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Green growth or de-growth: What is the best way to stop businesses destroying the biosphere?

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The world's major 3,000 corporations are responsible for a third of global environmental damage, but economists are divided in their views of how to stop them polluting. Some say government regulation, allied to promoting the business case, is the answer. But other experts say we need a new type of capitalism, which allows our economies to stop growing, or even to shrink.

A study by London-based consultancy Trucost has shown that the world's top 3,000 public companies are responsible for a third of all global environmental damage.

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The figure they came up with was US\$2.2 trillion (£1.4 trillion) for 2008, more than the national economies of all but seven countries. Over half of the cost was caused by emissions of greenhouse gases. The other major causes of damage were air pollution, and the over-use and pollution of freshwater.

Richard Mattison, the Trucost Chief Executive Officer, said:

We monetised the damage to give people an idea of the scale of the problem. If we said to business leaders they were emitting million of tonnes of carbon, they wouldn't know if that was a lot, whereas they understand money and so it communicates the core message.

Trucost produced an even more cataclysmic prognosis for 2050, by which time annual environmental damage from water and air pollution, greenhouse gases, general waste and depleted resources could be US\$28.6 trillion.

A significant portion of the US\$2.2 trillion figure has been self-inflicted by big corporations who will increasingly have to pay to repair the damage caused by natural disasters. The scale and frequency of these disasters is partly a result of greenhouse gas emissions from those selfsame big corporations.

There are many recent examples of the effects of freak weather on the world economy. Massive floods in Pakistan and China forced the global cotton price to 15-year highs, pushing up the costs of clothes at retailers such as Primark, Next and H&M. Meanwhile, droughts and wildfires in Russia sent wheat prices soaring, which had a sharp knock-on effect on the price of bread, and other foods.

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Trucost's research shows how the profits of the world's largest companies will come under increasing pressure from resource scarcity and unpredictable price hikes, undermining their share price growth. It is precisely these major companies that pension funds invest in.

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Although Mattison argues that putting a price on biosphere damage helps to persuade companies to take action, some economists disagree. Peter Victor, at York University in Toronto, and author of Managing Without Growth: Slower by Design, Not Disaster, says the numbers are meaningless to most people.

We say 20 trillion dollars by 2050, but how many people can understand a trillion? Most shrug their shoulders and say 'so what?' Billions, or trillions, what's the difference? We are still playing the same game of measuring everything in economic terms and once you do that everything is tradeable. If we lose 20 trillion dollars by damaging the environment, well, we'll become a 100 trillion economy then. It's no big deal. Of course it's more than a big deal. It's the deal, he said.

Professor Victor says we need a new narrative about environmental damage which gets the message across more powerfully than figures.

Putting it in monetary terms is not enough to change minds. It needs the input of artists and communicators as much as scientists, to tell the story in a new way, he said.

As long ago as the 1960s, Professor Victor concluded that the constant quest for economic growth would lead inexorably to environmental catastrophe. He began to produce economic models which are not predicated on growth, but are steady-state, or even shrinking. His influential models have been emulated by environmental economists around the world.

But the idea of no-growth economies is far too radical for the leaders of the major world powers. The official line of the Organisation for Economic Co-operation and Development (OECD) remains that environmental damage can be contained with a "green growth" strategy, rather than a de-growth strategy.

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Trucost are operating for the most part within the same economic paradigm as the OECD. Their CEO, Mattison, presents the environmental debate as an opportunity for savvy businesses to gain a competitive advantage. As environmental damage worsens, he says, governments will apply more stringently the polluter-pays principle to regulation. As a result, investors and businesses will face higher insurance premiums, higher green taxes, rising resource prices and increases in clean-up costs. The figure equates to 6-7% of the companies' combined turnover, a third of profits.

So businesses face a stark choice, Mattison says. Either they take the long-term view now and plan for a radically different near future, or the decisions will be forced upon them. Clearly it is better for the environment if they make the changes now.

There is a massive opportunity for innovative businesses. There are a number of ways they can gain an advantage. For many companies, it's a purely capitalist argument that they can gain business, or reduce costs, or encourage investment, by being greener, he said.

Mattison says there are many major companies who have understood the agenda, such as the sport and leisure group Puma. The German company became the first global corporation to publish details of its impact on the environment.

Puma used Trucost analysis to work out that the combined cost of the carbon it emitted and the water it used in 2010 was €94.4 million. The company set a target of reducing by 25% its carbon, waste, energy and water use by 2015. Puma's outsourced processes, such as embroidering and printing, are now subject to the same environmental standards as its own manufacturing processes.

Puma chief executive Jochen Zeitz said: "The business implications of failing to address nature in decision-making are clear. Since ecosystem services are vital to the performance of most companies, integrating the true cost for these services in the future could have significant impacts on corporate bottom lines."

Another company which has pledged to reduce its environmental impact is Walmart, the world's biggest retailer. The US giant will cut 20 million tons of carbon pollution from its supply chain over the next five years. The sum is equivalent to the annual greenhouse gas emissions of 3.8 million cars.

The knock-on effects of Walmart's decision are enormous because of the scale if its operations. It has more than 8,400 superstores in 15 countries and employs over two million people. In 2009, it had sales of \$405 billion.

The influence of Walmart's decision on thousands of companies worldwide could be greater than national policy-making, said Mattison. "Walmart, for instance, makes up 10% of Chinese exports to the US. Walmart's decision will force behaviour change right down the supply chain. Chinese companies which don't respond to key questions around water, waste, carbon emissions and energy consumption, won't supply Walmart any more. This shows how business can be a force for change."

Walmart's enlightened approach was, of course, influenced by its long-term financial goals. "Walmart has said it's 'following the carbon to get to the cash', which is a very capitalist argument," said Mattison. "One of the biggest pluses for Walmart is they can attract more investors with greener policies. It was pressure from investors to be greener that actually made them change their policies in the first place. Lots of major pension funds are now considering which companies are the most environmental before investing."

Walmart is controlling its own destiny, but many major companies have been overtaken by events. They have been forced to take steps to avoid the impending degradation to the biosphere, or avoid damaging their reputation, which could prove costly as public awareness of green issues grows.

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Water is one of the major issues faced by global corporations. The UN predicts water shortages for 1.8 billion people by 2025. Unilever, for example, has taken action to secure the water supply to its tea plantations in Kenya's Rift Valley. The local population has chopped down large sections of the Mau Forest, which impacts on water gathering. To

compensate, the company has spent \$475,000 over 10 years planting more than a million indigenous trees. Similarly, the brewing giant SABMiller has made major investments in reforestation in Columbia and South Africa, and set tough targets for reducing water consumption.

Meanwhile, Volkswagen, Europe's biggest carmaker, is investing \$430,000 in re-planting forests and digging rain water pits to secure the water supply to its factory in Puebla, Mexico. And ArcelorMittal, the world's largest steel producer, has invested almost \$2.1 million since 2006 on restoring the ecosystems surrounding America's Great Lakes which supply water to nine of its facilities.

The French energy group GDF Suez has invested in conserving biodiversity on its landfill sites as part of its "reputational risk management".

Clearly, many major companies have the foresight to take environmental issues into account. But the authors of a second report into biodiversity loss, the UN's Economics of Ecosystems and Biodiversity, don't believe the companies will collectively do enough unless forced to do so.

The authors of the report, which estimated the annual global economic impact of biodiversity loss at between \$2 trillion and \$4.5 trillion, said too few firms took green issues seriously enough. In one section, PricewaterhouseCoopers (PwC) calculated that fewer than one in five firms saw biodiversity as an important business issue, while just two of the world's largest 100 companies managed it as a strategic risk.

Report lead author Pavan Sukhdev argues that governments need to force businesses to address biodiversity loss. He told The Guardian newspaper: "We have created soulless corporations that do not have any innate reason to be ethical about anything. The purpose of a corporation is to be selfish. That is law. So it's up to society, and its leaders and thinkers, to design the checks and balances that are needed to ensure that the corporation does not simply become cancerous, and that's something that sometimes we do and sometimes we really don't."

But Professor Victor remains unconvinced that government legislation, allied to company self-regulation, is enough to sufficiently restrain the impact on the biosphere if we continue to operate within the parameters of modern-day capitalism.

We are moving towards more global institutions which control the damage, and that is a necessary thing, but the primary purpose of businesses is still economic growth and expansion, particularly in rich countries. This won't help the environment at all, he said. "Growth is the common driver of many bad trends in capitalism so we need to re-think what our economic and social policies should be. Thinking along these lines is what led me to model economies based on zero growth, or even de-growth."

The battle against climate change illustrates the attractiveness of his strategy. According to Professor Victor's model, to reduce greenhouse-gas emissions (GHG) by 80% over 50 years, an economy that increases its real gross domestic product (GDP) by 3% a year must reduce its emissions intensity by the huge margin of 6% a year. For an economy that does not grow, the annual cut would be a still challenging 3.2%.

His model looked at what could happen if the Canadian economy were not growing. "I asked if we could have reduced greenhouse gases, no poverty, full employment and fiscal balance without growth. And my computer model showed that you can," he said.

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A key ingredient of the model was a shorter working year, which spreads employment around. The benefits of greater productivity can thus be directed towards more leisure time, rather than increasing GDP. "Then we can have higher employment rather than keeping expanding the capacity of the economy and putting pressure on the biosphere," he said.

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Professor Victor rejects the belief that tinkering with the current capitalist system is an adequate strategy. "If we remain short-termist we are done for. The world where the environment seems infinite is no longer there. We're bumping up against the limits. We need to think longer term about how we will accommodate nine billion by middle of the century," he said.

"We need new ideas, and one thing which makes me hopeful is the changes at grassroots level, such as the spread of Transition Towns. It's never enough and we do need regulatory framework, but the government frameworks could follow the initiatives of the public. The onus is on older folk to be open to new ideas and not dismiss them as hopeless idealism," he said.

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