



Economics and Conservation in the Tropics: A Strategic Dialogue

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Participant Biographies

James Boyd is an economist dedicated to improved conservation and environmental protection. His research emphasizes the need to objectively track and evaluate environmental outcomes and trends. Development of a Green GDP, national indicator systems, and ecological assessment endpoints are his current research focus. As a policy analyst, Boyd emphasizes the need to better coordinate economic and ecological research to improve the practical performance of green incentives, markets, and investments. Boyd is currently the Lorry Lokey Business Wire Visiting Professor of Human Biology at Stanford University. Until recently he was the Director of the Energy and Natural Resources Division at Resources for the Future, Washington DC. He received his PhD in Applied Microeconomics from the Wharton School, University of Pennsylvania, in 1993. He has served on National Academy of Science, U.S. EPA Science Advisory Board, and numerous other government and private advisory panels, including most recently the U.S. EPA's Committee on Valuing Ecological Systems and Services. As a consultant he has advised the World Bank, European Commission, Doris Duke Charitable Foundation, and Harvard Institute for International Development, among other institutions.

John Reid is the founder and President of Conservation Strategy Fund. He has worked in conservation since 1991, promoting the use of economics to address conservation challenges. John has pursued that goal through an innovative training program and by the example of practical, policy-relevant analyses on a number of themes in the Amazon, Central America and the Brazilian Atlantic Forest. These include energy and transportation infrastructure, logging, ranching, environmental valuation and agriculture, among others. John founded Conservation Strategy Fund in 1998 after positions with Resources for the Future, Conservation International and Pacific Forest Trust. He designed CSF as an independent, service-oriented and technical organization with the aim of spreading economics skills among conservation professionals. The organization has evolved into an international team of 10 people, 12 university fellows and instructors and a network of over 725 training graduates. John's work has appeared in many CSF publications, in *Scientific American*, *Conservation Biology*, *Environment*, the *Journal of Political Economy*, *Megadiversidade* and *Ambio*. He speaks Portuguese and Spanish, and

holds a Masters in Public Policy from Harvard University. More information can be found at www.conservation-strategy.org.

Carlos E. F. Young is currently Associate Professor (Professor Associado) at the Instituto de Economia (Institute of Economics), Universidade Federal do Rio de Janeiro (UFRJ), where he teaches since 1990, and more recently has joined the Núcleo de Ciências Ambientais (Environmental Sciences Centre) of the same university. He is also Guest Professor (Huésped Distinguido) of the Postgraduate School, Universidade Nacional de Trujillo, Peru, and of many extension and postgraduate courses *latu sensu*. Dr. Young got his Ba. and MSc. Degrees from the Federal University of Rio de Janeiro, and he received his Ph.D. in Economics from the University College London in 1997. He spent the first semester of 2002 as BP Visiting Research Fellow at the Centre for Brazilian Studies, University of Oxford. He is an active member of the Ecological Economics movement, being the President of the Brazilian Society for Ecological Economics (EcoEco) in the 1996-1999 period, and elected Member of the Board of the International Society for Ecological Economics (ISEE) for the 2004-2005 period. The recent research agenda of Dr. Young has focused on the possible connections between international trade and the environment, environmental accounting, macroeconomic modelling incorporating environmental variables, the economics of deforestation, valuation techniques of natural resources, and the economics of climate change. More information can be obtained from the website: www.ie.ufrj.br/gema.

Alex Pfaff, Associate Professor of Public Policy, Economics, Environment at Duke University, studies how economic choice/development and environment/natural resources affect each other: impacts of roads, parks and payments on deforestation (Brazilian Amazon, Costa Rica, Mexico); decisions that lower exposure to fuels/stoves' indoor emissions (Pakistan, Tanzania, Ghana) and to arsenic in drinking water (Bangladesh); responses to climate/water vulnerability (N.E. Brazil) by households and in participatory water allocation; incentives for firms to provide information to regulators. The goal of this applied research is to increase the chance that interventions have their intended impacts on environment/resources while benefiting the people they are designed to help.

Allen Blackman is a Senior Fellow at Resources for the Future (RFF), a non-profit environmental policy research institute in Washington, DC and Resident Advisor at the Central America Environment for Development Centre, Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) in Turrialba, Costa Rica. He has also held positions as Adjunct Professor at the Georgetown University Public Policy Institute and Visiting Research Fellow at the University of California San Diego, Center for U.S.-Mexican Studies. He holds a B.A. in international relations and political science from the University of Pennsylvania, and a Ph.D. in economics from the University of Texas at Austin. In his 15 years at RFF, Blackman's research has focused on environmental and natural resource issues in developing countries,

specifically: land use change in managed landscapes; pollution problems caused by small firms; “alternative” pollution control instruments including voluntary regulation, public disclosure, and economic incentives; and environmental decentralization. In connection with this work, he has conducted research in Latin America and Asia. Blackman also worked extensively on U.S. regulatory reform including analyzing U.S. EPA's Project XL, the use of mortgage reforms to affect land use, and voluntary brownfields programs. Blackman's work has appeared in a number of books and journals, including the *American Journal of Agricultural Economics*, the *Journal of Environmental Economics and Management*, *Environment and Development Economics*, and *World Development*. He is the contributing editor of *Small Firms and The Environment in Developing Countries: Collective Impacts, Collective Action*. (RFF Press 2006).

Dick Rice is Chief Economist at Conservation International, and has 20 years experience in natural resource and public policy analysis. He currently supervises projects in Asia, Africa and Latin America. While at Conservation International, he has conducted extensive research on the costs and effectiveness of different approaches to biodiversity conservation in the tropics. He has published widely on the viability of sustainable forest management and is presently working on the development and implementation of conservation incentive agreements, an approach to conservation involving annual payments for the acquisition of development rights in priority habitats. Prior to joining Conservation International, Dr. Rice worked on the economics of public land use policies in the United States with The Wilderness Society, Resources for the Future, Inc. and the U.S. Department of the Interior. Education: Grinnell College: B.S., Economics; University of Michigan: M.S., Economics; University of Michigan: Ph.D., Natural Resources. Key publications include “Conservation Incentive Agreements as an Alternative to Tropical Forest Exploitation” by Niesten and Rice (in *Emerging Threats to Tropical Forests*, 2006); “Rethinking Green Consumerism” in *Scientific America* by Hardner and Rice (2002); and “Effectiveness of parks in protecting tropical biodiversity” in *Science* by Bruner et al. (2001).

Francisco Alpízar R. is a Research Fellow at the Environment for Development Center for Central America, at CATIE, Costa Rica. He obtained his Ph.D in environmental economics at Gothenburg University in 1999 as part of a joint program with The Beijer Institute of Ecological Economics. In 2002 he joined CATIE and since 2005 he has been the Program Director of the Latin American and Caribbean Environmental Economics Program. His work concentrates on the design and evaluation of economic instruments for the management of the environment, with particular focus on protected areas, agricultural landscapes and water. Methodologically, most of his work is based on surveys and economic experiments. His work has been published in several journals including *Journal of Public Economics*, *J.Economic Behavior and Organization*, *Ecological Economics*. He lives in Costa Rica with his wife and little daughter. More details at www.laceep.org or www.efdinitiative.org.

Gretchen C. Daily is Professor in the Department of Biological Sciences; Senior Fellow in the Woods Institute for the Environment; Director of the Center for Conservation Biology; and Director of the Interdisciplinary Program in Environment and Resources, at Stanford University. She is also Chair of The Natural Capital Project, a partnership among TNC, WWF, and Stanford, working to make conservation economically attractive and commonplace. Her most recent book is *The New Economy of Nature: The Quest to Make Conservation Profitable*, coauthored with journalist Katherine Ellison (2002, Island Press). She's working on a new book: Kareiva, PK, GC Daily, TH Ricketts, H Tallis, and Steve Polasky, Eds. In prep. *The Theory & Practice of Ecosystem Service Valuation in Conservation*. Oxford University Press, Oxford.

Jared Hardner is a founding partner of Hardner & Gullison Associates, LLC, a consulting firm that provides technical assistance to foundations, corporations, NGOs, and governments in the field of biodiversity conservation. His past and present clients include, among others, Gordon & Betty Moore Foundation, National Fish and Wildlife Foundation, USAID, World Bank, Inter-American Development Bank, BP, Rio Tinto, BHP Billiton, Conservation International, The Nature Conservancy, and World Wildlife Fund. Prior to forming his own firm, he was a Senior Associate at Industrial Economics, Inc, a Cambridge based consulting firm where he performed economic studies for the U.S. Environmental Protection Agency, including managing the Section 812 Ecological Benefits Assessment of the Clean Air Act Amendments. In recent years he has performed a range of economic and financial analyses of issues related to conservation, including the development of economic incentive agreements, the development of financial strategies for protected areas and an economic benefits assessment of the U.S. National Park System. At present he focuses on multi-disciplinary practice areas of program evaluation for conservation donors and conservation program development for corporations. Mr. Hardner earned an MS in Natural Resource and Environmental Economics from Yale University's School of Forestry and Environmental Studies, and a BA from Princeton University in Economics. For more information about Mr. Hardner and his firm, Hardner & Gullison Associates, LLC, please visit www.hg-llc.com.

Jeffrey R. Vincent is the Clarence F. Korstian Professor of Forest Economics and Management in the Nicholas School of the Environment and Earth Sciences at Duke University. Vincent's research focuses on the economics of natural resource management and policy in developing countries. Currently, his two main projects are a 5-year project with the Forest Research Institute Malaysia on biodiversity conservation in tropical landscapes affected by commercial logging, and an ongoing project on the joint impacts of brown clouds and greenhouse gases on climate change, water, and agriculture in South Asia. He has also worked extensively on the adjustment of national income and wealth accounts for resource depletion. Vincent's books include the *Handbook of Environmental Economics* (North-Holland, three

volumes, 2003, 2005) and *Managing Natural Wealth: Environment and Development in Malaysia* (RFF Press, 2005). His articles have appeared in environmental economics journals, economic development journals, forestry journals, and general science journals. Vincent serves on the board of the Beijer Institute of Ecological Economics in Stockholm, Sweden, and the international advisory committees of the South Asian Network of Development and Environmental Economists (SANDEE) and the Center for Environmental Economics and Policy in Africa (CEEPA). He is on the editorial boards of *Environment and Development Economics* and the *Journal of Tropical Forest Science*. Prior to joining Duke in July 2007, he held positions in the Graduate School of International Relations & Pacific Studies at the University of California, San Diego (2001-7); the Institute for International Development at Harvard University (1990-2001); and the Department of Forestry at Michigan State University (1987-90). He has degrees from Yale University (Ph.D., 1988), Michigan State University (M.S., 1984), and Harvard University (A.B., 1981).

John A. Dixon was Lead Environmental Economist at the World Bank Institute (WBIEN) in Washington DC where he led the Environmental Management Team before retiring in December 2002 and returning to Hawaii. From 1981 to 1990 he was at the Environment and Policy Institute, East-West Center, Honolulu, and joined the World Bank in 1990 and moved to Washington DC. He has extensive field experience in East and Southeast Asia and Latin America; his research and writing focus on applied economic analysis of environmental impacts, parks and protected areas (both terrestrial and marine), coral reefs and related coastal resources, natural resources management, and environmental indicators. He was a member of the core team that prepared the 1992 World Development Report, *Development and the Environment*. His undergraduate degrees are in Economics and Chinese from UC Berkeley, and his MA and Ph.D. in Economics are from Harvard University. He has published many books and articles on these themes and speaks and teaches widely on the application of environmental economics to environmental issues. His most recent books are *Economic Analysis of Environmental Impacts* (with L.F. Scura, R.A. Carpenter and P.B. Sherman) published by Earthscan Publications, London, 1995, and *Economic Analysis of Investment Operations* (Belli et al.) published by the World Bank, Washington, 2001. He also led the team in preparing *Expanding the Measure of Wealth: Indicators of Environmentally Sustainable Development* (1997) and *Five Years After Rio: Innovations in Environment Policy* (1997). His address: 1030 Aoloa Place #210-B, Kailua, HI 96734. Phone (808) 261-9844. email: johnkailua@aol.com.

Joshua Farley is an ecological economist. He is currently an assistant professor in Community Development & Applied Economics and Public Administration and a fellow of the Gund Institute for Ecological Economics (GIEE) at the University of Vermont. His interdisciplinary academic background includes degrees in biology, international affairs and neoclassical economics. Self taught in ecological economics, he is a co-author with Herman Daly of one of the first textbooks in the field. He believes

that economics should be science based and value driven. As one of many research topics, he seeks to identify the physical characteristics of resources that determine whether common property rights or private property rights lead to a more sustainable, just and efficient allocation. Much of this research suggests that private property rights to ecosystem structure systematically favor its conversion to economic production over its conservation for the provision of ecosystem services. Specific research projects have focused on the conversion of mangrove ecosystems to shrimp aquaculture in the Philippines, reforestation as a watershed management tool in the Atlantic forest of Brazil, investment in human and natural capital in Ethiopia, the contribution of ecosystem services to dairy production in the Wet Tropics of Australia and several others. Prior to his current job, he served as program director of the Centre for Rainforest Studies in Yungaburra, Australia where he ran a shade house and organized numerous ecological restoration projects. He also served as executive director of the University of Maryland Institute for Ecological Economics. He serves on the board of directors of the Robert Schalkenbach Foundation, Earth Economics and the US Society for Ecological Economics, as well as the directory board of the Scale Project.

Juan Camilo Cardenas is Associate Professor at the Economics Department, Universidad de los Andes in Bogota, since 2004. He obtained his Ph.D in resource economics at the University of Massachusetts Amherst in 1999 and did his post-doctoral work with Elinor Ostrom at the Workshop in Political Theory and Policy Analysis at Indiana University. From 2000 to 2004 he was an associate professor at the School of Environmental and Rural Studies (Javeriana University, Bogota). He has also been an international fellow at the Santa Fe Institute. His work concentrates on the behavioral and institutional foundations of cooperation and pro-social preferences, using field experiments, survey and other field techniques. During almost ten years of fieldwork he has conducted experiments with thousands of villagers who use natural resources and provide local public goods. This work has been published in several journals including *J. Development Economics*, *World Development*, *Ecological Economics*, *Science*, and *J. Economic Behavior and Organization*, as well as in several book chapters. He lives in Bogota with his wife and two children. More details at http://economia.uniandes.edu.co/profesores/planta/cardenas_juan_camilo.

Keith Alger is a University of Wisconsin Political Science Ph.D. who joined Conservation International in 2001, after 12 years in Brazil as a university professor and the founder and executive director of the Brazilian biodiversity conservation, IESB (www.iesb.org.br). As Vice-president and head of the Human Dimensions program in CI's Center for Applied Biodiversity Science, he has published on public policy mechanisms using incentives for landscape scale conservation of biodiversity and ecosystem services in tropical developing countries. In recent work with collaborators he is identifying those places that are

valuable for their contribution to the survival of biodiversity as well as the health and livelihoods of human communities.

Konrad von Ritter has been working at the World Bank since 1989 on sustainable development issues. In March 2005 he became manager of the Sustainable Development Unit at the World Bank Institute (WBI), the capacity development and training arm of the World Bank Group. The Sustainable Development Unit focuses on climate change, water resource management, and local government. His prior responsibilities at the World Bank included the management of sustainable development projects in Eastern Europe/Central Asia and East Asia. He managed the Bank's Caspian Environment Program, a GEF funded international waters project, wrote a study to assess Russia's capacity to undertake environmental impact assessments and co-authored a publication on economic valuation of ecosystems. He supported the Philippines in introducing pollution charges, worked on urban water and waste water projects in China, and started programs to phase out Ozone Depleting Substances in the Philippines, Thailand, and Malaysia. In addition, Konrad spent 2 years on a staff exchange with The Nature Conservancy. Prior to joining the Bank he lived in Central America for 4 years and worked with the International Labour Organization on micro-enterprise development in low income urban areas of Panama, Guatemala, and Costa Rica. Konrad has Masters in Economics and in Political Science from the Freie University, Berlin, Germany.

Linwood Pendleton is a Senior Fellow, Director of Economic Research, and the Director of the Coastal Ocean Values Center at The Ocean Foundation. He has published widely on issues of marine and coastal economics and policy and is a member of the Board of Advisors for the Conservation Strategy Foundation, a member of the Santa Monica Bay Restoration Commission's Marine Technical Advisory Council, and a Director of the Aquarium of the Pacific's Marine Conservation Research Institute. Before joining the Ocean Foundation, Dr. Pendleton was a tenured Associate Professor of Environmental Science and Engineering at UCLA and retains an adjunct position there. Dr. Pendleton has advanced degrees in Ecology from Princeton, Public Policy from Harvard, and a doctorate from Yale's School of Forestry and Environmental studies.

Lucy Emerton is Head of IUCN's Global Economics & the Environment Programme, responsible for leading the integration of economics tools and approaches into IUCN's work and for coordinating economics activities and capacities across Regional and Country programmes. She has been working as an environmental economist for the last 18 years, in Africa, Asia and Latin America, focusing particularly on the valuation of biodiversity and ecosystem services, innovative conservation financing mechanisms, and the environmental economics of large infrastructure development. Before joining IUCN in 1999, Lucy worked for DFID, African Wildlife Foundation, the Policy Research Group, and as a consultant providing

environmental economics technical assistance and policy advice across Eastern and Southern Africa to a variety of bilateral, NGO, UN and private sector organisations. After establishing and running a biodiversity and economics programme in IUCN Eastern Africa, she developed a regional environmental economics programme in Asia in 2001 before moving in 2003 to head the Asia Regional Ecosystems and Livelihoods Group. Lucy holds a BA (Hons) in Social Anthropology from the School of Oriental and African Studies of the University of London, and a Masters in Agricultural and Development Economics from the University of East Anglia, UK.

Marcos Amend is the Research Director Conservation Strategy Fund's Brazil Office. He holds a Masters degree in Economics and Forest Policy from UFPR (Federal University of Parana - Brasil) and has been working in conservation since 1987. Prior to joining CSF, Marcos was the president of the Speleological Studies Group, an organization dedicated to the study and conservation of Brazilian caves. Additionally, Marcos coordinated the development of a "Producing Forest Program" which gained national and international recognition, and managed the field Ecotourism Program for the Sustainable Development reserve of Mamirauá in the Amazon. More recently, was the coordinator of the MPE Ecotourism Program of Brazilian Biodiversity Fund. Marcos was a student in CSF's 2001 Brazil course and then attended CSF's first advanced course in the Pantanal Wetlands in 2002. He is originally from Paraná, in southern Brazil.

Paul J. Ferraro is on the faculty in the Department of Economics at Georgia State University's Andrew Young School of Policy Studies. He is a Senior Science Fellow at the World Wildlife Fund and a member of Global Environment Facility's Science Advisory Panel. Dr. Ferraro's research focuses on the design and evaluation of cost-effective environmental policies and institutions, and the use of experiments to study human behavior and decision-making. He received his PhD in economics from Cornell University. He also holds a BA in biology and history, and an MS in economics, from Duke University. He is a collaborating author on the 2005 Millennium Ecosystem Assessment, and his research appears in journals such as *Conservation Biology*, *Journal of Economic Behavior and Organization*, *Journal of Environmental Economics and Management*, *Journal of Policy Analysis and Management*, *Land Economics*, *PLoS Biology*, *Science* and *Trends in Ecology & Evolution* (see <http://epp.gsu.edu/pferraro> for more details).

Robin Naidoo is a conservation scientist with WWF's Conservation Science Program in Washington, DC. His interests focus on integrating economic costs and benefits into conservation planning, and on the general use of environmental economic methods in the field of conservation. He has mapped the economic costs and ecosystem values of conservation at a variety of scales, from landscape (including sites in Uganda and Paraguay) to global. Naidoo received his PhD from the University of Alberta with

the co-supervision of professors in the Biology and Rural Economy departments. His work has been published in peer-reviewed journals in both economics and ecology.

Stefano Pagiola is an economist in the World Bank's Environment Department. He leads the Bank's work on payments for environmental services. He has worked extensively on economic valuation of environmental and natural resource problems, with particular emphasis on land degradation, ecosystem services, and biodiversity conservation. He joined the World Bank as a Young Professional in 1994. Before joining the Bank, he taught economics at Stanford University and was a Research Associate at Washington State University. He holds a Ph.D. and M.A. from Stanford University and a B.A. from Princeton University. His recent publications include a volume of case studies of market-based mechanisms for forest conservation, *Selling Forest Environmental Services*.

Stephen Polasky is the Fesler Lampert Professor of Ecological/ Environmental Economics at the University of Minnesota. He received his Ph.D. from the University of Michigan in 1986. He has expertise in environmental and resource economics, ecology and economics, conservation biology, and game theory. Dr. Polasky's current research interests include biodiversity conservation, endangered species policy, common property resources, game-theoretic models of resource extraction, and environmental regulation. He served on the Council of Economic Advisers 1998-1999, and served as co-editor for the *Journal of Environmental Economics and Management*. Currently he is serving on the Science Advisory Board for EPA. Recent publications have appeared in the *American Journal of Agricultural Economics*, *Journal of Environmental Economics and Management*, *Journal of Economic Perspectives*, *Land Economics*, *Nature*, and *Science*.

Subhrendu K. Pattanayak is a Fellow and Senior Economist in Public Health and the Environment at RTI International, and an Associate Professor at North Carolina State University. He builds econometric models to analyze the policy causes and consequences of human behaviors and uses estimated parameters in integrated simulation tools to design policies. This research lies in three domains: (a) practical methods for non-market valuation, (b) evaluation of forest ecosystem services, and (c) economics of environmental epidemiology. Most of this research has relied on specifying testable hypothesis by applying economic theory to environment and development policies, conducting field experiments through household surveys in developing countries, matching the survey (microeconomic) data with meso-scale environmental and social statistics, and estimating econometric models to generate policy parameters and recommendations. Dr. Pattanayak has directed several research projects funded by the World Bank, Asian Development Bank, U.S. Environmental Protection Agency (EPA), the U.S. Department of Agriculture (USDA) Forest Service, Conservation International, Health Canada, and the National Science Foundation in Brazil, Costa Rica, India, Indonesia, Madagascar, Mexico, Nepal, the

Philippines, Sri Lanka and the United States. He has designed and managed large multi-site household surveys in urban and rural areas of India, Indonesia, Mexico, Nepal and Sri Lanka. Dr. Pattanayak has published in journals such as *Economics Letters*, *Land Economics*, *American Journal of Agricultural Economics*, *PLOS Biology*, *Environment and Development Economics*, *Agriculture Economics*, *Environment and Resource Economics*, *Forest Science*, *Journal of Forest Economics*, *Forest Policy and Economics*, *Water Policy and Water Resources Research*. He is a member of the American Economic Association and the Association of Environmental and Resource Economists. Dr. Pattanayak is also a Fellow in the Center for Applied Biodiversity Sciences, and a Resource Faculty for the South Asian Network for Development and Environmental Economists (SANDEE).

Sven Wunder is a Principal Economist with the Center for International Forestry Research (CIFOR), Livelihoods Program, based in the Regional Office in Belém, Brazil. Prior to CIFOR, he worked as a Senior Researcher for the Centre for Development Research in Copenhagen (1997-99), in IUCN's Forest Conservation Program in Ecuador (1993-96), and in the Danish Ministry of Foreign Affairs – Danida, Copenhagen (1992-93). He holds a DSc. in Forestry, a PhD and MA in Economics, all from the University of Copenhagen (PhD Visiting Student in Oxford, UK). He is a Danish citizen, born in Germany. Beyond that, he has lived and worked in Brazil, Indonesia, Ecuador, Colombia, and the UK, and is fluent in six languages. Sven has published around 70 scientific publications, of which about half peer-reviewed, including eight books. He has worked and published on natural resource management topics such as forest conservation, deforestation, payments for environmental services, ecotourism, non-timber forest products, but also on poverty, macroeconomics, trade, income distribution, development assistance, and economic history.