



Small-Scale Industry and Cleaner Production Strategies

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Abstract

Cleaner, more cost-effective means of production may be particularly attractive to small-scale industries in developing countries, and research in India has shown that cleaner means of production could have promising results in reducing pollution at lower cost.

However, small-scale industries are limited in implementing cleaner production due to a variety of behavioural, organisational, technical and economic barriers. To successfully adopt cleaner production practices, the small-scale sector needs support, including technical and financial incentives, from political and non-governmental organisations. This requires better coordination of policy efforts and small business organisation, particularly because environmental improvements can be achieved through closer industrial interaction. Clean production measures that are favourable to economic development may be particularly attractive to small-scale industries in developing countries. Research in India has shown that these measures may produce promising results in reducing pollution levels at lower cost. However, small-scale industries are limited in their ability to implement cleaner production due to a variety of behavioural, organisational, technical and economic barriers. To successfully adopt cleaner production methods, the small-scale sector needs support, including technical and financial incentives, from political and non-governmental organisations. This requires better coordination of policy efforts and SME organisations, especially as environmental improvements can be achieved through closer industrial interaction.

Introduction

How can pollution from small-scale industries be controlled without jeopardizing their economic viability? This article discusses possible measures to curb pollution from small-scale industries in developing countries, with an emphasis on cleaner production strategies.

It is based on a research project on pollution control at a small-scale smelter in India. After introducing the economic importance of the small-scale industrial sector, an overview of contemporary principles of urban environmental management is provided. In this context, there is a need to develop pollution control principles for small-scale industries. We discuss the relevance of cleaner production for the small-scale industry sector in India and the need to mobilize support within the institutional framework of small-scale industries to improve their environmental performance.

Defining the small-scale sector

Any attempt to define small-scale industries must consider the relative nature of "small" and "large," and the related question, "What do we mean by small-scale?" There seems to be agreement in the current literature on small-scale industries as to the answer to this question.

The size of industrial enterprises, at least in developing countries, can best be measured by the number of employees. There is general agreement among authors on this issue regarding the number of workers employed in small scale industries.

Environmental impacts of small-scale production

Environmental pollution in many cities in developing countries increases rapidly.

This affects rivers, land, and air, creating health risks for city residents.

To mitigate these risks and promote further economic development, solutions to the problems of industrial pollution need to be found.

This situation calls for innovative and environmentally friendly technologies, policies and



management strategies.

Principles and instruments of pollution control policy

Effective and efficient environmental management requires a combination of policy instruments, including regulatory, economic and voluntary instruments.

Initially, environmental protection strategies in Western countries were restrictive, using regulatory instruments and economic incentives based on the "polluter pays principle". Industries have generally complied with environmental standards set by governments by using complementary technologies.

Small-scale industry and cleaner production

Many countries have only policies and strategies for the purpose of pollution caused by large - scale industries, but there are few consistent strategies and laws for special needs for small industries.

The approach recommended to reduce the impact of small industries on the environment can actually be considered.

Considering the industrial network

A change to cleaner production will probably not be easily applied within individual companies. The entrepreneur must be motivated and provided incentives by external actors.

Clearly, governments have an important role to play here. In addition, industry associations can provide codes of conduct and information, banks can provide financing, trade unions can mobilize worker effort, and research institutes can develop technology and provide training.

Towards a cleaner production strategy

Exploring the institutional context of Indian enterprises provides tools for developing strategies for green restructuring of the small scale steel sector. The next section presents the main elements of these support strategies.

Although only a small number of enterprises have been studied, and one has to be careful in generalizing the findings, some directions for pollution control of small-scale industry in developing countries can be derived.

Conclusion

It can be concluded that small businesses in developing countries contribute significantly to urban pollution and have little capacity to control pollution.

Strengthening environmental regulations alone will hinder the economic development of small businesses and slow down employment growth.

However, clean production measures are promising approaches for controlling pollution in a economically executable way, but is a small industry.

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