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**The environment**

# Economic man, cleaner planet

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**Shocking as it may seem to most anti-globalists, market forces can help the environment. In fits and starts, they are already starting to**

"THE foresighted utilisation, preservation, and/or renewal of forests, waters, lands and minerals, for the greatest good of the greatest number for the longest time." That, insisted Gifford Pinchot, a founder of America's conservation movement, should be the proper goal of greenery. Decades after he penned those words, his sentiments still inspire.

Sadly, that is because the world's approach to environmental protection has mostly failed to heed Pinchot's call for wise use of resources. Instead, governments everywhere have tended to follow a heavy-handed "command-and-control" approach that sets impossibly lofty environmental goals and requires needlessly expensive responses or rigid technological fixes. In America, these came in the shape of a wave of federal environmental laws passed three decades ago, around the time of the first Earth Day. Most of the world then followed the same path.

The legacy of this "mandate, regulate and litigate" approach is mixed. It is true that it has helped to bring about environmental gains: by most measures, air and water in the rich world are cleaner than they were three decades ago. Yet, even as the actual air has got cleaner, the metaphorical atmosphere has been poisoned by the confrontational approach enshrined in such laws. For decades, the prevailing attitude of governments' environmental agencies, especially in America, seems mostly to have been one of hostility to industry. The resulting policies encouraged litigation and stifled innovation.

Dan Esty, a professor of environmental law at Yale University, says that the laws "often looked disapprovingly at human activities and economic growth because of their harmful pollution side-effects,

which were thought inescapable...prospects for further progress on the same path are limited." He has been developing "next generation" reforms, which favour incentive-based, market-oriented policies. Greens and anti-globalisers may not like this; but the result could hugely improve the environment, at much less cost.

## The cost of command-and-control

Three principal failings of the status quo are driving the new green revolution: yesterday's failed ambitions, today's large price tag and tomorrow's even harder targets. The command-and-control approach has not proved all that effective in curing yesterday's ills. Although air and water quality have indeed improved dramatically, other environmental problems—from waste management to hazardous releases to fisheries depletion—have not.

**Even gains have come at a needlessly high price**

Moreover, these top-down laws are inefficient, meaning that even the gains that the world has seen have come at a needlessly high price. Typically, the reason for this is that the laws have specified particular technological fixes so as to achieve outcomes that are pre-ordained, with little consideration for local environmental conditions or for the marginal cost of pollution abatement at individual companies. Another failing has been that cost-benefit analysis, a common-sense tool of economics that is suited to environmental matters, has not been widely used. Indeed, in many cases, America's Congress has expressly, and perversely, forbidden its use in environmental policymaking.

The most glaring example of what can go wrong has been America's Superfund scheme, which sought to clean up toxicwaste sites through tough federal laws. For all the nobility of its aims, Superfund has proved bureaucratic, costly and largely ineffective. The scheme often set standards so high (clean enough for toddlers in a theoretical nursery located on the site to eat the dirt, even if the dump was in an industrial park) that many polluted sites were never cleaned up at all. The scheme invited litigation: Superfund has cost billions of dollars, but over half the cash has lined the pockets of lawyers. Worse, according to "Superfund's Future", a new book from Resources for the Future (RFF), a Washington-based think-tank, the scheme will cost America another $14 billion-16 billion over the next decade.

This dirigiste approach to the environment is now under attack not only because of its past failings but because it is woefully inadequate to the task of dealing with tomorrow's environmental problems. One reason is society's ever-rising expectations: the green goal-posts keep moving. Also, scientists now have a better understanding of mankind's impact on the environment, which often brings to light unobvious, complex problems. The link between an obscure chemical used in hair spray and a hole in the ozone layer, for example, or the relationship between carbon dioxide and climate change, are harder to understand and to tackle than the concerns of three decades ago, when Cleveland's filthy Cuyahoga river spectacularly caught fire.

Slowly but surely, governments around the world are rethinking the command-and-control approach. Instead, they are tinkering with various types of market-based policies, ranging from green taxes to tradable permits to pollute. If they stick with it, such economic instruments would harness the power of the market for the sake of the planet's health. This could prove nothing short of a revolution.

## Enter the market

Market-based greenery differs from the conventional sort in that it tries to influence behaviour by altering price signals, rather than through regulations that spell out desired pollution levels or impose

particular pollution-control technology. The great weakness of the conventional approach is that it gives companies so little leeway in how they meet pollution targets. That means they cannot respond to local differences, and tends to lock in old technologies and stifle innovative approaches to improving the environment.

Robert Stavins, an environmental economist at Harvard University, argues that market instruments do precisely the opposite: since it often pays to clean up if a sufficiently low-cost process or technology can be identified, such policies can prove a powerful stimulus to both greenery and innovation. There are dozens of variations on the theme, but Dr Stavins divides market instruments into four broad categories: tradable permits, charging systems, cuts in government subsidies and the lowering of market barriers.

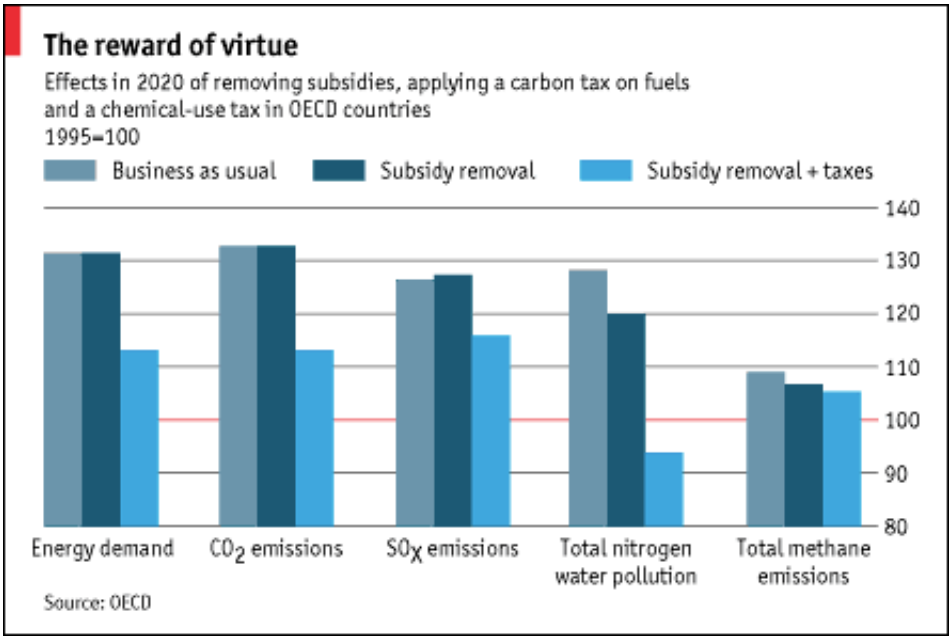
In a typical **tradable permit scheme**, a government decides upon acceptable levels of pollution and allocates credits for meeting those limits among companies. Those that can cut pollution at the lowest cost will have spare credits to sell; those with high abatement costs can then buy from them. Successes to date include the trading of chlorofluorocarbons under the international Montreal Protocol (designed to save the ozone layer) and the use of particulates trading in Chile.

However, it was America that led the way. The greatest environmental success story of the past decade is probably America's sulphur dioxide scheme, aimed at reducing acid rain. A decade ago, George Bush senior introduced this then-controversial plan, inspired by a trail-blazing scheme in Wisconsin, to control and "ratchet down" the emission of sulphur dioxide from power plants. The key was the introduction of tradable rights, combined with a credible threat of punishment for non-compliance. This spurred the development of a vibrant market and lowered emissions beyond expectations. Analysts at RFF reckon that, compared with doing the same thing using command-and-control, it has saved $1 billion a year.

America may have led with trading, but it has been a laggard in other market reforms. When it comes to using **green taxes and charges** to alter the prices of goods and services to reflect their environmental effects, Europe has generally gone the furthest. Led by Scandinavia, Europe is embracing comprehensive reforms that shift taxes away from labour to specific environmental harms.

A report published this week ("Environmentally related taxes in the OECD") argues that this is generally a good trend. The OECD's researchers conclude that there is growing evidence that such green taxes actually work. Sweden's experience is telling. In 1991 the country introduced a sulphur tax: this led to a drop in the sulphur content of fuels to 50% below legal requirements, and stimulated power plants to invest in abatement technology. Norway's carbon tax, also levied in 1991, lowered emissions from power plants by 21%.

The only unkind word that experts have for such green taxes is that they are too often blunted by blanket exemptions or rebates granted to heavy industry—an example of corporate welfare that is sadly too common in the environmental realm. The **reduction of environmentally harmful subsidies** is more essential than ever. Such subsidies are lavished on everything from pesticides (to make them cheap for farmers) to water (often free for both farmers and city-dwellers) to electricity (underpriced for almost everybody). The OECD reckons that, if its members embraced a carbon-based fuel tax along with a tax on chemical use, and eliminated harmful subsidies (see chart), it could improve its environment dramatically for a very modest price: less than 1% of one year's GDP. Poor countries would benefit even more, since they typically waste even more money on damaging subsidies.




The fourth sort of innovative approach involves **reducing barriers to the creation of new markets**. A simple, yet powerful application of this is to require the disclosure of information. Once equipped with information on the greenness of companies, the argument goes, consumers can vote with their wallets.

Europe has had eco-labelling schemes for some time, most notably Germany's Eco-Angel programme. In America, the Toxic Release Inventory requires companies to publish their emissions of more than 350 chemicals. Using these once-obscure data, "environmental justice" groups have created Internet sites into which anybody can punch in a postal code and find out how dirty the neighbours are.

The biggest bang may have come with Indonesia's "Proper" programme. As in most poor countries, local officials there had little money to enforce existing pollution laws; violation has been the norm. With the help of the World Bank, they have now designed a five-tiered scheme that ranks companies by sector—from gold for going beyond compliance to black for flagrant violations. They publicly applauded the few top rankers, and gave the worst offenders six months before their names would be made public. Astonishingly, most of the defaulters have rushed to invest in abatement technologies and otherwise clean themselves up for fear of public censure. The Proper scheme is now being adopted by the Philippines and by several Latin American countries.

## What about the poor?

This anecdote also points to something else that anti-globalists hate to acknowledge: that developing countries have the most to gain from market reforms in the environmental realm. The anti-globalisers, by contrast, argue that growth and trade are enemies of the environment.

That may appear true in a wholly static world, where every new factory may well do some harm. However, the world is anything but static: each environmental impact is mitigated by far more powerful forces. For a start, trade spurs economic growth, which is the ultimate guarantor of greater environmental protection: history shows that, as people get richer, they begin to demand a cleaner environment—and can afford to pay for it. What is more, trade liberalisation exposes filthy and inefficient domestic industries to competition, and attracts foreign direct investment; these in turn spur

investment in newer, and therefore cleaner, technologies.

Anti-globalists also worry that liberalisation will lead to a "race to the bottom", as poor countries lower their environmental standards in a contest to attract foreign investment or to set up sweatshops. That is wrong, on two counts. First, trade agreements (and the World Trade Organisation, for that matter) do not stop countries from pursuing whatever levels of greenery they wish; in fact, there is great variation, even among countries at comparable levels of economic development. Second, as the World Bank recently concluded after six years of study, "pollution havens—developing countries that provide a permanent home to dirty industries—have failed to materialise. Instead, poorer nations and communities are acting to reduce pollution because they have decided that the benefits of abatement outweigh the costs."

**Anti-globalists worry that liberalisation will lead to a "race to the bottom" in environmental standards. They are wrong**

What is more, history also shows that countries that have embraced free trade have seen their environments improve along with their economies, while those that closed their economies have fouled their air and water even as their economies stagnated. From the Soviet Union to China to India, centrally planned or closed economies have a pitiful environmental legacy that is only now being reversed as entire sectors are privatised and opened to competition and investment.

This is especially true in water and waste treatment, which have been among the first businesses that most poor countries have opened up to foreign investment. Water infrastructure is so expensive that governments have left over a billion people without safe water or sewerage. Happily, liberalisation has attracted tens of billions of dollars in investment to over 60 developing countries. Some home-grown multinationals from developing countries are even emerging.

## Of rights and wrongs

Given such impressive advances, it might seem that market forces have already triumphed. Not quite. In fact, market purists are deeply sceptical of even the inroads made so far. Jonathan Adler, a professor of law at Case Western Reserve University in Ohio, reckons that most people who gush about economic incentives these days are merely "*faux* market environmentalists". For such market advocates, even the most radical reforms proposed by the next-generation crowd do not go nearly far enough. What they want is a dramatic shift to a policy grounded in private property rights.

Free-market environmentalists argue that the incentives and markets created by such rights will protect the environment better than any amount of government meddling. This philosophy hinges on the idea that secure property rights create incentives for individuals to be good custodians of nature. Private ownership makes it possible for green groups such as Ducks Unlimited and the Nature Conservancy to buy and preserve pristine bits of wilderness. The assignment of freely tradable property rights over water flowing in rivers has allowed green groups such as Environmental Defence or Oregon Water Trust to save endangered fish by buying water from farmers on behalf of their aquatic friends.

The absence of property rights often leads to a "tragedy of the commons", with users overexploiting an otherwise renewable resource before their unconstrained competitors can do so. This is what has happened to offshore fisheries. Most of the world's fishing grounds are greatly depleted by over-fishing. All fishermen would benefit in the long-term from a thriving fishery. But each acting in his own short-term interest will catch as many fish as he can. A few path-breaking schemes, in New Zealand, Iceland and parts of America, have assigned fishermen rights to an assigned quota (set at a sustainable level), and allowed them to trade that quota freely. The result: stocks are reviving.

Such talk makes many traditional environmentalists nervous. Carl Pope, the head of the Sierra Club, a big American green group, rejects the philosophy of the free-market radicals as simplistic. He insists that free marketeers gloss over a fundamental question: "Who has property rights over the commons?" He points to climate change, and the thorny question of how to allocate and achieve global cuts in emissions of carbon dioxide.

However, even Mr Pope does not reject market forces out of hand. He accepts that economic incentives can play a part in the policy mix: "the dialogue about what we should do is a silly one—we should use every possible incentive to help the environment." He argues that markets would not help to protect migratory birds that travel thousands of kilometres, but acknowledges that they may help to restore fisheries. In sum, he would like to have command-and-control rules as the main course, but sprinkle in a bit of market forces for flavour.

The snag is that the two methods are often incompatible and so cannot easily be combined. If you impose overly detailed regulations, you may make it harder, not easier, to harness the market to your ends. Dr Adler's rebuttal of such "third way" arguments is blunt: "It was the fatal conceit of socialism, in Hayek's famous phrase, that wise government bureaucrats could guide society to a better future. Substituting red aspirations with green ones does not change the undertaking's essential nature—or its likelihood of success."

Libertarians and deep greens can perhaps agree on one thing: whether for good or ill, market forces are only just beginning to make inroads into green policymaking. Dr Stavins cautions that while economic instruments may seem all the rage today, "this should not leave the impression that market-based instruments have replaced, or have come anywhere close to replacing, the conventional, command-and-control approach." Even if current trends continue, it will take a while before the balance tilts toward the more innovative approach.