

# earth matters

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**By Graciela Chichilnisky**

# PIR UPDATE

For more than 20 years scientists associated with the Program on Information and Resources (PIR) have established a strong world-wide presence in the study of global environmental issues. PIR plays a unifying role in bringing together the unique expertise of Columbia Earth Institute scientists from Lamont-Doherty Earth Observatory, the Center for Environmental Research and Conservation, NASA-GISS, and PIR, as well as from various departments of the Arts and Sciences and professional schools. Today, PIR has a combined expertise in economics, mathematics and physics together with a world-class group of associated experts in biodiversity, including Peter Raven (Secretary of the National Academy of Sciences) and Tom Lovejoy (Advisor to M. Albright U.S. Secretary of State on Biodiversity). As the core of these cross-disciplinary efforts, PIR is becoming the Earth Institute's integrating unit and has defined a unique position in the study of the global environment founded on win-win approaches for economic progress cum environmental conservation. PIR's mission is to develop new economic strategies and financial instruments that increase productivity in industrial and developing countries while promoting wise stewardship of the world's ecological resources.

## UNESCO Chair Proposes IBES for Emissions Trading

In 1994 UNESCO Professor Graciela Chichilnisky advanced a proposal for an international framework to regulate and trade the rights to emit greenhouse gases at a workshop organized at Columbia University Business School with the support of the Global Environmental Facility (GEF) and the Secretariat of the Framework Convention on Climate Change (FCCC). This market would be regulated and supported through a new institution: an International Bank for Environmental Settlements (IBES). The IBES would organize and monitor a range of activities that appear in principle very different, yet share a role of providing a global financial infrastructure to encourage sustainable economic progress globally.

## The World Bank and the U.S. Department of State

The IBES proposal was presented officially at a keynote address to the 1995 Annual Meetings of the World Bank, and its trading component was advanced in 1996 by Timothy Wirth the Undersecretary of the U.S. Department of State in the global climate negotiations in Geneva. In the Fall of 1997, Timothy Wirth organized two presentations on the IBES with the collaboration of Tom Lovejoy at the Smithsonian Institute in preparation to the Kyoto 4th Conference of the Parties of December 1997. In December 1997 the trading function of the International Bank for Environmental Settlements was incorporated into Article 6 of the Kyoto Protocol, a landmark international agreement signed by representatives of 166 nations that will change the use of energy worldwide (discussed in greater detail later in this article.)

## Congressional Briefing on the IBES

The Chairman of the House International Relations Committee, Benjamin Gilman (Republican-N.Y.) invited Vice Provost for CEI Peter Eisenberger and Chichilnisky to present a briefing in Washington, D.C. to Members of the House of Representatives and others. The briefing took place on October 30, 1997, and was attended by 65 staff members from congressional offices and delegates from developing and developed nations. In preparation for the December Kyoto conference Chichilnisky presented her proposal for an International Bank for Environmental settlements at the briefing.

## U.S. Treasury and Outreach Efforts with Scientists of the Earth Institute

Following this briefing, another was requested by Larry Summers, Undersecretary of the U.S. Treasury, and three of his aids. In addition, two press conferences took place in mid-November, one in Washington and the other in New York. Participants in these events included several scientists from CEI-James Hansen (NASA-GISS), David

Rind (NASA-GISS), Richard Fairbanks (Lamont), Eisenberger (CEI), Chichilnisky (PIR)- as well as several others from other leading universities including Jonathan Patz (Johns Hopkins), Paul Epstein (Harvard), Eric Chivian (Harvard), and Steve Schneider (Stanford).

## Bellagio: Environmental Finance Conference on the IBES

The Rockefeller Foundation hosted a three-day conference at its Conference Center in Bellagio, Italy November 24-26 to discuss the creation of the International Bank for Environmental Settlements, immediately prior to the Kyoto COP-3. This event was funded by the Global Environmental Facility (GEF) and the Rockefeller Foundation. Tamara Cannon of CEI was in charge of the organization. Approximately 20 representatives from government, academic and financial communities were in attendance including prominent international figures such as Rene Castro (Minister of Environment and Energy of Costa Rica) who briefed the attendants on environmental and economic issues which currently face Latin America and Central America. The conference addressed the use of global financial markets for environmental conservation and sustainable development. One of the main themes of this three-day event was the proposal by Chichilnisky for the IBES blueprint, which was discussed over a two-day period.

## Kyoto

As the year came to a close, Kyoto became the site for one of the most crucial global meetings addressing the problem of climate change. In December 1-10, 1997, Kyoto housed the Third Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC-COP-3), bringing together over 5000 participants world-wide. PIR organized CEI's participation in the Kyoto effort, inviting a number of scientists across the Earth Institute, particularly Wally Broecker, Peter Schlosser, and Richard Fairbanks from Lamont, Michael Molitor from Biosphere 2, and Hansen and Rind from NASA/GISS.

Columbia Earth Institute became a United Nations non-governmental organization (NGO). Its delegation was chaired by Eisenberger and Chichilnisky. Columbia Earth Institute had two representatives from Lamont, (Eisenberger and Fairbanks), one from Biosphere 2 (Michael Molitor), and one from PIR (Chichilnisky). In several presentations, the Earth Institute addressed a range of topics including energy-saving approaches that can lead to increased economic growth and the role of the IBES in trading emissions of greenhouse gas. Fairbanks explained Lamont's latest climate research, including work from other Lamont scientists.

PIR's proposal for international trading of greenhouse gas emissions rights, first advanced in 1994, was officially adopted by 166 countries on December 10, 1997 in Article 6 of the Kyoto Protocol, emphasizing the global impact of Earth Institute scientists.

## Next Steps

The Conference of the Parties of the FCCC will meet again in Buenos Aires in November 1998, and will bring together many of the leading participants in climate change negotiations to address the rules, modalities and enforcement mechanisms for the international emissions trading mechanism in Article 6 of the Kyoto Protocol.

In preparation for the Conference of the Parties (COP-4) to take place in Buenos Aires, on April 24-26, 1998, CEI, with the support of the Italian Academy, UNESCO, UNDP and UNIDO, will hold a workshop in conjunction with the Annual Meeting of the UN Commission for Sustainable Development (CSD) entitled: "From Kyoto to Buenos Aires: Technology Transfer and Emissions Trading." The conference will bring together a group of prominent scientists, policymakers, media and business people in the aftermath of the Kyoto environmental negotiations. The purpose is to discuss the resolutions in Kyoto and to provide an analysis of emissions trading regimes for greenhouse gases that can be used to implement Article 6 of the Kyoto Protocol.

Participants in the workshop will discuss the guide-

lines, rules and regulations for the successful implementation of an international emissions trading mechanism. The workshop will produce a working document containing the conditions that will form the basis of a book or booklet to be distributed to academia, the UN and the media and which will form the basis of discussion at COP-4 in Buenos Aires. The workshop will also present its findings officially at the UN Commission on Sustainable Development New York meetings of April 1998.


In addition, the meeting will address other potential trading activities for the IBES:

- Securitized biosphere.
- Financial instruments for using and conserving the world's watersheds.
- The use of innovative financial instruments to foster technology transfer, based on the emissions trading regime. The organizers of this conference are Chichilnisky and Heal of PIR and Molitor of Biosphere 2.

## UNESCO Fellows 1998

CEI and PIR welcome two additions: David Taylor of the University of Witwatersrand, South Africa, and Yuliy Baryshnikov currently of the University of Osnabruck, Germany. Both are participating in a new joint program among the UNESCO Chair, the Earth Institute and Columbia Business School and the Center for Global Environmental Finance to create a network of universities throughout the world.

Taylor has a Ph.D. in Cosmology and teaches the mathematics of finance in the Department of Computational and Applied Mathematics. He has joined PIR and the UNESCO Columbia Chair as part of the North-South initiative promoting academic and research exchange sponsored by the United Nations. This initiative will help further cooperation between South Africa, South America and Columbia University.

Baryshnikov, who has a Ph.D. in Mathematics, and teaches mathematics and statistics, has joined PIR for the spring semester as a visiting research scholar. He will focus on mathematical issues of risk management and mathematical problems arising within finance and the environment. 



*U.S. Representative Ben Gilman introduces Peter Eisenberger and Graciela Chichilnisky at a Congressional briefing in Washington, DC in October, 1997.*



*GRACIELA CHICHILNISKY is UNESCO Professor of Mathematics and Economics, Professor of Statistics, and Director, Program on Information and Resources, Columbia University. She can be contacted at: PIR, 535 Low Library, Broadway and 116th Street, New York, N. Y. 10027. Phone 212 854 7275; Fax 212 854 6309. email gc9@columbia.edu*