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INSIDE: DEUTSCHLAND RECONSIDERED

ENVIRONMENTAL ACCOUNTING

Greening the profit motive

by ROBERT STAVINS *in Cambridge, USA*

Two powerful forces—nature and the marketplace—are beginning to find common ground.

Following the early phases of environmentalism, which concentrated on conservation and the preservation of endangered species, the movement began stressing industry regulation to prevent the kind of pollution that threatens global life support systems.

Now the pioneers of environmentalism are seeking ways to use market forces to maintain the proper balance between economic development and environmental protection—shifting their attention to the present concern of environmental accounting.

IMPERIAL CHEMICAL INDUSTRIES, headquartered in London, is one of the largest international chemical companies in what has been, environmentally speaking, one of the world's dirtiest and most dangerous industries. Yet ICI today promotes itself as one of the most environmentally sensitive multinationals, cleaning up its facilities, from a petrochemical plant in the United Kingdom to a terephthalic acid operation in Taiwan.

If ICI represents growing corporate awareness of the real value of respecting the world's air and water resources, it also represents a larger shift in global environmentalism away from regulation and prevention and toward an emphasis on market forces.

Today market forces are recognized as potential allies in the struggle for solutions to both local and global environmental problems. Rather than attempting to dictate how products should be made or manufacturing processes designed, economic-incentive systems impose a cost on polluting activities, leaving firms to decide how to achieve or exceed required levels of protection. Market forces will drive these decisions toward least-cost solutions.

Some promising incentive-based policies include imposing charges on pollution, allowing firms to trade emission permits, removing market barriers and eliminating government subsidies.

• **Pollution charges.** Charge systems impose a fee or tax on pollution, not simply on pollution-generating activities. Hence, it pays for firms to reduce pollution up to the point where the cost of pollution control is equal to the pollution tax rate. The result is additional revenue for governments and a deterrent to polluters.

In West Germany, a water pollution charge system has been in place since 1981. A carbon tax on utilities is a frequently discussed approach for controlling global warming.

• **Tradable permit systems.** Permit systems establish overall levels of acceptable pollution, then allot permits to firms which dictate their levels of discharge. Firms that keep emission levels down below the permitted level may sell or lease their surplus permits to other firms or use them to offset excess emissions in other parts of their own facilities. One problem with pollution charge systems is that governments do not know what level of overall cleanup will result from charges. Tradable permit systems eliminate this problem while providing polluters with greater potential incentives for reducing discharges.

The primary application of tradable permits has been in the United States.

• **Deposit-refund systems.** This plan levies surcharges on potentially polluting products when they are purchased. When the product's consumers or users return the product to an approved center for recycling or proper disposal, their deposit is refunded. This approach has already been used to reduce littering with beverage containers and stem the flow of solid waste to costly landfills.

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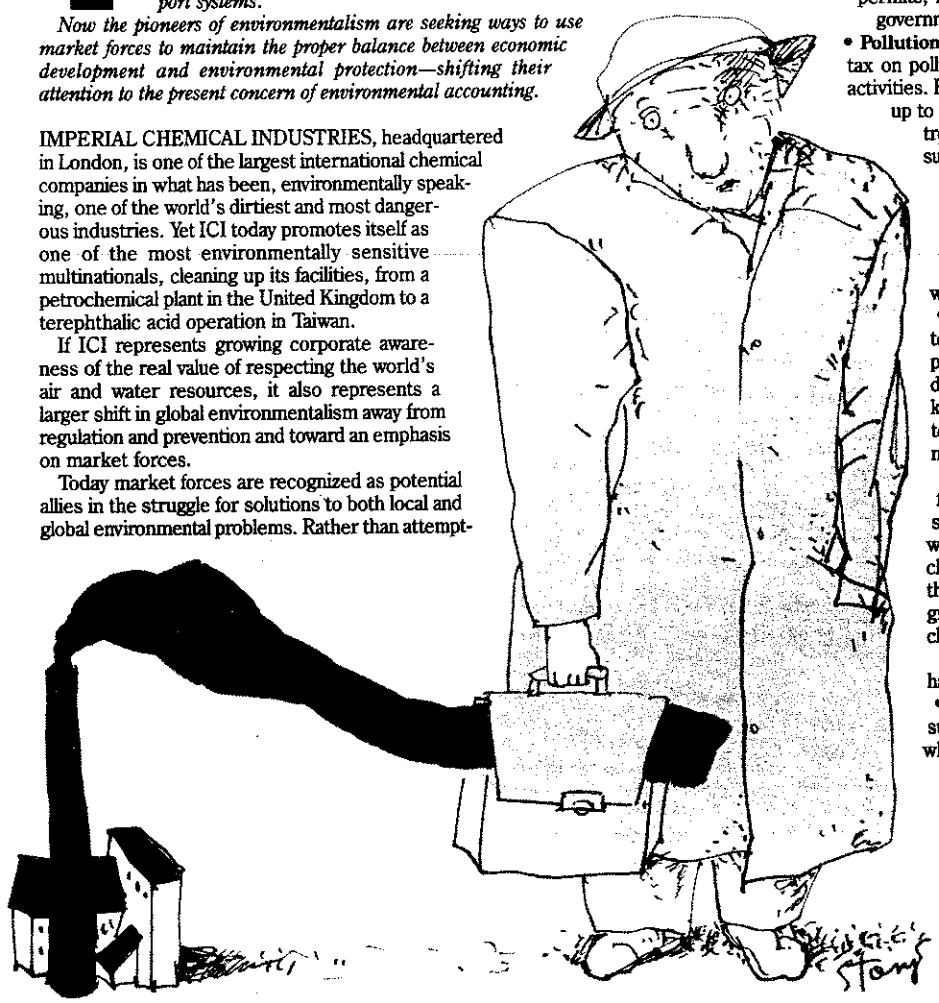

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Greening the profit motive

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Deposit-refund systems can also be used for hazardous waste that can be easily stored in containers, as well as for other forms of solid waste. Lead-acid batteries, used motor oil and vehicle tires are obvious candidates. Denmark has such a plan for mercury and cadmium batteries and Norway and Sweden have successful deposit-refund systems on car hulks.

• **Removing market barriers.** Substantial gains can be made in environmental protection simply by removing existing government-mandated barriers to market activity. For example, measures that facilitate the voluntary exchange of water rights can promote more efficient use of scarce water supplies while curbing the need for expensive and environmentally disruptive dams and reservoirs.

• **Eliminating government subsidies.** In practice, many government subsidies promote inefficient and environmentally unsound development. One example is below-cost timber sales by the US Forest Service which does not recover the full cost of making timber available. This has led to excessive timber cutting which has, in turn, severely damaged natural habitats and watersheds. Another example is agricultural price-support systems, common in many nations, that are both economically inefficient and environmentally disruptive.

As the decade of the 1990s begins, serious attention is being given by political leaders in Europe and North America to promising market-oriented policies.

Within the Soviet Union, the Central Institute of Mathematics and Economics of the Academy of Sciences has advocated the use of pollution taxes. In Poland and Czechoslovakia, government officials have endorsed a variety of market-oriented approaches to help address air and water pollution problems.

Market-oriented policies, however, do not provide all the answers. The best set of policies may well involve a mix of market and regulatory processes. Perhaps with the push-pull effect of regulations and economic incentives more companies will be motivated, like ICI, to become profitable environmentalists.♦

Dr. Stavins, economist and environmental policy consultant, is an assistant professor at Harvard University's John F. Kennedy School of Government.