



PART V

**DEVELOPMENT
AND EQUITY**

CHAPTER 14

A Southern Perspective on Curbing Global Climate Change¹

Anil Agarwal

Climate change may be the biggest North–South cooperation challenge the world has ever faced. While facilitating the affluence of industrialized countries, fossil fuel–based development has been largely responsible for causing climate change. Developing countries, on the other hand, are late entrants to western-style economic development; their populations remain economically poor, and their per capita emissions are far less than those of industrialized countries. Because developing countries did not create the environmental problem in the first place, industrialized countries should take the lead in remedial action. Climate change is not only a global environmental issue but also a North–South equity issue. Therefore, negotiations should work to check climate change and right global inequity.

The current approach to controlling climate change, as illustrated by the Kyoto Protocol, seems flawed at multiple levels. It may re-entrench the carbon-based energy infrastructure on a global level and perpetuate inequity between industrialized and developing countries. Industrialized countries, especially the United States, have pushed for flexibility mechanisms that allow them to get credit for national emission reductions without taking domestic action. Two such mechanisms, the Clean Development Mechanism (CDM) and emissions trading, fail to address southern equity concerns or promise to significantly reduce global greenhouse gas (GHG) emissions.

An alternative supported by developing countries—per capita emission entitlements—would be ecologically, economically, and socially sound. All nations would reduce their per capita GHG emissions substantially, but the burden would be shared equitably. The southern perspective has been long neglected by

leading industrialized countries in climate change negotiations. It is high time that North and South worked together to create a climate change solution that all people and the environment can live with.

Equity in Climate Change Negotiations

Industrialized and developing countries must agree to share atmospheric space in an equitable manner. Although some nongovernment organizations (NGOs) go so far as to say that the climate treaty was not meant to deal with inequity in the world, equity must not be overlooked. Afraid that any debate on equity and entitlements would stop the United States from sending the treaty to Congress for ratification and end the protocol, most westerners—including the usually outspoken western environmental NGOs—have been largely mum on the issue. When it comes to dealing with a common resource such as the atmosphere, the concept of equity cannot remain in the background. It has to form the basis of any workable system. Inequity makes it very difficult for political leaders, especially in nations with an electoral democracy, to agree to a common action plan. It is fundamental to human nature that people cooperate only when there is a sense of fairness among them. Without equitably sharing, global solidarity will not be possible. Per capita emission entitlements are critical for equity in a climate change regime.

Equity is not only a moral issue but also a policy concern. According to the Stockholm Environment Institute (SEI), even if the North fails to curb emissions and relies on adapting to climate change, it must still face the geopolitical, demographic, economic, and human problems that will spill over from the South's likely inability to similarly adapt. Alternatively, if the countries of the North decide to avert climate change by forcing an inequitable burden on developing countries, they court similar problems.² In an increasingly globalized and interdependent world, industrialized countries cannot be insulated from the effects of climate change.

Historical and Future Responsibility for Climate Change

Industrialized countries owe their current prosperity to years of historical emissions, which have accumulated in the atmosphere since the start of the industrial revolution, and also to a high level of current emissions. Developing countries have only recently set out on the path of industrialization, and their per capita emissions are still low. The GHG emissions of one U.S. citizen were equal to

those of 19 Indians, 30 Pakistanis, 17 Maldivians, 19 Sri Lankans, 107 Bangladeshis, 134 Bhutanese, or 269 Nepalis in 1996.³

With such high levels of GHG emissions, industrialized countries are holders of natural debt, borrowing from the assimilative capacity of the environment by releasing waste gases faster than they can be removed naturally. These countries therefore should not think of resources devoted to curbing climate change as a sudden extra cost being imposed on them but as the inevitable need to repay the ecological debt that has helped them achieve their present wealth.⁴ Yet leaders of industrialized countries usually view emission reductions as an economic threat, not an ecological necessity.

Under these circumstances, any limit on carbon emissions amounts to a limit on economic growth, turning climate change mitigation into an intensely political issue. International negotiations under the UN Framework Convention on Climate Change (FCCC) aimed at limiting GHG emissions into the atmosphere have turned into a tug of war, with rich countries unwilling to compromise their lifestyles, and poor countries unwilling to accept a premature cap on their right to development.

Developing countries have demanded their space to grow while refusing to take on emission cuts at their current stage of development. The atmosphere is a common property resource to which every human being has an equal right. The people of industrialized countries have more than used up their share of the absorptive capacity of this atmosphere through their high emission levels in the past and in the present. To that extent, the global warming problem is their creation. So it is only right that they should take the initial responsibility of reducing emissions while allowing developing countries to achieve at least a basic level of development. Moreover, asking developing countries to reduce carbon emission levels now amounts to asking them to freeze their standards of living at their current stage of development. And this would amount to freezing inequality by ensuring that some countries will always be more developed than others in the world.

Developing countries will continue to grow, making huge energy investments in the next three to four decades. If these investments lock developing countries into a carbon energy economy like industrialized countries, it will be very difficult for them to get out of it. But if proper policies are put in place, developing countries can take a lead in creating a global market for zero-carbon energy technologies because they have two distinct advantages: They have more solar energy than most western countries, and they provide a huge niche market in several hundreds of thousands of their villages that are not yet touched by the power grid. Experts at SEI point out that because of the fossil fuel-based historic industrialization of the North, the South today finds itself facing a severely

compromised climatic system if it follows the well-trodden path of the North. The South therefore has to bear the extra cost of taking a different path and has to get it right the first time.

This raises several critical issues. Energy production is based on long-lived capital, which, once built, commits a society to a lifetime's worth of emissions. A power plant built today will still be emitting 30 years from now, by which time global carbon emissions must be reduced by 25 percent from the business-as-usual scenario. The South is witnessing rapid economic growth, and its major energy investment decisions will significantly contribute to the majority of global emissions in the decades ahead. There is very little that can be done to change the fossil fuel-based path for the next 20 years. But if efforts to make renewables competitive by 2020 are not made now, then the world will stay committed to a carbon-based energy economy well into the next century. A slower rate of reduction today will mean either faster rates of reduction later or a higher risk of climate change, passing on a very heavy burden to future generations.⁵

The United States, European Union, and G77 at Climate Change Talks

As a result of these political complexities, negotiations under FCCC have turned into a game between unequal partners. G77, the negotiating bloc of developing countries, has often found itself politically outmaneuvered by alliances between the two main industrialized country groups: the United States and the European Union (EU). Although the EU and the United States often come to the negotiating table with divergent viewpoints, with the EU pressing for tighter commitments and the United States unwilling to give in, the two have almost formed a habit of resolving issues among themselves. The EU usually ends up giving in to the lax U.S. position—the recent Hague conference being an exception—and the two expect the developing world to accept their conclusions.

In past negotiations, the United States and EU have sorted out their differences and presented developing countries with a take-it-or-leave-it deal on climate change. To prevent this from happening in the future, there should be greater coordination of strategy between the EU, G77, and China. At the November 1998 COP-4 meeting in Buenos Aires, a positive development from the point of view of developing countries was a perceptible shift in the EU's position away from the United States. Since Kyoto, the United States has pushed for being allowed to meet its entire emission reduction commitment through flexible mechanisms. The EU, G77, and China have resisted such a policy. At COP-6 in the Hague, developing country representatives feared that "another

climate meeting would end up serving the economic interests of the US more than the threat of global warming and climate change.”⁶ Yet EU ministers did not capitulate to U.S. demands, arguing that it was better to have no agreement than to be stuck with a bad one.

The G77 finds itself sidelined by the United States and EU in climate change negotiations. Southern governments participate as junior partners, worried about lectures and dictates from industrialized countries. After COP-6, the director of the Nigerian Conservation Foundation, Mutkar Aminu-Kanu, said, “We are beginning to think these conventions are no longer a negotiating process, that the West, in particular the US, calls the rest of the world to tell them what to do and if they won’t do it the whole thing folds.”⁷ The West takes G77 consent for granted, without the group’s participation in actual negotiations, and continues an extremely dangerous and undemocratic trend in international negotiations.⁸

Science Biased by the North

Added to these political complexities is the fact that tracking climate change, predicting the adverse affects with some degree of reliability, and pinpointing responsibility entails a degree of investment and scientific expertise that is available mostly to industrialized countries. This leaves developing countries, which have made little effort to expand their scientific capacity, dependent on northern scientists and institutions to tell them the extent and fallouts of global warming and to lead the negotiations in an intensely science-driven convention. Science has been used several times in the past to implicate developing countries, either by showing their future GHG contributions as increasing and counterproductive to industrialized country action or by making no distinction between the survival emissions of the South and the luxury emissions of the North. Also, there is an enormous disparity in North–South participation in the IPCC, with U.S. and European scientists making up most of all three IPCC Working Groups.

Moreover, the North-driven scientific process often places developing country concerns low on the priority list. For example, very little research has been conducted on the possible impacts of climate change on different countries and regions, leaving them unprepared to handle the adverse effects of climate change. Some scientists have even alleged that there seems to be a conspiracy of silence on this count because it may show that the most damage will take place in the developing countries. If this is true, there is a danger that the incentives for industrialized countries to take action against global warming will be low. A team of scientists sponsored by the UN have reported that on a vulnerability

index, developing countries are, on average, twice as vulnerable as industrialized countries and small island developing countries are three times as vulnerable.⁹

To add to this political and scientific confusion, industrial groups with a vested interest continue to generate science disputing even the fact that global warming is a threat to the world. According to the U.S. Internal Revenue Service, business groups in the United States have spent millions since 1991 to persuade the public and policymakers that there is too much uncertainty about climate change to warrant action. They claim that the world should wait for more conclusive evidence before taking any preventive measures. Their bankrolling of skeptical scientists and visible ad campaigns has fueled inaction by industrialized countries, especially the United States.

The U.S. Stance: Obstacle to Effective International Action

From Rio to Kyoto to the present, the United States has hindered efforts to curb climate change. The list of U.S. demands includes developing country participation, low commitments, and the flexibility to meet their entire commitment through emission trading and the CDM. Whereas the first demand questions social justice and equity, the very basis on which any global negotiation should be built in a civilized world, the latter two threaten the ecological effectiveness of the treaty.

In 1992, the FCCC committed the West to no more than what one country, the United States, was willing to commit. Industrialized countries accepted the “common but differentiated responsibilities” principle, a very diluted version of the polluter-pays principle. Through the framework convention, industrialized countries got away with not having to account for their historical emissions.

Before Kyoto, the U.S. negotiating position demanded “meaningful participation of key developing countries.” This served not only as a way to delay substantive action on climate change but also as a wedge in G77 unity. After getting host country Argentina and South Korea, members of the G77, to agree to “voluntary” commitments, the United States upheld them as examples of developing countries that wanted to see the Kyoto Protocol work. The definition of meaningful participation was left purposely obscure: Even if it eventually resulted only in developing countries agreeing to trade in emissions credits, it would give the United States and its allies a chance to meet their Kyoto Protocol commitments without domestic action.

The U.S. position at Kyoto, conditional on developing country participation, seeks to move the onus from the world’s biggest polluter to countries that are likely to be major polluters in the future. The U.S. stance shifts NGO and

media attention to developing countries, which are seen as holding up ratification by the United States. The terms for “meaningful participation” have been purposely left undefined but threatening, so that any offer from developing countries could be easily dismissed as “not meaningful enough.”

The United States argues that southern emissions will surpass northern emissions in 2035, but this claim must be put into perspective. Statistically, this means that in 2035, 20 percent of the world’s population living in the North will be emitting 50 percent of the carbon emissions and 80 percent of the world’s population living in the South will be emitting only 50 percent of the carbon emissions.¹⁰ In energy system changes, large developing countries such as India, China, and Brazil are not doing badly—in comparison with industrialized countries—with regard to reducing GHG emissions, according to a report published by the Worldwatch Institute in November 1997. All three have implemented meaningful policy reforms in the past decade, including politically difficult reductions in fossil fuel subsidies and improved efficiency in China.

Meanwhile, the United States is capitalizing on the fact that a protocol without their ratification is virtually meaningless because they are the world’s largest emitters of carbon dioxide. The U.S. Senate, negotiators, and industry have capitalized on their ability to hold negotiations hostage to their demands. Before Kyoto, the Byrd–Hagel resolution sent a clear message to the rest of the world: “Give us something we do not like and we won’t ratify. Let’s see where that leaves you.” This attitude had a significant effect in shaping the Kyoto Protocol.

U.S. Responsibility for Weakening the Kyoto Protocol

At the Kyoto negotiations in 1997, the United States came out the undisputed victor, having totally outwitted both the EU and G77 and China, the two major blocs opposing it. Kyoto was a “grand bargain” between a magnanimous U.S. commitment to reduce its emissions below its 1990 levels—something that the world media immediately hailed—and the acceptance of various trading mechanisms by other groups. Everything was contorted to fit this bargain. Brazil’s proposal for a punitive Clean Development Fund miraculously turned into a market-based North–South tool for emission trading called the CDM. Emission trading between nations got into the protocol literally in the last hour of the conference, well after the official clock had been stopped. Russia and Ukraine, despite their extremely low emissions compared with 1990, calmly walked away with no commitments to reduce below their 1990 levels, making a huge amount of emission trading a reality at throwaway rates.

In current discussions, negotiators may be missing the forest for the trees in

trying to appease the United States. Starting with the third conference of the parties (COP-3) in Kyoto, the FCCC process seems to have lost sight of its objectives. Mostly NGOs, but also governments, now seem to be working toward bringing the United States on board instead of looking for a sustainable solution to the climate change problem. The world's civil society, as represented in the climate negotiations, seems to be willing to give up on equity. Doing so will hinder the world's ability to transition to renewable energies and achieve the emission reductions needed to prevent major climate change.

To be specific, the G77 and China have consistently opposed the U.S. demand for including forest management and changes in sinks as a mitigation method in a climate change treaty. Sinks became the center of controversy in Kyoto when the United States, France, Australia, and New Zealand demanded that land use changes and forestry (LUCF) be included while calculating commitments by countries.¹¹ But in November 2000, the IPCC released a report stating "that there are too many complications associated with the use of LUCF to 'fix' carbon."¹² Developing countries generally believe that land use changes should not count toward emission reductions in CDM and in emission trading schemes. Counting LUCF would favor northern countries with large boreal forests, create a perverse incentive to deforest in tropical areas to receive credit for reforestation later, and allow industrialized countries to get credit for planting trees in developing countries under CDM. Most of all, allowing LUCF to count for emission reductions would not combat additional GHG emissions.

The Kyoto Protocol: A Weak and Flawed Solution

The Kyoto Protocol promises to be a weak agreement because of flexibility mechanisms, lack of a compliance mechanism, small mandated emission reductions, sink loopholes, and inequity within the accord. Nine prominent U.S. scientists and economists, including John Holdren, member of President Bill Clinton's Committee of Advisers on Science and Technology, note that the Kyoto Protocol assigns emission caps to the industrialized countries based on their 1990 emission levels. This "rewards historically high emitters and penalises low emitters . . . by basing future emission caps on past levels."¹³ This agreement based on historical levels would allow high emitters to impose environmental damages on other countries, in violation of the polluter-pays principle. "This contravenes international environmental law," says this group of experts on climate and energy policy. They argue that the U.S. government's insistence on "meaningful participation" of developing countries will block the implementation of the Kyoto Protocol because the long-term equity concerns of the South

have not been addressed. Southern countries cannot reasonably be expected to restrict their future emissions without being assured of a fair allocation scheme that will not impair their ability to develop.

Through flexibility mechanisms such as emission trading and the CDM, Kyoto would ignore equity issues, allow industrialized countries to avoid domestic emission reductions, and lock renewable energy out of the market. Most southern countries remain wary of flexibility mechanisms for a variety of reasons, including their impression that FCCC does not call on them to take the lead in GHG emission reduction, and that “meaningful participation” could be the first step on a slippery path toward voluntary commitments.

SEI experts argue that if northern countries rely heavily on flexibility mechanisms, they risk being unprepared for much deeper cuts ultimately needed to prevent climate change.¹⁴ This is because any strategy that seeks to obtain least-cost carbon emission reduction options inevitably will focus on improving energy efficiency in the carbon energy sector. It will give the North least-cost options to meet emission reduction targets and allow them to continue on a carbon-intensive path.¹⁵ Therefore, emission trading should be limited to projects that promote the zero-carbon energy system and should not be allowed for projects that promote the carbon energy system. Also, there should be a strict limit on the amount of credits that can be bought to count for domestic emission reductions. Such a cap on credits for emission trading would push industrialized countries toward domestic emission reductions.

In addition, the Kyoto Protocol lacks a compliance mechanism to make it enforceable. Because this is the first global agreement in which only the powerful industrialized nations have taken on commitments, it is not easy to conceive how poorer nations will be able to apply effective sanctions against the powerful nations if they do not meet their commitments.¹⁶ In contrast to the Montreal Protocol and the Convention on International Trade in Endangered Species, the Kyoto Protocol lacks a compliance mechanism based on trade sanctions. It is therefore unenforceable by “hard” law and subject to the voluntary participation of nations that ratify it.

Worse yet, the Kyoto Protocol by itself will do nothing to solve the climate change problem. As SEI experts put it,

The direct GHG impact of the mandated reductions during the first budget period will amount to an almost negligible effect; they would reduce atmospheric carbon dioxide levels by only about one-third of one percent relative to where they would be in 2010 without a Kyoto Protocol.¹⁷

In fact, the protocol could even worsen the situation by locking renewable sources out of the energy market. As a global environmental agreement, it runs the risk of appeasing civil society, NGOs, and governments with a misplaced faith in a flawed accord.

Kyoto does not right North–South inequity but perpetuates it through three main inequities in the agreement. The first is that the protocol allows industrialized countries to bank emissions for future use. If an industrialized country reduces more than its target for 2010, then it can bank emissions even though it already has very high per capita emissions. But India, China, and Nepal, with extremely low per capita emissions today, cannot bank anything today for their future use. Second, a Dutch study points out that burden-sharing criteria that take into account historical emissions or a per capita approach favor developing countries, whereas the inclusion of all GHGs and land use–related emissions favors industrialized countries. The Kyoto Protocol does precisely the latter.¹⁸ Third, if the Kyoto strategy is followed, then developing countries will soon have to undertake reductions at much lower baseline emissions than those industrialized countries had in 1990 or risk serious impacts of climate change that they will least be able to afford.

On a positive note, an SEI report concludes that the real importance of the Kyoto targets lies in their potential to motivate the North to determinedly direct resources toward developing and deploying technologies, infrastructure, and institutions that will build momentum toward long-term GHG mitigation options and progressively deeper GHG reductions. If Kyoto hastens a global transition to renewable energy, it will have served an important function for North and South.

Objections to the CDM

Of the three flexibility mechanisms, CDM promises to have the most impact on developing countries. Yet it is replete with flaws, making it particularly unpalatable to developing countries. Possibly the worst aspect of CDM is that it helps the North to buy up the cheap emission reduction options available today, leaving the South to pay a heavy price tomorrow. Economists predict that the carbon savings options that currently cost \$10–\$25 per ton of carbon could cost \$200–\$300 per ton in the long term.¹⁹ When the South itself has reached high levels of energy efficiency and therefore its cost of curtailing emissions is high, the North will have no economic incentive to buy emission credits from it. And if global warming is still a threat—as it definitely will be because industrialized countries would have taken little action domestically—then the pressure will

mount on developing countries to take expensive emission reductions themselves.

In other words, CDM encourages the current generations of developing countries to sell off their cheaper emission control options today, leaving future generations saddled with high-cost options tomorrow. It offers cash-strapped developing country governments an opportunity to discount the future, and nobody knows what would be the form of international cooperation at that time.

If developing countries participated in CDM, they would sell their cheap options for reducing emissions and not even get credit for it in the global balance sheet.²⁰ This buying and selling would take place without any property rights framework, essential for market-based systems. The South Asian Equity Group issued a statement warning that trading without property rights or entitlements would amount to a mortgaging of the future interests of the South. In addition, host countries of CDM projects cannot sell emission reduction credits. Instead, Annex I investors can carry out reduction projects in developing countries and sell the resulting credits at a higher price to countries in need of the credits. This represents yet another equity gap in the climate negotiations.

In terms of ecological effectiveness, CDM could ultimately prove to be a disaster. CDM will subsidize the very source of the problem, the carbon-based energy system, because all least-cost options are in the carbon-based system. By subsidizing carbon-based energy technologies, it will create further obstacles to the penetration of non-carbon-based energy technologies and could lock them out for several decades, thus ensuring that a high order of climate change becomes inevitable. Developing countries have expressed concern about whether CDM will end up promoting sustainable development or become yet another conduit for outdated technology. Developing countries stress that the host country should have the last word on what constitutes sustainable development, and CDM projects should spell out clearly their net contribution to development.

Developing countries have two main financial objections to CDM. As currently envisioned, a share of CDM projects will also be used to pay for the adaptation costs of developing countries. This provision amounts to taxing the poor to pay the affected poor. There is no such provision in the other mechanisms (JI and emission trading) meant for emission trading between industrialized countries. Also, developing countries demand “financial additionality” for CDM projects (i.e., that they use funds beyond official development assistance and direct investment flows to developing countries). Without additionality, industrialized countries could simply redirect funds currently earmarked for other southern development projects.

CDM: Bypassing Poorer Developing Countries

Another shortcoming of CDM concerns how it could bypass poorer developing nations. CDM under the present framework, without entitlements, is unlikely to benefit poorer nations among the G77 because industrialized countries are likely to give preference to projects in the more technologically rich countries among the G77, which will provide them with fast and cheap emission credits.²¹ Within a purely market-driven framework, most CDM projects will go to larger and more industrially advanced developing countries such as India and China.

Africa has its own qualms with CDM as currently structured. African governments have argued that because Africa's carbon emissions are low and their energy consumption is only 2–3 percent of the global energy resources, there are few options for implementing CDM projects that reduce emissions from existing sources. So CDM should be designed to reward projects that promote socioeconomic development using clean technologies, and a concept of emission avoidance should be established. A project promoting infrastructure development in the energy sector would not only meet Africa's sustainable development needs but also avoid emissions. Africa can be meaningfully integrated into the Kyoto Protocol only if the principle of emission avoidance is incorporated.²² African experts therefore express two key concerns about CDM: that a purely market-driven mechanism will bypass Africa and that even if it reaches Africa, it will not meet the region's priority concerns for sustainable development such as food and energy security of the poor majority. But a CDM that functions under an emission entitlement scheme will ensure that all poor countries can participate in it.

Economical, Ecological, and Equitable Action

To put a stop to this political, economic, and scientific game-playing—which currently seems to be concentrated on innovative and complicated ways to meet commitments without actually reducing carbon concentrations or to buy cheap options from developing countries—solutions that meet three criteria are needed. The first is their ecological effectiveness: whether they actually reduce the concentration of GHGs in the atmosphere. The second is their economic effectiveness: To be acceptable to both industrialized and developing countries, they must have the minimum possible impact on the global and national economies. And, finally, in the interests of fairness and global cooperation, the solutions must be socially just and equitable toward all countries. It is a challenge to all participating countries, and particularly to the world's civil society, to ensure that all measures agreed to under FCCC meet these three criteria.

This challenge is heightened because the world is divided into three key climate camps today. The first consists of nations that want to take serious action on global warming. For island states and European states with strong Green parties, the Kyoto Protocol must lead to ecologically effective action. The second camp consists of nations that believe that emission reduction will come at a high cost and are searching for lower-cost solutions. For the United States and other countries, Kyoto must lead to economically effective action. The third group is composed of poorer nations that depend on carbon emissions for their present and future development. Led by India, China, and other poor nations, they want the Kyoto Protocol to undertake equitable and socially just actions. The three objectives—of economic and ecological effectiveness and equity and global solidarity—can be put together to develop an action plan to keep climate change at tolerable levels.

One such way would be a per capita emission entitlement approach. An entitlement method might calculate the emissions absorbed annually by the global atmospheric sinks and distribute these emissions equally among all the people of the world, providing each person with an equal entitlement. Empirically, the EU's burden-sharing agreement shows how emissions can be equitably divided into entitlements. If the per capita emission entitlement were set at 0.38 tons of carbon per year, for example, industrialized countries would have to reduce their emissions sharply, and many developing countries would have room to grow. These entitlements could then be traded between countries. Those who consume more than their fair share of the world's environmental space would have to buy the extra space they want to use from those who do not consume their full share. In this way, the world will begin to value the unvalued commons.

The biggest advantage of tradable equitable emission entitlements is that they immediately engage developing countries and provide them with an incentive to keep emissions low. Trading of emission entitlements would immediately give them an incentive to move toward a low-emission developmental path so that the benefits from emission trading can stay with them for a long time. It would also provide an "enabling economic environment for technology transfer"²³ and serve as a strong disincentive against leakage because countries would be wary of allowing high-GHG economic activities to come into their countries. Entitlements ensure that North–South cooperation will remain open to southern countries as long as they are low emitters. They will not be entirely dependent on the least-cost options offered by the CDM. Thus, equal per capita emission entitlements offer the most just, effective, and meaningful way of getting developing countries to engage with the climate change problem.

What developing countries should not accept is a principle of emission trading built solely on the argument that they provide a lucrative opportunity today

to reduce emissions cheaply. Emission trading cannot simply be carried out to achieve economic efficiency. It must be undertaken in an environment that also promotes ecological efficiency and global solidarity. The purpose of equity and an equal per capita entitlement principle is not to force industrialized countries to drastically curtail their economies. It is to create a framework for global cooperation so that the world can move as quickly as possible toward a world economy that can keep on growing by using renewable energy. A three-pronged combination of emission trading, equitable entitlements, and promotion of renewables thus constitutes a truly meaningful plan of action. Such an approach would help change consumption patterns and leapfrog into a technological world that is less carbon energy intensive.

In crafting an effective accord to curb climate change, northern and southern negotiators must find a way to significantly reduce emissions while not ignoring developing country concerns for equity or the global desire for economic development. Negotiations must give appropriate primacy to moral and ecological concerns instead of purely economic concerns. In relying on emission trading and the CDM, the Kyoto Protocol remains far from achieving this objective. A per capita entitlement approach would work far better at spurring a transition to renewable energy, addressing North–South inequities in fuel use, and ultimately curbing major climate change.

The Kyoto Compromise in Bonn and Marrakech

The meeting in Bonn in July 2001 to flesh out the Kyoto Protocol was predictably difficult. 180 countries finally reached an agreement on rules to implement the protocol, after almost six months of uncertainty on the issue. But we did not expect the world to give away so much to get so little.

George Bush, leader of the world's biggest economy and polluter, had already declared that the protocol was “fatally flawed in fundamental ways” and walked out of the multilateral discussions. The final permutation was that Japan, Canada, Australia, and Russia held the key to the agreement. These polluters played their cards well, prevaricating to the last moment to ensure that they got the deal they wanted.

First, these countries wanted major concessions on the use of vegetation to sequester carbon. They got it, to an amazing extent. Now every small area under trees can be calculated as a sink. Every scrubland is included because an area with 10–30 percent tree cover has been defined as a forest. And even areas with no trees temporarily, but which are expected to revert to being forests, can be included. Countries can also add up any management measures taken to improve productivity of forests, agricultural, and grazing lands as their contribution to cutting GHG emissions. For instance, if a new fertilizer use enhances

carbon storage, then the impact it will have on the ability of the cropland to soak up carbon will be used to calculate the reduction in the country's emissions.

Under the final agreement Japan, for instance, can meet well over 50 percent of its reduction commitment by using better forests, grazing lands, and even better agricultural management practices. The same sink advantage is gained by all other polluters, which can either fix carbon in their own lands or buy their emission reduction targets by fixing carbon in developing country forests or agricultural or grazing lands. The enormous scientific uncertainties in measuring the effective reductions in emissions makes the Kyoto compromise a grand and shameless fudge account.

Second, given this extremely creative accounting, the polluters wanted an agreement in which the crooks, if caught, would not get penalized. The next big concession came on the issue of compliance. In the Kyoto Protocol, the world had to design an enforcement mechanism for the rich and powerful. The initial talk was for a punitive and legally binding compliance regime, which would put in place severe monetary penalties for not meeting the target. But the final agreement lacks teeth, with the enforcement branch politely called the facilitative branch. With an ineffective compliance regime, the Kyoto Protocol is now a voluntary agreement, not legally binding.

But why should we be surprised? The climate negotiations are not about the environment but the economy, and every nation is working overtime to protect its right to pollute. In this sham act, Japan has been the convenient ploy to get concessions. The EU (which makes much of its green commitment) has a history of caving in at the very last moment. In the same week when it was busy making euphoric proclamations about how it has saved the world by getting an agreement, the EU decided to postpone for another 10 years its program to remove subsidies on coal, the filthiest and most carbon-intensive fuel. Before the "historic" Kyoto agreement, the EU was going to phase out these subsidies starting July 2002. The EU has also decided to postpone its plan for domestic emission trading. Why? Because its own "green" companies complained that they would lose their competitive advantage.

After round 3 discussions this past November in Marrakech, the protocol still has no teeth in its realization, but marks the beginning of a new phase of action and implementation. By continuing to exploit their pivotal positions, Japan, Canada, Australia, and Russia managed to get more concessions from the EU. An agreement deciding upon the legally binding nature of enforcement mechanisms in the protocol, specifically if an industrialized country does not meet its GHG reduction commitments, was deferred to the first conference of parties after the protocol's implementation.

Still without US involvement and almost a year after the climate talks failed miserably at the Hague, Marrakech is a sign that countries are succeeding in

resurrecting the protocol. Eligibility conditions using mechanisms, like emissions trading and project based investments, helping industrialized countries fulfill their production targets at a lower cost were hotly debated, with the four countries trying persistently to undermine the conditions. The final deal, however, upholds them. Countries will be allowed to bank credits generated from project-based investments in developing and industrialized countries, but by only up to 2.5 percent of the amount they are allowed to emit. Parties also decided that a developing country could unilaterally start a project and sell credits to industrialized countries.

The next grand compromise, we predict, will come when the world bows to the United States. Bush has made it clear that the most important part of his opposition comes from the fact that key developing countries such as China and India do not have binding commitments under the protocol.

At the next round of talks, which is predicted to happen at the end of October 2002, developing countries continue to be the next targets. The probability is that they will get a 10-year grace period to take on legally binding commitments.

G-77 countries are blissfully lost in the quagmire of discussions on funding and technology transfer. They fail to realize that without an effective climate convention they will lose a lot more than promises for a fistful of dollars. Emerging science tells us that climate change will result in greater climatic variation and extreme events such as floods, droughts, cyclones, and sea level rise, leaving poor people at the very margins of survival to become even more vulnerable. Therefore, it is in the interests of India and other developing countries to demand that the industrialized North take effective and measurable action to reduce its emissions.

Notes

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