

A woman with long dark hair, wearing a bright orange sleeveless dress, is standing inside a large, clear, inflatable bubble. She is barefoot and has her arms raised, touching the inner surface of the bubble. The bubble is resting on a dry, cracked, brown earth surface. The background is a vast, flat, cracked landscape under a clear sky. The text 'the most' is overlaid in white on the top left of the image.

the most

global ISSUE

by Joseph
Stiglitz

The world is engaged in a grand experiment, studying what happens when you increase carbon dioxide and other greenhouse gases in the atmosphere by larger and larger amounts. The scientific community is fairly sure of the outcome – and it is not pretty. The gases act like a greenhouse to capture solar energy and, gradually, the Earth warms up. Glaciers and polar ice melts, ocean currents change, and sea levels rise. It is not yet clear how long this will take to happen, but it has been taking place far faster than even many pessimists thought even ten years ago, with far more adverse consequences.

If we had access to a thousand planets, then you could imagine conducting such an experiment on one, and if things turned out badly – as the vast majority of scientists worry it will – moving on to the next. But we don't have that choice; there isn't another planet we can move to. We're stuck here on Earth.

No issue is more global than global warming: everyone shares the same atmosphere. So while the United States alone adds almost six billion tons of carbon dioxide to it every year, contributing to climate change, everyone everywhere else will suffer the consequences. If the greenhouse gases emitted by the United States stayed over its territory, America could conduct its own experiment to study the results of filling the air over its cities with these gases. But, unfortunately, carbon dioxide molecules do not respect borders. ➤

© Getty Images / Gallo Images



And though emissions from the U.S. or China or any other country affect the *global* atmosphere, the United States (or China, or any other country emitting greenhouse gases) does not have to pay for the consequences of its pollution outside its borders. Thus, it has insufficient incentives to conserve.

As I point out in my recent book, *Making Globalization Work*, America — in spite of its protestations — can well afford to reduce pollution: there are countries that emit only a fraction as much greenhouse gases per person while enjoying just as high a standard of living. But not taking responsibility for its emissions does give American producers a competitive advantage over producers from countries that are doing something about their pollution. It is not surprising that many countries have not reduced their emissions. It is more so that — as part of the 1997 Kyoto Protocol — European countries, Japan, and a few others have put their own self-interest aside, in the interest of the well-being of the whole world, and agreed to do so.

As with so many aspects of globalization, it is the poor that are most likely to be most adversely affected — and they lack the resources to adapt to the consequences. Bangladesh and the Maldives are being threatened by forces beyond their control — the polluting actions of others — with a fate far worse than is caused by even the worst of wars. Much of Bangladesh is a low lying delta, great for rice growing, but vulnerable to even small changes in the sea level, and frequently buffeted by deadly and destructive storms. If, as a result of global warming, those storms get more intense, the annual death toll will soar. If sea levels rise, one-third of the country will become submerged, and some 140 million Bangladeshis will become even more crowded together than now. Their incomes, already barely above subsistence, will fall still further.

And Bangladesh is not even the country likely to be worst hit. Once viewed as a tropical paradise, the Maldives — a small island state of 1,200 islands and 330,000 people in the Indian Ocean — will be totally submerged in as little as fifty years, according to reliable predictions. Along with many other low-lying islands in the Pacific and elsewhere, it will simply be no more — our own 21st century Atlantis.

Important as the Kyoto Protocol was, it left out some 75 per cent of the sources of emissions: the developing countries have no obligations; America, the world's largest polluter, did not sign on; and nothing was done about deforestation, which contributes vastly to global warming.

Efficiency requires reducing greenhouse gas concentrations in the most cost-effective manner. Planting forests may be one way, but it may be even more efficient simply to preserve the world's rainforests, mostly located in developing countries. Deforestation is bad for the atmosphere for two reasons: there are fewer trees converting carbon dioxide into oxygen; and carbon stored in the wood is released into the atmosphere as it burns or decomposes.

Tropical rainforests not only reduce the level of carbon in the atmosphere: they also help preserve biodiversity. Many medicines, for example, have made use of this precious resource. The Biodiversity Convention, signed in 1992, was designed to ensure its maintenance — including providing some incentives for developing countries — but, regrettably, the United States has refused to ratify this agreement too.

The 2.7 billion people in the over 60 developing countries that contain these tropical forests are not being compensated at all for the enormously valuable environmental services they provide for the whole world. Though it is difficult to assign a value to preserving biodiversity, we can obtain rough calculations of the benefits of, say, reducing the annual rate of deforestation by a modest 20 per cent. In late June 2005, for instance, carbon was trading at around \$30 a ton on carbon emissions markets. At that price, the annual value of this avoided deforestation is between \$30 and \$40 billion a year. By comparison, according to the OECD, all foreign assistance to developing countries was around \$78 billion in 2004.

The forests also 'clean' the carbon dioxide out of the atmosphere. These 'negative' emissions of the rainforest countries are estimated — at the same \$30 dollars a ton — to be worth some \$100 billion a year. Compensating developing countries for the environmental services that they provide would



© Getty Images / Gallo Images

not only be fair and help their economies, but provide incentives for them to maintain their forests. It would also help give them the resources that they need to prevent illegal logging.

In principle, this would be relatively easy to do by carbon trading. Just as many energy companies in Europe buy 'carbon offsets' (allowing them to emit more carbon than otherwise would be allowed) by paying for the planting of a forest in a developing country, so countries could be paid for not cutting down their trees. Yet the Kyoto Protocol allows compensation only for planting forests, not for *avoiding* deforestation. So rainforest countries are doubly better off if they cut down their ancient hardwood trees and then replant. From a global perspective, this obviously makes no sense. What is needed is simple: developing countries should be given incentives to *maintain* their forests.

Now a group of developing countries, led by Papua New Guinea and Costa Rica — the Coalition for Rainforest Nations — has come forward with an innovative proposal. They are offering to commit to greenhouse-gas limits, but ask to be able to 'sell' carbon offsets, not just for new forests, but for avoiding deforestation. This would ensure their most efficient use from the global perspective by maintaining them as forests, rather than harvesting them for timber. At least twelve developing countries — including Costa Rica, Nigeria, Vietnam and India — support this new organization, announced by Sir Michael Somare, Prime Minister of Papua New Guinea, at Columbia University in New York, in January 2005. A team at the university is working on the technical details.

Without some form of compensation for maintaining their forests, developing countries have neither the means nor incentives to continue underwriting conservation. Cutting them down — even when they presently receive only 5 per cent of the final price the wood fetches in, say, New York — is the only way their impoverished people can make ends meet.

Some have suggested waiting to address this issue until 2012, when a revised Protocol is supposed to come into effect. But can we afford to do so? At

current rates of deforestation, the combined contributions to greenhouse gas concentrations from Brazil and Indonesia alone offset some 80 per cent of the emission reductions gained from the Kyoto Protocol. It is urgent to fix the problem now so that deforestation does not undo Kyoto's gains. And some of the ancillary damage — the loss of old hardwood forests and biodiversity — may be reversible if we act soon.

What is so impressive about the new rainforest initiative is that it comes from the developing countries themselves, demonstrating their creativity and social commitment. For the first time, they seem willing to undertake the kinds of commitments that Europe, Japan, and the advanced industrial countries (other than the U.S.) have made to avoid what could be a global disaster.

Costa Rica, which pays its citizens for preserving their forests, has already shown that a system of reimbursement for providing environmental services can work in ways that preserve the environment, boost the economy, and benefit small landholders. It has had enormous success not just in avoiding deforestation, but in significantly increasing forest cover, even though it receives only limited compensation from the advanced industrial countries for its 'carbon services'. But it has benefited from the tourism (and specifically, from the 'eco-tourism') that its rainforests attract, and which it has vigorously promoted. Most of the other rainforest countries stand to gain less from tourists — and, for them, the best *private* use of their forests still remains cutting them down.

Global warming and global poverty are two of the greatest problems facing the planet. The ingenious Coalition for Rainforest Nations would make a major contribution to tackling both. It is based on the most basic of market principles — incentives — and enhances the global efficiency with which the global community addresses global warming. It is a rare opportunity through which the world could do well for itself, and simultaneously do good for many of those in most need. 