A Year of Dramatic Change Brings Opportunity to Rethink the Value of Environmental Taxes

The year 2008 has been one of dramatic change. It will go down in history as the year when the international financial system came crashing down on neoliberal, everything-goes capitalism and when only massive government bailouts around the world seemed to prevent total economic collapse. Historic for other reasons was the election of U.S. President Barak Obama, who became not only the first Black American president in history but also a beacon of hope for people around the world who believe that the world’s looming global problems can be solved only multilaterally, involving all major parties. After 8 years of unilateral American foreign policy that has systematically ignored both scientific understanding of global trends and different points of views on how to deal with them, there are indications that the world’s leading economy will return to a foreign policy built on a new cooperative spirit.

Both the global financial crisis and the election of a new American president will profoundly influence international environmental negotiations and the debate about what sustainable development is and should be. Concretely they will affect efforts to agree on a fair and equitable follow-up agreement to the Kyoto Protocol on climate change as well as initiatives to conserve the rapidly shrinking natural environments around the world, to sustainably manage depleted ocean fisheries, and to stem the ever-increasing release of man-made persistent organic chemicals that can now be traced to every corner of the world and threaten the natural world in ways we barely begin to understand. The United States under President Obama is recognizing the urgency of addressing these issues and has pledged to join the European Union and other countries in such efforts. However, there should be no doubt that the financial meltdown may greatly undermine the will of political leaders to commit to any domestic measures that are perceived as being costly to national economies and exacerbating economic hardship.

The economic crisis is a historic opportunity to wean the rich world from its unsustainable resource consumption and help poor and emerging economies to adopt sustainable development practices. The advantage of economic downturns is that they tend to force necessary structural change that is otherwise difficult to accomplish politically. When businesses and consumers have to reorient during hard economic times, the seeds can be planted for political and institutional initiatives to achieve long-term public policy objectives that seem inconceivable during good economic times. Governments now more than ever have the opportunity to overcome entrenched political opposition to shift tax burdens from labor income to consumption of environmentally damaging goods and services and to invest in green infrastructure, resource conservation, and green research and development.
The good news is that many governments have been talking about the dawning of a green economy for some years now and are vowing to help ailing industries to become greener and create millions of “green jobs.” The question is how deep such commitments really go and how they can be financed. The facts on the ground look somber. There is a wide gap between professed commitments and real achievements. Renewable energy from wind, solar, and geothermal sources still provides only about 1% of total world primary energy, whereas fossil fuels continue to make 80%, a percentage that has remained basically unchanged for many years now, despite all the hype about the expansion of renewable energy technologies in developed and developing countries (International Energy Agency, 2008). Pressure to explore in pristine lands for oil and minerals has increased dramatically, at least until the recent downturn, and will not abate.

Even the European Union, the leader in mandatory CO2 emissions reductions regulation, has struggled to lock in its renewable energy commitment, which foresees the production of 20% of electricity from renewable sources by 2020. Some of its new eastern member countries, notably, Poland, are hard-pressed to give up their heavy reliance on abundant coal. This is echoed elsewhere in the world. China and India continue to bank on coal as by far the main energy source to keep fueling their economic growth for decades to come, even as they move to support renewable energy development more aggressively. Even Germany, one of the leaders in renewable energy investments, has seen investments into solar and wind energy decline in 2008, despite price support for renewable energy. In Germany and the United Kingdom, the solar and wind industries are hurting. In the United States, an Obama administration will have difficulties to reduce America’s reliance on old coal-fired utilities, which continue to produce more than 50% of all electricity. The coal industry has successfully staved off stricter emission and efficiency standards for decades, and now that hundreds of thousands of jobs are seen at stake in the coal sector while the economy is in recession, there is little political support for drastic measures to reduce coal consumption. Instead, the industry has been pouring millions of dollars into ad campaigns touting the promise of “clean coal technology,” which so far does not exist but in the laboratories and likely will never be cost-effective compared to renewable energy sources.

As taxpayers look on incredulously while stunned parliamentarians hand out billions of tax dollars to failing banks and industries in the hope of saving the economy from total collapse, now would be the right time to ask where the money to pay for this momentous bailout should come from. It is time to take a good look at the old but ideologically tainted concept of environmental taxation. Many public policy experts and economists have long argued that environmental taxation—a variation of a more broadly conceived consumption tax—could provide a double dividend to the economy. As any tax does, it would raise revenues that could be used both to offset other taxes and to fund earmarked environmental policy objectives, including support for developing countries. But it can also provide direct incentives to consumers to behave environmentally more responsibly,
particularly if set at sufficiently high levels. It would be the best way to generate resources for funding the large-scale public works programs many governments are putting in place to support ailing economies.

Environmental taxes, as compared to income taxes, will allow those who consume less environmental resources to save costs not just because they have to pay less, for example, at the pump or for heating oil if they consume less but because they can also reduce their tax burden. Those who pollute more, on the other hand, pay more taxes. It is a simple concept called the “polluters pay” principle and has been around for decades. In fact, it was adopted by the Organization for Economic Cooperation and Development (OECD) as a principle of public policy already in 1974! During times when energy prices fall, introducing or ratcheting up energy or CO₂ taxes would make a lot of sense. The world has quickly gotten used to $120-a-barrel oil prices in 2007; however, combined record profits of close to $100 billion have gone only to the oil companies, whereas governments have been cash-strapped to finance sensible climate policies. Now that oil prices have plummeted back into the $30 range (at the end of 2008), there is room for introducing progressive energy taxes before a recovering economy will cause energy prices to rise again. Increasing energy demand will then also generate increasing revenues that can be at least partially used to fund the transition away from fossil fuels. Best of all, the prospect of progressively increasing energy taxes will by itself provide incentives for firms to invest in a low-carbon future.

A serious political dialogue needs to be initiated to educate the general public about the double dividend green taxes can produce for national economies. In the past decade, however, ideological tax warfare has all but eliminated the appetite of even brave politicians to push for the introduction at a significant level of environmental taxes and fees as part of a broad green fiscal reform. The argument of the opposition shifts: During good times, the point is made that one should not jeopardize a good thing while it lasts; during bad times, one is reminded that now is not a good time for raising taxes. Although individual countries, such as Sweden, Denmark, and Germany, have gone farther than other countries to introduce environmentally motivated energy taxes, their efforts have stalled in the late 1990s, and as a percentage of total taxes, environmental taxes have actually slightly declined in recent years and remain in the low single digits of the total tax burden (Albrecht, 2006). The European Union shelved a carbon tax idea in the early 1990s after heavy opposition from industry opponents. In 1993, the administration of U.S. President Bill Clinton saw its energy tax proposal go down in flames in the U.S. Congress. Since then, only the brave even dare talking about energy taxes in the United States.

Governments therefore have largely built their climate policy approaches around an idea heavily propagated by the private sector and very much in line with the neo-liberal free-market ideology now largely discredited by the global financial crisis: emissions trading. The concept is simple. Company A buys CO₂ emissions credits from Company B, which can reduce emissions cheaper than Company A can, or
Country A (developed country) buys them from Country B (developing country). A market ensues for emissions credits, resulting in cheap emission reduction opportunities being realized around the world. Everyone benefits and emissions are reduced. Emissions trading is a compelling idea and is politically advertised as the most efficient true market instrument to reduce emissions. However, it is often forgotten that emissions trading systems depend on mandatory overall emissions caps determined by governments and therefore critically depend on command and control measures. Setting such targets at a level that is sufficiently ambitious to respond to the overall declared policy objectives has proven politically very difficult. But there are more fundamental problems with the practical implementation of emissions trading on a global scale that undermine its potential to be the one and only solution to emissions reductions.

The European Union has experimented with an emissions trading system (ETS) since January 2005, when it first imposed mandatory emissions caps on its industry. The EU/ETS has gone into its second phase in 2008, and the carbon market has now reached €50 billion. Developing countries—particularly, China—have profited from generating some of the emissions credits for EU companies through the Clean Development Mechanism (CDM) set up under the Kyoto Protocol. The EU experience, however, raises doubts that emissions trading can ever become a reliable centerpiece for international efforts to deliver the global emissions reductions deemed necessary by the Intergovernmental Panel on Climate Change’s fourth assessment report, for which this international forum received the Nobel Peace Price (IPCC, 2007). Too manifold are the methodological problems related to verifying emissions credits as real and additional to what would have happened without the projects generating them (a problem known as leakage and discussed in depth elsewhere; Clémençon, 2008). Another problem is that the volatility of carbon markets has seriously undermined private-sector incentives to invest in energy conservation and renewable technologies.

The price for certified emissions reductions units has dropped precipitously from about 40 per ton of CO$_2$ in 2006, when it became clear that German industries ended up needing fewer emissions credits than anticipated in early 2007. The price recovered to around 14 a ton at the end of 2008. A low carbon price would seem like good news because it suggests that overall emissions have fallen and therefore such emission credits are not in high demand. But the low price reflects, first of all, a high overall emissions cap, which does little to force industry to significantly reduce emissions. The cap-and-trade system so far has failed to provide sustained incentives for EU companies to invest in carbon reduction measures. At the same time, CO$_2$ reduction projects funded largely to produce credits for carbon markets are also faltering, because many—particularly, those involving renewable technologies—do not cover their cost at current carbon prices. The high volatility in the price for emissions credits makes investment decisions into emissions reductions and carbon markets difficult. In a down market, investments into energy conservation and
renewable energy technologies therefore also decline. Although the economic crisis will automatically bring down global emissions for 2008, most EU member countries still have trouble reaching their Kyoto Protocol targets even under bad economic conditions. Once economic recovery begins, emissions will rise quickly again, unless much more ambitious emissions caps have been put in place. Many European countries now see emissions trading at best as one but not the only instrument in the fight to lower overall emissions.

Carbon taxes can prevent many of the problems related to an emissions trading system. A carbon tax simply sets a direction in which to go; it does not require setting overall emission targets, which are chronically difficult to negotiate. Progressive taxes phased in over time provide a predictable environment for companies, which can calculate exactly how much in taxes they can avoid paying by any given investment into energy conservation or renewable energy, independent of market fluctuations. The question of what should happen with the revenues of carbon taxes needs to be considered carefully and cannot be explored here in detail. The main issue will be to find a balance between offsetting other taxes and using revenues to subsidize renewable energy technologies, public transportation systems, and tax breaks for energy conservation investments. Revenues from environmental taxes must also be distributed internationally. They could fund most of the programs and projects now developed for financing through the CDM, in case demand for CDM emissions credits do not match expectations. They could also fund adaptation to climate change in developing countries, a politically critical element of any future climate agreement.

Unfortunately, the ideological and political obstacles to any kind of taxes—particularly, consumption taxes—is large, particularly in the United States, and has increasingly prevented an honest public debate about the proper use of such environmental and consumption taxes in a modern fiscal and public governance system. The U.S. climate debate therefore remains firmly entrenched in the idea of making a cap-and-trade system the centerpiece of any federal climate initiative. This is because even progressive environmentalists have come to believe that this is the only politically feasible option. But this inevitability should be questioned. Both the Obama presidency and the fiscal crisis provide a promising political background for this. It would seem that the best we could do now is to start a political dialogue about taxation in general and environmental taxation in particular, one designed to showcase the advantages to the general public compared to emissions trading and private-sector initiatives. We need to talk more about smart government and smart taxes that can support public policy objectives that ultimately provide the framework that lets the private sector thrive. We need to talk more about what those benefits are and why they cannot easily be accomplished in other ways that mainly benefit special interests. This will require taking on entrenched economic interests on both sides of the political spectrum. This may be as good a time to do so as ever and could lead to the paradigm change needed to move from the carbon age to the age of sustainability.
The JED Has a New Institutional Home

During the past summer, the *Journal of Environment & Development* moved to a new institutional home at the University of California–Santa Barbara’s (UCSB) Bren School of Environmental Science and Management. The Bren School provides an ideal base for the *JED*, as it is home to many world-renowned environment and development scholars and to graduate students interested in environmental science and policy from around the world. UCSB also is home to the first environmental studies program established in the United States and has a long history of commitment to environmental issues. The campus hosts diverse interdisciplinary programs and departments in the natural and social sciences that produce important research related to environment and development. Several persons at UCSB have been instrumental in making the transition happen for the *JED* and myself. I am particularly grateful to Melvin Oliver, Verta Taylor, Giles Gunn, and Ernst Von Weizäcker for their tireless efforts. I also wish to acknowledge the kind support and encouragement of Laura Haston, Oran Young, Rich Applebaum, William Freudenburg, Marc Jürgensmeier, John Melack, and Mike Best. Thanks are also due to Eric Nielsen, Sara Kamali, and Nicole Serra, three UCSB graduate students who stepped up quickly to the opportunity to become involved in *JED* and helped prescreen manuscript submissions during the transition months.

A new start also means leaving something behind. Last summer, *JED* and I said goodbye to the Graduate School of International Relations and Pacific Studies (IRPS) and the University of California–San Diego (UCSD). The journal will always remain deeply connected with IRPS. It was launched there in 1992 by a dedicated group of graduate students under the leadership of the late atmospheric physicist and environmental visionary Gordon MacDonald, who understood early the need for an editorial outlet for research and policy work on the environment and development interlinkage. Sage Publications acquired *JED* in 1996 and incorporated it into its family of academic and policy journals. Having the support of a prestigious publisher has helped *JED* gain readership and maintain its position as a premier outlet for scholarly work in the field, even during a time when many more environmentally oriented journals have emerged. Since 2004, when I took over as editor, many persons at IRPS and UCSD have provided invaluable support to the journal. I wish in particular to thank Jeff Vincent, Barry Naughton, Elizabeth Stryjewski, Josefine Durazo, Laura Tierney, Lee Yen Anderson, David Woodruff, Susan Smith, Clark Gibson, Valerio Kao, Aparna Krishnan, Darren Posey, John Rowe, and Gary Hoffman.

In its new home at UCSB’s Bren School, the *JED* will continue its mission of strengthening dialogue on environmentally sustainable development among scholars and policy makers around the world.
JED Welcomes a New Group of Distinguished Editorial Board Members

During the past year, a stellar group of scholars and policy experts have accepted the invitation to serve on the JED’s editorial board. These individuals come from diverse backgrounds, disciplines, and regions of the world, reflecting JED’s interdisciplinary and international character. They, along with the distinguished group of existing board members, will work to further strengthen the journal’s quality and improve its international reach. Our mission is to provide an outlet for cutting-edge research and policy work on environment and development issues by scholars and practitioners from around the world. In so doing, we hope to make our small contribution toward finding policy solutions that lead to more sustainable economic development.

Miranda Schreurs became director of the Environmental Policy Research Centre and a professor of comparative politics at the Freie Universität Berlin in 2007. Prior to this, she was an associate professor in the Department of Government and Politics at University of Maryland. Her work focuses on comparative political institutions; governance questions; the role of civil society; relations among government, business, and civil society actors; and public–private partnerships in the fields of the environment and energy. She is a member of the German Expert Council on the Environment (Cabinet appointed) and was also a member of the China State Council’s Environment and Development Governance Task Force, an international group of experts called in to provide advice to the Chinese government on environmental governance matters.

Miranda Schreurs was born and raised in the United States but has also lived for extended periods in Japan and Germany and briefly in the Netherlands. In addition to her native English, she speaks Japanese, German, and Dutch. Schreurs was an American Field Service student in Japan during high school. She returned to Japan with a Fulbright dissertation fellowship during her PhD training. Support from a John D. and Catherine T. MacArthur Foundation fellowship in international peace and security studies, the Center for Science and International Affairs, and the Pacific Basin Research Center at Harvard University made possible an expansion of her research to comparisons across Europe, the United States, and Asia. Her expertise in Europe was further strengthened with a Fulbright German studies summer fellowship. She has published widely. Among her recent books are, in 2007, the second edition of *Green Movement*, with Elim Papadakis (Lanham, MD: Scarecrow Press), and, in 2002, *Environmental Politics in Japan, Germany, and the United States* (New York: Cambridge University Press). Miranda Schreurs also was the guest editor of the December 2008 issue of JED, “From the Bottom Up: Local and Subnational Climate Change Politics.”

Peter Newell is a professor of development studies at the University of East Anglia and currently holds a U.K. Economic and Social Research Council Climate Change Leadership fellowship. Prior to this, he has held posts as...

Peter Newell has also worked in the nongovernmental organization (NGO) sector for Climate Network Europe in Brussels and at Friends of the Earth London as a researcher and lobbyist. He has conducted consultancy and policy work for the United Nations Development Programme (UNDP), the Global Environment Facility (GEF) and the Inter-American Development Bank, the International Centre for Trade and Sustainable Development, Climate Action Network, the Earth Council, and governments, such as Sweden, Finland, and the United Kingdom. He chairs the Independent Advisory Panel of the NGO One World Trust, is a member of the U.K. Committee of the International Human Dimensions Programme for Global Environmental Change, and is an associate editor of the journal *Global Environmental Politics*.

**Thomas Bernauer** is a professor of political science (international relations) in ETH Zurich’s Department of Social Sciences and Humanities. He heads a group of approximately 10 persons that forms part of the Center for Comparative and International Studies and the Institute for Environmental Decisions. Thomas Bernauer studied political science, history, and international law at the University of Zurich, where he received an MA in 1988. From 1988 to 1992, he worked as a research associate at the United Nations Institute for Disarmament Research in Geneva. During that period, he wrote a doctoral dissertation analyzing the negotiations on a global chemical weapons ban. In 1992, he received a PhD from the University of Zurich. After 2 years as a postdoctoral research fellow at Harvard University (1992 to 1994), he served for 1 year as a senior lecturer in political science at the University of Zurich before joining ETH Zurich as an assistant professor of political science (international relations) in 1995. He became an associate professor in 1999 and full professor in 2004.

In his research and teaching, Thomas Bernauer focuses on international economic and environmental issues. His book publications include *Genes, Trade and Regulation* (Princeton University Press, 2003); *Staaten im Weltmarkt* (States in World Markets; Leske+Budrich, 2000); *The Politics of Positive Incentives in Arms Control* (University of South Carolina Press, 1999); *Handel und Umwelt* (Trade and the Environment; Westdeutscher Verlag, 1999); and *The Chemistry of Regime Formation* (Dartmouth Publishers, 1993). He has published in journals such as *British Journal of Political Science, European Journal of International Relations, International Organization,*
Navroz K. Dubash is an associate professor at the Centre for the Study of Law and Governance at Jawaharlal Nehru University in Delhi. He holds PhD and MA degrees in energy and resources from the University of California–Berkeley and an AB in public and international affairs from Princeton University.

His work focuses on the political economy of institutional change, with an emphasis on the environmental and social implications of economic reform. His major areas of work include the political economy of electricity reform, governance of energy in India and Asia, climate change policy, the role of civil society in global environmental governance, international financial institutions, and local institutions for water management. His current research looks at the emergence of a “regulatory state” in the developing world, with particular reference to infrastructure sectors and to the interface between global climate negotiations and national policy instruments and politics.

His recent publications include *The Practice and Politics of Regulation: Regulatory Governance in Indian Electricity* (Macmillan, 2007), and he has edited special issues of *Economic and Political Weekly* and *Pacific Affairs*. His earlier book on groundwater, *Tubewell Capitalism* (Oxford, 2002) was awarded the SR Sen Prize Award in India. In addition to publishing in various journals, he is also active in Indian policy fora and is on the editorial board of the journal *Utilities Policy*. Navroz Dubash formerly held positions as IDFC chair professor of governance and public policy at the National Institute of Public Finance and Policy (New Delhi) and senior associate at the World Resources Institute in Washington, D.C. He has a long history of engagement with civil society organizations, including as the first international coordinator of the Climate Action Network from 1990 to 1992. He has also consulted and conducted training programs for a variety of international and Indian institutions.

Angela Alonso is a professor at the Department of Sociology at University of São Paulo (Brazil); the coordinator of the Environmental Conflicts Area at Cebrap (Brazilian Centre of Analysis and Planning); a researcher at the Development Research Centre on Citizenship, hosted by the University of Sussex (United Kingdom); and a member of the *Brazilian Social Sciences Journal* committee. She has published many articles about the history of ideas in Brazil and about the Brazilian environmental movement, and she is a coauthor (with Sergio Costa and Sergio Tomioka) of a book on the environmental conflicts in Brazil (*Negotiated Modernization: Road Extension and Environmental Risks in Brazil*; Cebrap/Ibama, 2000).
Additionally, she has a book on the Brazilian reformist movement in the 19th century (Ideas in Movement: The 1870 Generation in the Crisis of the Brazil-Empire; Paz & Terra/Anpocs, 2002), awarded with the prize for best Brazilian PhD thesis in social sciences conferred by the CNPq (National Council of Research) and Anpocs (National Association of Social Sciences Researchers). Her most recent work is a biography of the main leader of the movement for the abolition of slavery in Brazil (Joaquim Nabuco: The Salons and the Streets; Companhia das letras, 2007), selected as one of the top 51 literary books of the year by the Brazil Portugal Telecom Prize of Literature as well as one of the top 10 Brazilian biographies of the year (Jabuti Prize).

Jeffery Vincent is the Clarence F. Korstian Professor of Forest Economics and Management at the Nicolas School of the Environment at Duke University. He has a PhD from Yale University, an MS from Michigan State University, and an AB from Harvard University. His expertise lies in economics of natural resource management and policy in developing countries, with an emphasis on forests, agriculture, and water in Asia. He was a professor in the Graduate School of International Relations and Pacific Studies at UCSD, associate faculty in the Department of Economics at UCSD, and environmental research director at the Institute on Global Conflict and Cooperation at University of California. He has received many awards for his publications, most recently, in 2006, the Cozzarelli Prize (best article in applied biological, agricultural, and environmental sciences published in the Proceedings of the National Academy of Sciences) and, in 2003, the McKinsey Award (most significant article published in Harvard Business Review).

Maggie Opondo is a senior lecturer and researcher in the Department of Geography and Environmental Studies at the University of Nairobi. She obtained her PhD in economic geography at the University of Düsseldorf. She has researched and published widely on vulnerability and adaptability to climate change impacts (e.g., on malaria, cholera, and drought), risk communication, smallholder agriculture, gender and labor rights in global supply chains, ethical trade and corporate social responsibility, and trade policy. She has been involved in various research projects, some of which include “Climate Change-Induced Vulnerability to Malaria and Cholera” (funded by AIACC, Assessments of Impacts and Adaptation to Climate Change), “Gender and Ethical Trade in African Horticulture” (funded by the Department for International Development [DFID]), and “The Socio-Economic Effects of Fair Trade Tea Between Kenya and the UK” (funded by the National Science Foundation). She is currently coordinating two climate change adaptation projects titled “Increasing Community Resilience to Drought in Makueni District in Kenya” (funded by GEF and United Nations Environment Programme [UNEP]) and “Strengthening Community-Based Adaptation to Climate-Sensitive Malaria in the Western Kenya Highlands” (funded by ACCCA, Advancing Capacity to Support Climate Change Adaptation). She is also part of the research team on the project titled “Governance Implications of Private Standards Initiatives in Agri-Food Chains” (funded by the
Economic and Social Research Council and DFID). She was an expert reviewer for the Inter-governmental Panel on Climate Change Working Group II Fourth Assessment (IPPC) in 2005-2006 and for the World Health Organization’s book titled *Methods for Assessing Vulnerability and Adaptation: Climate Change and Human Health* (2003). She participated in a strategic brainstorming session for Google.org’s recently launched initiative, Predict and Prevent.

**Maria Onestini** directs the Centro de Estudios Ambientales (CEDEA), an NGO based in Argentina that carries out research, policy analysis, and training in sustainable development issues. Ms. Onestini carried out her undergraduate and graduate studies at Indiana University and at the Pennsylvania State University in the United States. She has also been a consultant to several international and regional agencies, among them the Economic Commission for Latin America and the Caribbean, the UN Department of Public Information, the UNDP, the Office of the High Commissioner for Human Rights, the Ministry of Foreign Affairs of Italy, and the International Development Research Centre of Canada. Her expertise is in several areas of sustainable development. She has been an invited lecturer at various universities and has served in a number of international organizations’ committees and boards.

Among her many publications, some of the most recent ones are *Negotiating and Implementing MEAs: A Training Manual for NGOs Working on Multilateral Environmental Agreements* (coauthor with UNEP, Stakeholder Forum, Centro de Estudios Ambientales, and Earth Media; United Nations Publications, Nairobi, 2007); “Comercio, desarrollo y ambiente: Perspectivas latinoamericanas” (with Claudio Palos), in *Desarrollo sostenible y estructura económica mundial* (Centro de Investigación y Cooperación para el Desarrollo, Madrid, 2004); “Recursos naturales, desarrollo sustentable y agricultura en Argentina,” in *Asistencia Técnica para la Elaboración de la Estrategia de Desarrollo Rural para la Argentina* (RIMISP, Santiago de Chile, CD, October 2004); “Juxtaposing Economic Exclusive Zones With Liberalization of Trade in the Fisheries Sector: The Argentine Case in the 1990s,” in *Performance on Economic Exclusive Zones* (edited volume in preparation, Duke University); and *Implementation of Individual Transferable Quotas (ITQs) as a Policy Response to Promote Sustainable Management in the Argentine Fisheries Sector* (with the collaboration of C. A. Palos; UNEP, United Nations Publication, in preparation).

**Liliana B. Andonova** is an associate professor in political science at the Graduate Institute for International Studies in Geneva, Switzerland. She holds an MA and PhD from Harvard University. She has held positions as an assistant professor in government and environmental studies at Colby College, USA; Jean Monnet Fellow at the European University Institute, Italy; and fellow at the Earth Institute of Columbia University, USA. Andonova’s book *Transnational Politics of the Environment: EU Integration and Environmental Policy in Eastern Europe* was published by MIT Press in 2004. Other publications include articles on environmental politics, climate change, and international institutions in journals such as *Journal of Environment and*
Dr. Andonova’s current research focuses on international organizations and public–private partnerships, transnational governance, and climate cooperation. Recent activities include being elected a member of the Executive Committee of the Environmental Studies Section of the International Studies Association (2005 to 2007) and collaboration with the U.S. National Academy of Sciences initiative on public–private partnerships for sustainability (2008).

**William R. Freudenburg** is the Dehlsen Professor of Environment and Society at UCSB. Much of his published work deals with society–environment relationships, with special emphases on the social and economic dynamics of resource-dependent regions and on the dynamics of technological risks and controversies. Many of his recent and forthcoming publications emphasize the importance of “disproportionality,” or the tendency for a major fraction of all environmental impacts to be associated with a surprisingly small fraction of the overall economy. His 2005 *Social Forces* article on this work won the inaugural Frederick Buttel Award for best article from the Rural Sociological Society (RSS).

William Freudenburg has held numerous offices in professional organizations, having served as secretary and as chair of Section K (social, economic, and political sciences) of the American Association for the Advancement of Science, as chair of the Section on Environment and Technology of the American Sociological Association (ASA), and as president of the RSS. Most recently, he has been a cofounder and interim secretary of the Association for Environmental Studies and Sciences. He has received numerous awards and honors for his work, including the Award of Merit from the RSS Natural Resource Research Group, the Award for Distinguished Contributions to the Sociology of Environment and Technology from the ASA, and best-article awards from the Pacific Sociological Association and three different ASA sections.

**Ramesh Ramankutty** is the head of operations and business strategy at the GEF. He has worked for nearly 20 years on issues related to development and environment, first at the World Bank and then at the GEF, where he currently advises the CEO and chairperson on operational and strategic issues. His motivation for working in this area stems from research he conducted in India as a graduate student nearly two decades ago studying the impacts of droughts and the coping strategies employed by the rural poor, particularly with regard to management of natural resources. At the GEF, he continues to grapple with the challenges and opportunities of facilitating development activities that generate benefits for local communities and at the same time contribute benefits to regional and global environmental commons.

**Thomas Sterner** is a professor of environmental economics at the University of Gothenburg, Sweden. He directs the Environmental Economics Unit (EEU), which has a dozen faculty and about 25 graduate students from all over the world. The EEU
specializes in the economics of the environment and natural resource management in both OECD countries and in developing countries (see http://www.handels.gu.se/econ/EEU/). During 1998-1999, Sterner was the Gilbert White Fellow at Resources for the Future (RFF) and consultant to the World Bank. Through extensive collaboration with organizations such as Sida, the World Bank, and the Beijer Institute of the Royal Swedish Academy, RFF, International Institute for Environment and Development in London, Economy and Environment Program for Southeast Asia, and others, the EEU runs a number of research and training programs for capacity building in environmental economics that particularly focus on Third World countries.

Professor Sterner earned his PhD in economics 1986 and became a professor of environmental economics in 1995. He is also chairman of the board of the Centre for Environmental Economics in Gothenburg. His other board memberships include the Local Investment Programmes of the Ministry of the Environment, Sweden, and board of the European Association of Environmental and Resource Economists, 1997 to 1999, and he is a university fellow at RFF. His academic publications number approximately 60 major published articles and books (including more than 30 journal articles). His most recent book is also on the subject of this article and is titled Policy Instruments for Environmental and Natural Resource Management (RFF Press in collaboration with the World Bank and Sida; Washington, DC, November 2002).

David Woodruff is a professor for conservation biology at UCSD. His interests are in phylogeography and conservation genetics: the role of population genetics and ecology in determining the past and future evolution of animal species. Until the 1990s, his research focused on such topics as the genodynamics of hybrid zones (using Australian frogs, Pseudophryne), the role of gene flow and parapatric divergence in speciation (using Bahamian land snails, Cerion), and the coevolution of host–parasite compatibility (using human schistosomes and their freshwater snail intermediate hosts). Most of his attention is now devoted to helping biologists meet their greatest challenge: that of ensuring the future evolution of animal species. To this end, his lab has contributed to the development of molecular genetic methods of noninvasive genotyping, of defining evolutionarily significant units for conservation management purposes, and of detecting and monitoring genetic erosion in isolated populations. Recent projects have focused on primates, birds, elephants, and the effect of rainforest fragmentation on species composition.

David Woodruff received his PhD and DSc from the University of Melbourne, Australia. He spent the period from 1969 to 1974 at Harvard University, where he was a Frank Knox Fellow and an Alexander Agassiz Lecturer on Biogeography. He served as the founding chair of the Ecology, Behavior, and Evolution Section at UCSD and is currently a trustee of the Zoological Society of San Diego and fosters research and conservation at the San Diego Zoo, Wild Animal Park, and Center for the Reproduction of Endangered Species.
We are excited to be able to draw on the tremendous expertise these scholars and experts bring to the *JED*.

Raymond Clémençon

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