Expanding Public-Private Partnerships
Economic Competitiveness and Environmental Concerns in the Asia-Pacific Region
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Developing a Culture of Industrial Environmental Compliance: A New Approach to Strengthening Environmental Regulation and Compliance

Over the past decade, efforts to reduce industrial pollution in industrializing countries have focused on developing environmental institutions and legal frameworks, largely by establishing command and control regulations and market-based incentives. Overall, however, formal regulation, based on the OECD model, has not proven very effective by itself in reducing pollution in these countries—enforcement capabilities are weak, levels of compliance are poor, and there have been few actual improvements in environmental quality. The effectiveness of formal regulation in these countries has been hampered, in part, by the lack of understanding of how to achieve environmental objectives. An environmental regulatory regime is not an end in its self; there must be a need to focus on how to encourage industry to take action to implement environmental regulations.

The difficulty of importing traditional regulatory regimes in developing countries

While many developing countries have adopted environmental regulations from OECD countries in an effort to improve environmental performance, experience demonstrates that this approach is often counterproductive. Effective environmental regulations must first reflect their own context and be compatible with the administrative capabilities of regulatory agencies. Regulations "imported" from industrialized countries are inherently unenforceable in developing countries where institutional capabilities to implement and enforce them are weak. Successful environmental regulations are also dependent on an overall culture of compliance that is the result of a country's legal traditions, the maturity of its institutions, available resources, and the capacity and support of its citizens and the private sector. Compliance does not automatically happen once requirements are legislated and issued; rather it is achieved as a result of targeted efforts that encourage behavioral changes among polluters.

Innovative mechanisms to improving environmental compliance

The increasing openness of economies and the expanding role of the private sector in many developing countries require a more collaborative approach between regulators and industry—one that includes more flexible regulation with more effective enforcement, as well as market driven incentives for improved environmental management.

In this context, several innovative approaches are now emerging as effective ways to improve industrial environmental compliance and performance in countries that lack the necessary institutional capabilities required for formal regulation to succeed on its own. While there is no substitute for a regulatory regime, innovative pollution management tools involving partnerships between government, industry and the public are fostering environmentally sustainable development practices. They include the following:

- Pollution inventories;
- Information dissemination on firm performance;
- Cleaner production techniques;

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- Environmental management systems;
- Greening of the supply chain; and
- Negotiated agreements between regulators and industry

Negotiated compliance agreements and government-industry partnerships assist in translating regulatory requirements into clear, easily understood and implementable terms, based on popular support. In contrast, other tools, such as pollution inventories, information dissemination, cleaner production techniques, environmental management systems, and greening of the supply chain target industrial environmental improvements through strengthening public and private sector capabilities.

The use of some of these tools may be more strongly associated with regulators or industry. However, it is not clear that one tool will always be applied primarily by either the public or private sector, as much of their application will depend on the specific circumstances of the country or locale where they are being applied. For example, in one situation these tools could be part of a coherent program where the government largely sets the regulatory framework and the private sector takes the lead in selecting and applying some of these tools as mechanisms to meet environmental objectives established in the regulations. Alternatively, the government may assume a more direct role in the use of these tools, from working with industry to develop pollution inventories and improving information dissemination, to facilitating the implementation of cleaner production techniques and environmental management systems.

Ultimately, it matters little whether an instrument is used by industry or regulators. What matters most is that the use and application of these tools by either sector leads toward improved environmental performance and compliance.

Incentives for using these tools

Market forces for industry

Within industry, except in the most progressive firms, environmental management is perceived as imposing costs. Managers thus are often reluctant to even address the issue. This is especially true in smaller or less responsive firms where there is frequently complete ignorance of the environmental effects of industrial processes or even of the regulatory requirements designed to protect the environment and human health. Even where there is some understanding of the issues, the problems are often assigned low priority or set aside as too difficult.

In this context, the most effective incentives for environmental improvement are those that can offer the prospect of increased productivity and competitiveness to individual companies. Larger or more sophisticated firms, especially those in export markets, are recognizing the benefits of these approaches, in terms of either cost savings or of maintaining increasing market share. There is considerable evidence in many parts of the world that opportunities exist to enhance productivity and improve environmental performance at the same time through low-cost changes in production processes.

Maximizing government resources

The costs and limitations of relying soley on traditional command and control regulation and end-of-pipe responses are becoming increasingly apparent to governments, particularly in OECD countries. Even in rich countries, the size of the regulated community far exceeds the resources of government programs for environmental enforcement. Given the current trend towards leaner governments, this is especially relevant for developing countries. The use of these tools can leverage government resources by promoting "regulatory streamlining," where, for example, companies make commitments to reach compliance and report on their progress, while the regulators concentrate on establishing targets and auditing only a sample of the companies.

More cooperative approaches to regulation

International experience demonstrates that there is a need to consult with industry as well as the general public in the development of environmental policies and regulations to ensure their feasibility, practicality and implementability. Such collaboration can facilitate implementation of existing environmental regulations, where large gaps frequently exist between regulatory requirements and actual performance. One such tool to help facilitate such collaboration is the use of negotiated compliance agreements between the regulator and polluter that define a legally sanctioned path from non-compliance to compliance. In this context, polluters receive protection from fines and enforcement

actions as long as they follow the established timetable, while regulators gain assurance that environmental improvements will ultimately be attained.

Importance of a regulatory foundation

While most traditional regulatory measures focus on punishing polluting firms, these approaches reward model firms by encouraging long-term changes where environmental goals are integrated with business objectives. Such systematic changes are typically beyond the scope of the traditional regulator. However, these tools are *not* substitutes for a comprehensive environmental regulatory framework. In fact, their success largely relies on a strong institutional and regulatory foundation. Rather than alternatives to environmental regulation, they provide "sanctioned" pathways to achieving environmental goals specified in laws.

What are the particular circumstances where innovative instruments are appropriate?

Experience demonstrates that there are particular circumstances in which neither strict regulation nor market-based instruments *alone* are appropriate nor feasible. The challenge lies in identifying these situations and determining which innovative pollution management tool, or which combination of tools, regulations and market-based instruments will be most effective. We know, for example, that command and control regulation is most appropriate for controlling potential adverse impacts of toxic substances and that market-based instruments work well in sectors such as water, where there is a willingness to pay. The key is identifying which instruments work best in which sectors, as well as the particular circumstances where innovative instruments may also be effective.

In the end, whatever approach is chosen will clearly reflect the specific context, including the existing regulatory framework, administrative capabilities of the government, and macroeconomic conditions that are necessary for a market-based system. Only when these factors are understood, can one understand how to select and apply these tools and tailor the approach to a particular set of circumstances.

Conclusion and the role of the World Bank

These tools provide approaches for the public and private sectors to work together to identify opportunities that will encourage firms to take environmental issues seriously and move in the direction of sustainable business practices. Such opportunities include viewing the environment as a competitive issue (where an internationally recognized certificate of good environmental management may be a price of entry); public and regulatory pressure to reduce polluting activities; the desire to find a technical edge in more efficient production; or a recognition that poor environmental performance may be a significant direct or overhead cost for a firm.

International experience is still limited but suggests that industrializing countries may have much to gain from these approaches in assisting in developing a culture that fosters improved environmental compliance and overall environmental performance. In view of the absence of mature regulatory systems and credible enforcement mechanisms, combined with the budgetary constraints of nascent environmental agencies, these tools may be an effective means to improving industrial environmental performance and achieving overall environmental objectives.

Currently, the World Bank and its clients are beginning to pilot these innovative approaches to pollution management by catalyzing and coordinating public and private sectors to come together to achieve environmental goals, while also improving productivity and competitiveness and overall performance of industry. In this context, an appropriate role for the Bank may be to serve as a catalyst and neutral broker that brings stakeholders together and promotes such innovative instruments for pollution management.