POLICY BRIEF 2002-3

SETTING QUALITY STANDARDS FOR ENVIRONMENTAL MANAGEMENT POLICY: *HOW EFFECTIVE IS IT?*

In the face of continuing environmental degradation in the country brought about by, among others, urbanization and industrialization, it is important to ask what has been done in terms of adopting a policy to address such degradation and assess how effective that policy has been in achieving its objective.

In the Philippines, the approach adopted in its environmental management policy is reflected in the various legislation passed through the years, attempting to arrest the damage inflicted on the country's environment and natural resources. Decrees such as the National Pollution Control Decree of 1976, Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990, Philippine Mining Act of 1995, and Philippine Clear Air Act of 1999 share a common characteristic. They are all based on the command-and-control principle in environmental management whereby standards are set or established to protect or improve environmental quality.

Command-and-control principle in environmental management

Basically, the command-and-control approach[1] involves the enactment of a law to bring about a behavior and the use of an enforcement machinery to get people to obey the law. The tools used in the command-and control approach are the environmental quality standards, an example of which is the decreed minimum parameter for the acidity level of fresh waters (class AA) at 6.5–8.5 pH per DENR Administrative Order No. 34 repealing the National Pollution Act.

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[1]*Please refer to PIDS* Economic Issue of the Day *Vol. III No. 1, April 2002 issue on "A law of nature: The command-and-control approach" for an explanation of this concept.*

For a long time, this approach has been used in the Philippines. And its major tool or instrument—the setting of standards—has indeed been and is still popular since standards appear simple and specific in targets. The question, however, is: Are they also effective?

Emerging concerns on environment standards

There are a number of factors that contribute to the success or failure of environmental policy. Among them are the question of efficiency and cost effectiveness, equity considerations, and enforceability.

Standards may indeed look simple and specific at first glance but as one goes through the political and administrative process of implementing them, one discovers that there are several complications and problems that have to be addressed. These relate to the setting of the level of standards, uniformity of standards, equity effects, and enforcement.

All-or-nothing quality

In the setting of standards, the principle seems to reflect an "all-or-nothing" quality. Either the standard is met or not; the cost involved is not considered. For instance, setting ambient or emission standards generally considers only damage cost, not abatement cost. Balancing marginal abatement cost and marginal damage cost or minimizing abatement cost vis-à-vis damage in order to achieve efficiency is not taken into account.

At the same time, standards are considered as threshold levels where risks involved are at the minimum. However, these "safe" levels may not hold true in all cases as toxicologists and other scientists claim that there is no threshold for many environmental pollutants. The standards imposed by law may be safe for some individuals but not for others because of varying reactions of human or habitat to pollutants. To shield everything from diverse effects means targeting for a zero-risk level or setting the standard level of emission at zero. This, understandably, is not quite a realistic goal.

Uniformity in heterogeneity

A single, uniform standard is also usually imposed for nationwide application. But in reality, regions or areas have heterogeneous situations such that the costs of damage will expectedly differ. The same level of emission may affect more people and economic activities in a more developed area than in a less developed one. A uniform standard could thus be relatively stringent in less affected areas than in more affected areas. Standards should, therefore, conform to situations appropriate to an area.

Equity in multiplicity

Pollution emanates from multiple sources. Ideally, it would be efficient if the standard level of emission is achieved at the minimum marginal cost of abatement. With the underlying 'equimarginal principle' of the command-and-control approach, the different polluters, regardless of size or performance, will have to pay the same compliance cost to meet a uniform standard emission. However, the cost of abatement varies in reality across polluters based on their economic and technological conditions. The greater the variation, the more difficult it is to attain the equimarginal principle of the uniform standard approach.

The setting of source-specific emission standards would thus be more appropriate as long as the polluters would be willing to share information on their actual abatement costs to establish individual emission standards.

Paradox of enforcement

Pollution control laws are useless if not enforced nor supported with resources. Standards are often formulated by national authorities but enforced by local authorities. In formulating the standards, the cost of enforcement may not usually be thoroughly considered, leaving local authorities with the financial burden. Because of limited funds,

local enforcers may thus resort to compromises or deals with the firms concerned at times.

Strictness of standards often suggests higher enforcement costs. Sanctions for violators are usually in the form of fines or imprisonment. If fines are too low, offenders may opt to pay the fine than spend for abatement measures. Higher penalty may motivate compliance but extremely high fines could encourage authorities to make this an avenue for income generation, distorting the litigation process.

Sustainability of enforcement is also another concern. Initially, compliance with standards may be high but if monitoring is not sustained through time, continuous compliance may not be assured. Effectiveness of the standards approach depends on time, effort and money invested in enforcement.

Policy option

As shown above, standards set under the command-and-control approach have a number of limitations, in particular, in terms of incentive offered to polluters in compliance with environment standards.

The abovementioned approach with its set standards is like a "one-size-fits-all" approach (World Bank 2000) that does not categorically consider varying performances of polluters, thereby ignoring the efficiency principle.

In this regard, one option for policy that may be considered is an incentive-based strategy or the "polluter pays" principle[2] where emission charges or taxes are estimated according to the level of emission. This kind of approach was adopted by the Laguna Lake development Authority (LLDA) in the 1990s and within two years, the level of biochemical oxygen demand (BOD) discharges from the industrial plants initially covered in the early stage of implementation declined by 88 percent.

Because of the proportionate charges involved, incentive-based strategies like the polluter pays principle motivate polluters to be more cautious of their emission levels. They also provide stronger economic incentive to polluters to clean up, using their own chosen strategy. Pollution taxes or charges encourage polluters to search for innovations— management or technological—that will reduce emission rates at the least cost.

Meanwhile, regulation—whether standards or taxes and charges—and enforcement are important in environmental management. However, environmental policies should systematically suit local circumstances such as the pollution load, size of the exposed population and income, and simultaneously consider both benefits and costs of pollution control. Effective enforcement also depends on the community's capacity to respond to environment problems; thus, the importance of information, education and bargaining power cannot be overemphasized. Regulatory policies will only gain leverage therefore

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[2]*Refer to PIDS* Economic Issue of the Day *Vol. II No. 3, December 2001 issue.*

if programs to inform and educate the communities are also in place.

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