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文章 Articles

Saving Kyoto

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中文版本

The carbon market can be used to avoid a stand-off between the major emitters at Copenhagen and forge a consensus among nations. Graciela Chichilnisky sets out her proposal.

As nations get ready for the climate-change showdown at Copenhagen in December, the pieces are falling into place for a major confrontation between the two largest emitters: China and the United States. The United States does not want to limit its emissions unless China does. Yet China is protected by the United Nations Framework Convention on Climate

Change (UNFCCC), Article 4, under which developing nations are not required to limit emissions without compensation.

The stand-off between them is reminiscent of the cold war between the Soviet Union and the US in the middle of last century. Both powers refused to limit their nuclear arsenal unless the other did first. The times are different, the weapons are different, but the situation is the same. And the emissions of the two countries alone could cause catastrophe for the world.

Many think that China is no longer a developing nation and must be treated differently, because of its enormous economic strides since 1997, when the Kyoto Protocol was adopted. Yet China is still a poor nation – it ranks below more than 100 other nations in GDP per capita. Moreover, if every person in the world emitted as much as the average Chinese, global warming as we know it would not exist. According to the Climate Analysis Indicators Tool, emissions per capita in the United States are 7.1 times more than that of China from 1990 to 2005. If the entire world emitted as much as the average Chinese citizen, the world would emit 12 gigatonnes of carbon dioxide per year, rather than the 30 gigatonnes we do today.

The UNFCCC became international law in 1992 (the United States itself ratified it that year), so breaking the convention rules is breaking the law. Breaching Article 4 of the convention could isolate China from the rest of the developing nations, at a time when it faces challenges at home and from the industrialised nations.

I propose a solution that overcomes this stand-off and does not require that China breaks ranks with the developing world.

The Kyoto Protocol was the first international environmental agreement based on a global market solution – one that changed the value of the global commons. The carbon market saved the Kyoto Protocol, when the agreement was perilously close to failure in December 1997. I suggest modest changes in Kyoto's carbon market that could shift the playing

field on which the Copenhagen agreement will be negotiated – making it much more likely to have a successful outcome that is advantageous to the United States, European Union and Japan, and is acceptable to China, India, Brazil, Mexico and all the developing nations. It also fits the needs of the small island nations, whose survival is at stake.

The formula I propose uses the Kyoto Protocol's own structure and updates it to overcome the impasse and forge a consensus between rich and poor nations. It has two aspects: *financial* and *technical* assistance.

The financial part is an extension of the carbon market – engineered so that both sides get what they want – and the technological aspect makes sure that the carbon reductions are feasible and developing nations receive funding for clean development. The former extends the carbon market and the latter the Clean Development Mechanism (CDM).

The UNFCCC does not say that China and the developing nations should never have limits: it says they should have no limits *unless they are compensated*. This is quite different. What we need is a form of "compensation" that fits the bill, and eliminates the opposition from both sides. Here I suggest trade – a term the United States is more comfortable with – rather than unilateral compensation. Nobody needs to be the first mover: a simultaneous financial solution makes this possible.

The United States can buy rights to reduce Chinese emissions in the future, thus obtaining what it wants, while providing "compensation" to China as is required by the UNFCCC. At the same time, China can secure a minimum price for the credits, ensuring that they would not be selling economic growth for a pittance.

This "one-two punch" reduces the overall monetary exchange while giving each party what they want; it can be a modest extension of the carbon market and sold in secondary markets to provide liquidity and stability for the carbon market.

The new financial mechanism allows the United States and China to save

face by each saying at home, truthfully, that they are sticking to their original position – while at the same time both countries may also say, truthfully, that they got what they want from the other. Two simultaneous transactions based on the carbon market would do the trick. The entire transaction could involve little in terms of monetary exchange, but it would set emissions limits on both nations at the same time. Secondary markets can trade the corresponding options, thus providing liquidity and stability to the carbon market and its Clean Development Mechanism.

At the G8 meeting in July 2009 developing nations were loath to accept any obligation without specific commitments of financial and technical assistance – and failed to agree on a formula. The formula proposed here provides financial and technical assistance that should work for both sides.

Compensation can also take the form of export credits for negative carbon air capture technologies, which make it possible to reduce carbon from the atmosphere. This is the technological part of the proposal. The extension of the Clean Development Mechanism that we propose here could certify these new technologies When used in Africa, these carbon negative technologies can help the region reduce more carbon than it emits, meaning the continent can attract significant CDM funding that was not possible until now. The same works for island nations. For rich nations, this would involve US$200 billion per year in technology exports – the right size to stimulate today's world economy – creating technology jobs and stimulating trade, all funded by the Kyoto Protocol.

Oil nations could benefit from the technological innovation proposed here: Saudi Arabia is on the record espousing a commitment to become a leader in solar power in this century. Significantly, a representative of the China delegation at a recent United Nations Conference on Trade and Development (UNCTAD) meeting of experts agreed to this proposal in principle.

Copenhagen is the "do or die" mission for the climate negotiations. The

price of failure could be catastrophic but there is a solution available. Now it's up to the international community to step up to the plate and save Kyoto.

Professor Graciela Chichilnisky played a central role in designing and negotiating the carbon market of the Kyoto Protocol. She is the director of the Columbia Consortium for Risk Management and professor of economics and statistics at Columbia University, New York. Chilchilnisky acted as lead author on the Intergovernmental Panel for Climate Change from 1996 to 1999. From 1996 to 2008, she was UNESCO professor of mathematics and economics at Columbia University.

Her book, Saving Kyoto*, co-authored with Kristen A Sheeran, is available now from New Holland.*

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