraging environment for its adoption in the Egyptian industry sector. The use of the legislative, financial and the awareness tools correlates with various issues the most important of which is the difference in nature and status between the existing and the new industrial establishments.

- **Prerequisites**

There are a number of requirements that are essential for the operationalization of the strategy. These include improving the efficiency and effectiveness of enforcement activities, improving public disclosure of pollution information and increasing the enforcement likelihood to industry. These are applicable for new as well as for the existing establishments. However, the main difference between both types of establishments lies in the integration of CP in the existing regulations. Whereas the new establishments are required to comply with the relevant regulations during the early phases of the project development (during design and EIA preparation), the existing ones will need certain legislative transition arrangements and financial support to be able to carry out changes.

- **Approach**

The approach adopted in the document is summarized as follows:

- Addressing the attitude of industries towards compliance and overcoming the technical and informational barriers
- Relying on positive incentives as a first stage
- Turning to disincentives as second stage

- Use of the legislative approach to differentiate between new and existing establishments to support positive trends rather than initiate them.

In due time, the evolving legislation will become pivotal for CP activities in Egypt, in the sense that it should be preceded by certain activities to prepare for its adoption and followed by others that facilitate its implementation. This would achieve the correlation between the continuous evolution of the legislative requirements and the industrial performance.

A delay in reaching the legislative stage would result in dealing with all types of establishments following the suggested approach for existing ones. This has the main disadvantages of a slow rate of progress and the need for intensive resources in order to move industries in its direction.

The improvement of the Egyptian industry's performance is to be accompanied by a similar improvement in planning methodologies. The benchmarking of industries should reflect on the targets to be achieved in the relevant legislations. With accumulating and documenting the implementation experiences focus could be put on a number of tools which proved to be more effective in achieving the goal.

• Objectives

The objectives leading to realizing the goal of the strategy are:

- The Performance of New Industrial Establishments exceeds National Average Performance
- Existing Industrial Establishments Progress towards Cleaner Production within a specified timeframe
- The Share of Clean Products Increase Continuously on the Local Market
- Industrial establishments bear increasing percentage of actual costs of input material and services
- The Necessary Knowledge is available
- The Required Technical Capacities is available

• Action Plan

For each of the objectives, corresponding action items are identified and categorized into immediate, short and long term action items. For each action item the lead, support agencies are identified.

An action plan is currently being developed for selected immediate action items, for which time frame for implementation is determined as well as the required resources means of verification and potential risks.

The following table summarizes the different objectives and the corresponding action items categorized into immediate, short and long term action items, based on set criteria including:

- Existing of capabilities and organizational framework within which implementation and be carried out
- Availability of ongoing stakeholders' activities interested in carrying out such activities
- Existing of favorable implementation conditions.

Lead and Support Agencies for Implementation of Action Items

(● denotes a lead agency, while o denotes a support agency)

	Action Items	Entities Involved in the Implementation of the Action Items										
		EEAA	Ministry of Electricity	Ministry of Industry	Ministry of Finance	Ministry of Petroleum	Ministry of Foreign Trade	FEI	Ministry of Scientific Research	Ministry of Planning	Cabinet of Ministers	Other major stakeholders
Immediate term	1. The Performance of New Industrial Establishments exceeds the National Average Performance											
	1.1 Establishing Public Recognition Schemes	●		o			o	o				NGOs
	1.2 Modifying EIA Guidelines to Include CP Practices	●										Local Administration/ Technical service providers
Short term	1.3 Adoption of CP Practices in Applicable Regulations	●		o		o		o				Other regulators
	2. Existing establishments progressing towards CP within specified time frame											
Immediate term	2.1 Increase Awareness of Upper Industrial Management concerning CP practices	o		●		o		●				Training providers
	2.2 Establishing Public Recognition Schemes	●		●				o				NGOS
	2.3 Facilitating Access to Available Funds	●						o				
	2.4 Capitalizing on International Agreements	●		●		o		o				Ministry of Foreign Affairs
Short term	2.5 Negotiate Transitions with Industrial Sectors	●		●				●				Other regulators
	2.6 Supporting CP Technical Studies and Audits	o		●								Service providers/ Banking sector
	2.7 Compliance Agreements to Encourage Facilities to Adopt CP	●						o				Other regulators
Long term	2.8 Fiscal Incentives for Technology upgrading in Egyptian industry			o	●			o				Central Auditing Agency/ General Authority for Investment
	3. The Share of Clean Product Increases Continuously on The Local Markets											
Immediate term	3.1 Raising Public Awareness about Benefits of Clean Products	o		●				o				NGOs
Short term	3.2 Establishing a Local “Eco-label” Scheme	o		●			o	o				NGOs
	3.3 Developing National Environmental Standards			●			o	o				
Long term	3.4 Government procurement policy			o	●			o				
	4. Industrial Establishments Bear Increasing Percentage of Actual Costs of Input Material and Services											
Short term	4.1 Use Economic Instruments	●	o	o	●	o		o		●	●	Ministry of Labor
Long term	4.2 Economic Pricing of Inputs		o	o	o	o		o		●	●	Ministry of Housing
	4.3 Recovering Full Costs of Services			o	o			o		●	●	Other regulators/ Ministry of Housing
	5. Availability of the Necessary Knowledge											
Immediate term	5.1 Establishing a CP Clearinghouse	o		●		o		●	o			Technical service providers
	5.2 Implementing Selected Demonstration Projects	●		●				●				Local Administration/ SFD
	5.3 Knowledge dissemination	●		●				●				
Short term	5.4 Encouraging Local Targeted Research	●		●				o	o			
	5.5 Extension Services for SMEs	o		●				●				Local Administration/ SFD/ Technical service providers
	6. Availability of the Required Technical Capacities											
Immediate term	6.1 Establishing CP Training Facilities	o		●				o				Training Centres
Short term	6.2 Integrating of CP Concepts in Higher Education Curricula	o		o								Ministry of Higher Education/ Private Universities
Long term	6.3 Increasing The Availability of Skilled Technical Labor to Implement CP Practices			●								Ministry of Labor (Labor University/ Ministry of Education (technical education institutes)

Institutional Arrangements

- **Core organizations**

Central to the successful implementation of this strategy and action plan is the availability of an organization, or a core group of organizations, who would act as a champion for the document. This entails seeing it through to implementation phase, monitoring the implementation progress, and collecting feedback from the industry. Seeing into the roles of the lead and supporting agencies in implementation of the different action items, it is proposed that such core group is to consist of the Ministry of Industry and Technology (MIT), and the Egyptian Environmental Affairs Agency (EEAA) both representing the policy making bodies of industry and environment respectively and the Federation of Egyptian Industries, presenting the institutional umbrella for the Egyptian industries. The necessity of such a core group does not reduce the importance of involvement of other concerned stakeholders.

- **Execution mechanism**

The cooperation mechanism between the core organizations does not have to involve establishment of a new organization to be responsible for implementing the strategy. Since a separate potentially isolated organization could be counter productive as it may involve further institutional arrangements to develop communication channels with the existing bodies. Therefore, it is recommended to establish a steering committee responsible for execution of the cooperation protocol signed between the core entities. The committee will play a key role in attracting resources and direct them towards implementation of the identified action plans as well developing norms and standards related to CP.

Additionally, a joined technical secretariat to be formed of the Ministry of Industry and Technological Development and EEAA, located in either organization, to be responsible for developing the details action programmes and follow up on the implementation of the action plan and its periodical update.

Currently, activities are undertaken for establishing the policy umbrella for CP implementation. These would entail elaboration of the draft CP cooperation between the core organizations. The current activities also include developing detailed description of the function of the steering committee and technical secretariat including staffing, possible funding sources and mode of operation.