## CLEAN DEVELOPMENT TO ADDRESS GLOBAL CLIMATE CHANGE, INEQUALITY, AND ENVIRONMENTAL RIGHTS

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In the last decade, it has become globally accepted that climate change, due to the increased human production of greenhouse gases, is in fact taking place. International concern has culminated in several agreements aimed at mitigating the problem, such as the U. N. Framework Convention on Climate Change, the U. N. Conference on Environment and Development, and the Kyoto Protocol, through which countries have banded together to address global climate change. There are significant inequalities inherent in the issue of global climate change, such as in who will suffer the effects and who created the problem. In his article, "Global Inequality and Climate Change," J. T. Roberts analyzes the injustices of the issue and concludes that future development in industrializing countries must be "decarbonized." He says, "The innocent are suffering the effects of something (our consumption) from which they drew little or no benefit. As members of the small island states whose cultures are likely to be decimated have pointed out, to understand the links and yet willfully allow the destruction of cultures and people seems plainly immoral" (502). Although they have done little to contribute to the problem in the past, developing countries will play a significant role in efforts to control global climate change in the coming decades because of their rapidly increasing carbon emissions. The desire and efforts of these countries to develop in the same ways that industrialized nations have, in order to improve their quality of life, is an issue that poses many difficulties to fairly and effectively addressing the issue of global climate change. For equity's sake, these countries should have opportunities to develop their economies, but the prospect of the enactment of global climate change agreements to control carbon emissions threatens their desired economic prosperity. Shari Collins-Chobanian discusses different aspects of and issues surrounding "environmental rights" in her essay, "Beyond Sax and Welfare Interests: A Case for Environmental Rights." Ideas about the role of economic wealth and the market economy in "environmental rights" will be used here to analyze the

inequalities of the issue of global climate change and proposed solutions to the problem, such as the Kyoto Protocol, the international agreement to reduce greenhouse gas emissions. Because society is based on a market economy, clean investment through public-private partnerships using the Clean Development Mechanism (CDM) of the Kyoto Protocol is the most efficient way to address the problem of increasing greenhouse gas emissions in developing countries and its contribution to global warming. This type of investment effectively encourages developing countries to participate in the agreement because it addresses their development and equity concerns and provides them with increased access to that which is necessary for living. However, creation of a market economy results in an unsustainable lifestyle. So this solution for developing countries is a short-term one, and will eventually result in the deprivation of that which it was intended to ensure: access to a successful livelihood, which is considered to be an environmental right.

The Kyoto Protocol is the global treaty aimed at limiting greenhouse gas emissions internationally in order to prevent the negative consequences of global warming. Although developing countries have had a negligible impact on the buildup of greenhouse gases in the atmosphere to date, they play a significant part in international efforts to lower greenhouse gas emissions because their emissions are progressively becoming a larger proportion of globally emitted gases. The inequality of circumstances between developed and developing countries in negotiating the terms of the Protocol can be illustrated by the fact that developed countries have put pressure on less-developed countries to lower their emissions. Despite the fact that lessdeveloped countries have not contributed significantly to the problem, they are being pressured to participate in binding agreements and to agree to place limits on their emissions because it is unlikely that reductions by other countries alone will be sufficient to solve the problem. Roberts asserts,

It is true that environmentally speaking, one cannot handle this problem of global warming without addressing the boom of emissions in the developing countries. This point has been seized upon by the United States—headquartered oil and coal industries, who have

mobilized think tanks, journalists, scientists, and senators to block any progress on the Kyoto treaty until the poor nations also agree to limits on their carbon emissions. (502)

This impediment to the Kyoto process has essentially led to gridlock. Real progress has been limited. Developing countries are concerned that limits put on their greenhouse gas emissions would limit their prospects for development, and as a result they will not agree to participate. Should they be expected to? To require, through limits on carbon emissions, that these nations stop at a level of development that more industrialized nations would never consider returning to seems hypocritical, and is, according to Collins-Chobanian, a violation of their basic rights. During negotiations, China's lead negotiator said, "In the developed world only two people ride in a car, and yet you want us to give up riding on a bus" (Roberts 506). This claim really hits on the injustice of the situation. Is it fair to ask the people of these countries to do without what people in the developed world take for granted? Shouldn't they have the right to develop their economies in the same ways that other countries strive to?

Many people in developing countries are severely impoverished. They lack the means to provide themselves with even the basic requirements of life. In her article, Collins-Chobanian describes welfare interests, which she uses as the basis for "environmental rights," as "the most important interests humans have and include physical, emotional, and intellectual health; a secure environment; the absence of coercion; and (assuming an economy) minimal economic wealth." (133). Her idea is that all human beings should be provided these conditions and, according to these principles, the populations of developing countries should have the right to strive for minimal economic prosperity. The prospect of limits being put on their greenhouse gas emissions threatens this right. Developing countries must participate in efforts to lower greenhouse gas emissions in order for those efforts to be effective, but negotiations must address their equity concerns and ensure their rights to economic prosperity if they are expected to contribute. In his article, "Global Governance for the Environment: Equity and Efficiency," Laurence Tubiana discusses how considerations of equity are essential for the success

of environmental agreements. He says that, "taking equity into consideration may well play a decisive role in the launch of a policy of cooperation between nations displaying a substantial degree of inequality" (335). The only way for the Kyoto Protocol to be successful is for equity in the right to economic development to be taken into consideration in negotiations so that developing countries will participate. Development concerns are a key equality issue for developing countries. Acknowledging these concerns in negotiations and including measures that address them in Kyoto will contribute to the fairness that Tubiana deems necessary for success; but development concerns are only one of the issues that need to be addressed.

To ensure that developing nations participate in negotiations to address climate change, the inequalities in who will bear the brunt of the consequences of the warming climate, and the subsequent violation of environmental rights, will need to be addressed. Have developing countries made a significant contribution to the problem of global warming? No, but they will disproportionately suffer the impacts when compared to industrialized nations that have been the primary emitters of greenhouse gases. These impacts have the potential to threaten their prospects for sustainable development. In their article, "Towards an Equitable Global Climate Change Regime: Compatibility with Article 2 of the Climate Change Convention and the Link with Sustainable Development," Metz et al. discuss the disproportionate effects that elevated levels of greenhouse gases in the atmosphere will have:

Wherever greenhouse gases are emitted, the negative impacts from rising greenhouse gas concentrations such as threats to food production, ecosystems and human settlements will be unevenly distributed. Developing countries are much more vulnerable than industrialized countries due to their larger dependence on agriculture, limited infrastructure, lack of knowledge and technology and their limited financial, institutional and governance capabilities. These climate change impacts can seriously undermine the prospects for sustainable development.

(211-12)

Developing countries will be much more seriously affected by the impact of global warming than developed countries, which is obviously unfair. Because of their lower levels of development, government, and infrastructure, they will experience much more dramatic suffering in the wake of the rising climate. They will suffer decreases in food availability and ecosystems and settlements will be destroyed by changes in temperature and rising sea levels. Prospects for development will be threatened because of the hardships that they will suffer. The developing world will need to address the negative effects that climate change will have and will not be able to put resources toward development. The tragic losses that will be suffered as a consequence of global warming, discussed above by Metz et al., constitute a violation of the environmental rights described by Collins-Chobanian as "the most fundamental to life," including the basic needs of food, air, water, and shelter (133). In a market economy, this includes the right to development. Collins-Chobanian says that "in a market economy, the right to earn a livelihood is required to provide necessities for life. Prima facie, the right to earn a livelihood (required for sustaining life) and environmental rights (required for sustaining life) have rough equality" (141). Because development is needed to earn a livelihood in a market economy, it is fundamental to sustaining life. Concerns about global warming's consequences are linked to the development pursuits of developing countries and threaten their environmental rights. To take equality concerns into consideration, as Tubiana suggests, and ensure the success of the treaty, these issues must also be addressed in the Kyoto Protocol. Because international society is becoming increasingly based on the market economy, the easiest way of securing environmental rights, which are the basis for survival, is through development of an economy. Consequently, the easiest way to address the issue of development in developing countries so that they will participate in global climate change agreements is through the market. A market economy can be established in these countries to foster better access to jobs and to the necessities of life, but the lifestyle that generates and is generated by that economy often has a negative impact on the environment.

The prospect of clean, sustainable development has the potential to address effectively the issues of inequality and to

ensure the environmental rights of those in less-developed countries through the "decarbonization" of development in those countries. What this means, essentially, is that new development should involve technologies that emit low amounts of greenhouse gases. Roberts states that development must be "delinked from fossil fuel consumption" (507). To minimize carbon emissions and "delink" development from fossil fuel consumption, technologies used by new industries in developing countries must be based primarily on renewable resources rather than on fossil fuels. Development of this sort is sustainable because it does not involve the use of finite resources that will eventually run out. Private investment in "clean technology" has had some success in developing countries. In his article, "The Legacy of Rio," Christopher Flavin discusses the outcomes of the 1992 U. N. Conference on Environment and Development, known as the Earth Summit. He describes how the opening up of markets in developing countries has accelerated the degradation of natural resources, but at the same time has accelerated the transfer of more environmentfriendly technologies. He states that "opportunities abound for profitable investments in more environmentally benign products and processes" (350). Removal of trade barriers has spurred the growth of new markets in developing countries, but due to weaknesses in their governing regimes and the desire to bring in new industries, environmental health has suffered. Private investment prospects for technologies that are more environmentally benign have resulted. These include investment in less carbon-intensive technologies (Flavin 350). However, success stories concerning investments in alternative fuel sources in poorer countries are few and far between, which suggests that there are problems with the prospect of relying on clean development to address climate change. But if future development projects can evolve, primarily using these technologies, developing countries will be able to advance their societies without fear that participation in climate change negotiations will affect their ability to develop. If alternative fuel sources can be made available, these countries can participate in binding agreements to lower their emissions through the Kyoto Protocol and still have opportunities to further their development and improve their living standards. The success of this prospect is difficult to project into the future

when one considers the sporadic and unpredictable occurrences of successful alternative fuel markets, even in countries with fully developed economies. Will it really work? The potential for this type of clean development to address global climate change inequalities, coupled with private investment opportunities in developing countries, provides concrete possibilities for effective ways to address the issue of development through the market. However, Collins-Chobanian argues that the market economy fosters growth and threatens sustainability. She states, "the market economy does not value sustainability, but growth" (141). This argument is exemplified by the above description of the degradation of natural resources that resulted from expanded markets in developing countries. The general nature of the market economy is to accelerate the use and degradation of finite natural resources, but because clean development is based on renewable resources, it can be considered sustainable. But is the economy that it creates sustainable? Is it logical to assume that just because less carbon-intensive development is encouraged, all subsequent development of the economy will be sustainable? Other problems with this proposed solution to the development problem are high risks and initial costs associated with clean investments.

Clean investment projects in developing countries are often associated with heightened risk and involve technologies that are significantly more expensive to implement than more readily available technologies. In "Towards a Private-Public Synergy in Financing Climate Change Mitigation Projects," Zhang ZhongXiang and Aki Maruyama discuss the risks that are involved with climate change mitigation projects. These risks include those related to the performance and management of unconventional technologies, and regulations of investment and import of the technologies (1370). Additional costs are required to manage these risks and to establish the institutions needed to deal with risk issues. These institutions, along with environmental monitoring institutions, are often lacking in developing countries. When investments are made in low-emission technologies, the issue arises of who should pay the costs additional to those of least-cost technologies, which Cooper and Arrow discuss in their article, "International Approaches to Global Climate Change/A Comment on Cooper." They say,

It seems reasonable to decline to finance infrastructure investments that are unnecessarily damaging to the environment and acceptable to ask the borrowing country to pay fully for the incremental cost of any environmental benefits that will accrue directly to it, but it is reasonable to expect the international community to pay most or all of the incremental cost (depending on the income level of the borrowing country) associated with greenhouse gas emissions in cases in which the benefits will accrue to the world as a whole. (44)

The populations of developing countries profit from these investments because their economy is being developed, providing them with additional capacity to gain access to environmental rights. However, the benefits of investment in clean technology go to the world as a whole, so it is only fair that the international community cover or supplement the additional costs. Similarly, when private investments in clean technologies in developing countries involve significant risks and additional costs to manage these risks, the international community should cushion these costs in order to promote investment, the benefits of which accrue to the world as a whole in the form of reducing the risk of global climate change.

The negotiations of the Kyoto Protocol have yielded a method of mobilizing investments in clean development projects in less-developed countries in the form of the CDM, which Roberts describes in his article:

The objective of the CDM is to help the South further its development goals in a less carbon-intensive fashion, while offering the North some flexibility in meeting its Kyoto commitments. As envisioned, the fund would channel Northern investment, technologies, and practices into developing country projects such as solar instillations [and] wind farms . . . . A share of the proceeds from the mechanism will be used to help particularly vulnerable developing countries, such as island states and Bangladesh, cover the costs of climate disruptions. (507)

The use of this mechanism would allow less-developed countries to further their development while preventing increases in greenhouse gas emissions. It would encourage industrialized countries to make clean investments by offering them an incentive: a more efficient way of meeting their Kyoto targets by reducing emissions in the places where it is most cost-effective to do so. The development issue that plagues effective climate change agreements can be addressed through use of the CDM. Zhang and Maruyama illustrate the advantages of this part of the Kyoto Protocol:

The mechanism has the potential to help developed countries meet their national emissions targets cost effectively, while contributing to sustainable development in developing countries. Although the ultimate responsibility for fulfilling the national reductions commitments rests with each government, the Kyoto mechanisms open the door for participation with private entities. (1371)

By encouraging clean investments by governments and private companies, the mechanism effectively addresses developing countries' concerns of equity that include development and the costs of dealing with the negative impacts of global climate change. But who is really making decisions concerning these investments? Will foreign (most likely U.S.) corporate intervention really benefit these countries, or subject them to a whole host of other problems? Through market mechanisms, which afford environmental rights by providing a livelihood, developing countries can have the opportunity to improve their quality of life; but in the long run, will the economy be sustainable? Or is the CDM merely another way of expanding the market economy to avoid dealing with environmental issues? In spite of the obvious advantages in addressing issues of inequality through the market, there are identifiable problems with the current system that have to do with the investment risks and high costs described above. Zhang and Maruyama advocate private foreign investment in developing countries through the CDM of the Kyoto Protocol. However, the authors assert that because of the risks and high costs involved in these investments, public assistance to complement private investment will be necessary to make the CDM successful and to bring it into full play (1373). Public, internationally funded assistance can be made available through the CDM to supplement the additional costs of investments in clean technologies. It is only

fair that the international community, through public financing, should take responsibility for these additional costs because the benefits will accrue collectively to the globe. This linkage of private investment and public finance through the CDM is necessary to provide access to environmental rights in developing countries through the market and to address other issues of inequality in global climate change agreements. But, in light of the many negative outcomes associated with the market economy, is this really the most effective way to address the problem of global climate change? Does this solution ignore the problems created by the lifestyle that results from the institution of a market economy? Should further economic development through the creation of a market economy be encouraged in developing countries or are the methods of addressing global climate change laid out in Kyoto just another way of evading the real problems?

Although clean investment by means of a public-private partnership through use of the CDM has the potential to address effectively issues of equality, and can provide increased access to basic necessities in developing countries, encouraged use of the market economy to provide these things creates an unsustainable lifestyle. Even if clean investments can tackle the global climate change problem by unlinking development from the production of greenhouse gases, any intensive development creates a lifestyle that has many other negative impacts on the environment. The right to earn a livelihood, which is considered an environmental right, is provided by capitalism; but the lifestyle that results is not sustainable. Collins-Chobanian writes that "the 'need' created in a market economy for people to work in polluting industries that create luxury goods, in order to get a paycheck to buy the necessities of life, is not a fixed need, but one that can and should be changed" (142). The livelihood is needed but the lifestyle is not. Other lifestyles exist that are more sustainable and less damaging to the environment. Through the market, clean development in developing countries can address the problem of global climate change. Even though the basics of life can be provided this way, improving quality of life for people who, in light of equity, deserve it, the consequences of the lifestyle that results from the creation of a market economy will eventually threaten the environmental rights of people. The solution only ensures short-term gain for

developing countries, because ultimately a lifestyle based on the creation and subsequent fulfillment of desires will yield negative consequences and will result in threats to environmental rights. In the long run, the Kyoto Protocol and the CDM neglect to really address the needs and rights of people in developing countries. Furthermore, the market economy puts an increased strain on natural resources and ruins the ability of people to provide their own livelihood through their own sustainable practices. Collins-Chobanian states, "The market economy is fueled by environmental resources, and does not always meet needs, while destroying the ability of many to meet their own needs from such methods as biodiverse, traditional agriculture" (141). The question then arises: How can we rely on continued growth as the ultimate solution to our environmental problems? Unless the problems with the market economy and its associated lifestyle are dealt with, the methods of addressing global climate change that are currently being considered and employed will not produce an improved situation for people in developing countries. These solutions are contrary to the way we need to think about dealing with environmental issues. Are we willing to make the sacrifices these alternative solutions entail?

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