

The logo for Environment for Development (EFD) features the letters 'EFD' in a bold, green, sans-serif font. The letters are set against a white background with a thin black horizontal line above and below the text.

Environment for Development

The logo for CATIE (Center for Tropical Agriculture and International Cooperation) features the word 'CATIE' in a bold, blue, sans-serif font. To the right of the text is a stylized green leaf icon.

Solutions for environment and development
Soluciones para el ambiente y desarrollo

A photograph of a lush green forest with tall trees and dense foliage. In the background, a range of blue mountains is visible under a clear blue sky. The image is framed by the dark silhouettes of tree branches in the foreground.

EFD INITIATIVE
CENTER REPORT 2010:

CENTRAL AMERICA

The EFD Central America aims to contribute to the design and evaluation of public policies and local institutional arrangements that affect environmental protection, sustainable natural resources management and poverty alleviation by strengthening the understanding of the causes and consequences of human decisions as key inputs into policy making, and by increasing the interaction between academia and policy makers in Central America.

THIS REPORT

This report presents EfD Central America, its members and work during 2010.

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Other photos: Maria A. Naranjo, Juan Robalino, Karin Backteman, Karin Jonson, Roger Madrigal and Anna Nordén

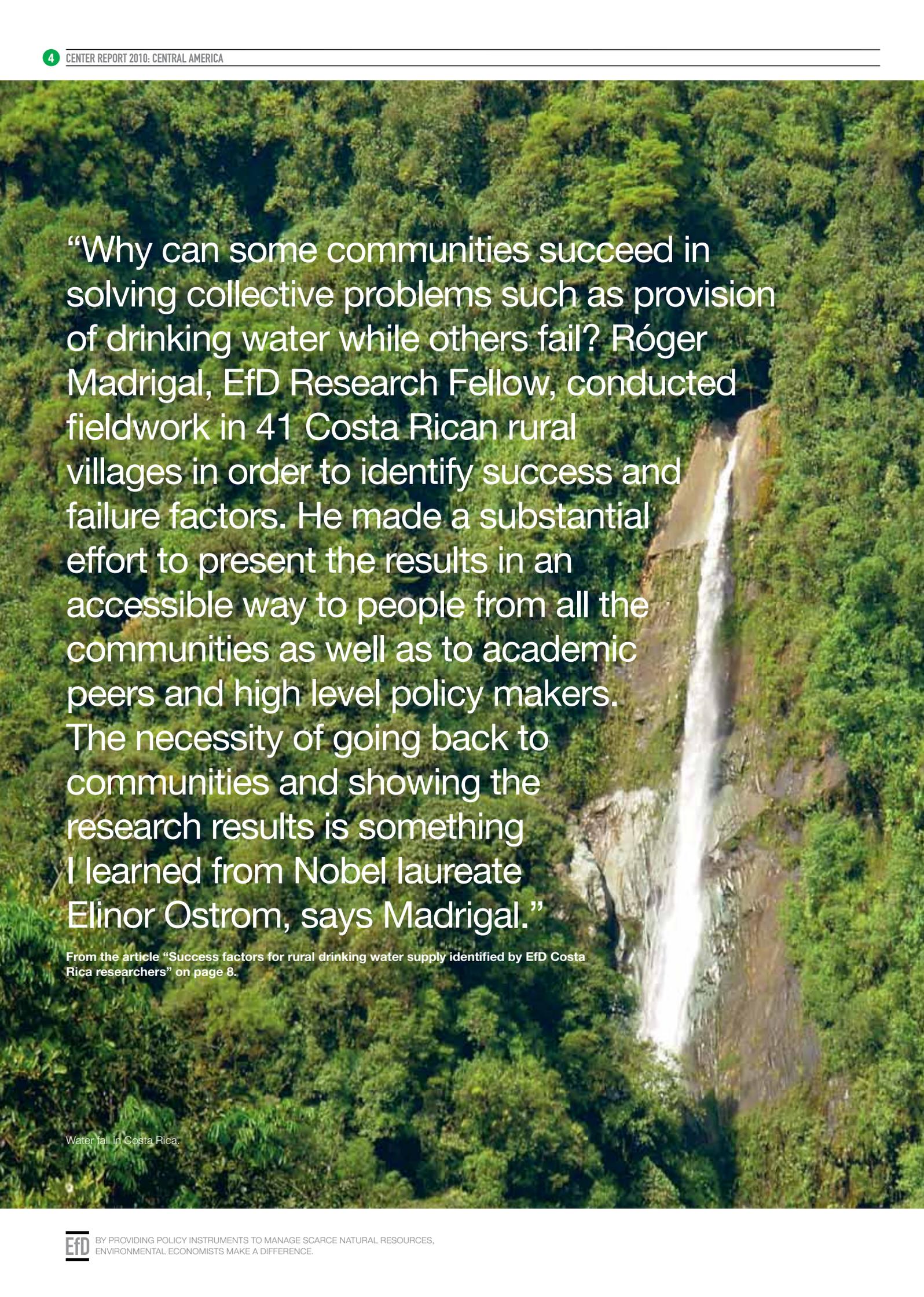
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Beach in Costa Rica

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A photograph of a waterfall cascading down a rocky cliff in a lush green forest. The water is white and foamy as it falls, surrounded by dense, vibrant green foliage. The scene is captured from a slightly elevated angle, showing the waterfall's path down the cliff face.

“Why can some communities succeed in solving collective problems such as provision of drinking water while others fail? Róger Madrigal, EfD Research Fellow, conducted fieldwork in 41 Costa Rican rural villages in order to identify success and failure factors. He made a substantial effort to present the results in an accessible way to people from all the communities as well as to academic peers and high level policy makers. The necessity of going back to communities and showing the research results is something I learned from Nobel laureate Elinor Ostrom, says Madrigal.”

From the article “Success factors for rural drinking water supply identified by EfD Costa Rica researchers” on page 8.

Water fall in Costa Rica.



Francisco Alpizar

MESSAGE FROM OUR COORDINATOR

The year 2010 has been a good one, full of changes, new things, and above all, full of interesting challenges. From the moment we started working on planning activities for the period, we felt in the air that the transitions in 2010 were not going to be easy. As good competitors and sportspersons knowing that, helped us to speed up and get momentum for the challenges and opportunities we had to face. In this report we present the most important results achieved in EfD-CA/CATIE during the year.

I would like to highlight some achievements of this period that, from my perspective, are of especially value. First, at the beginning of the year we received Alex Pfaff here in CATIE and we presented him a concrete and timely idea. Just six months later that idea became a research project sponsored by the Tinker Foundation; an unprecedented achievement for us. Most importantly this achievement demonstrates our ability to compete as a center at the same level with universities and research centers worldwide.

Another major success in 2010 was simply the growth in number of staff. This year four

new members and two doctoral students joined the Center. Our most senior staff has managed to consolidate their most important career aspirations and exercise a very good leadership which benefits the whole team. Thus we have succeeded in forming a group of thoughtful people with a research agenda which profiles EfD-CA/CATIE as a true "Think Tank" in economics and environmental policy. This gives us a great sense of pride and commitment. On the one hand, proud to be able to have people of such high professional quality and on the other, commitment to provide the conditions necessary for all to realize release our full potential.

I also want to draw attention to our efforts in local capacity building through the EfD seminar series. Throughout the year, both EfD-CA staff and the whole community at CATIE enjoyed very stimulating presentations. These seminars not only allow us to discuss, share ideas, and learn about the remarkable work others are doing but in addition they allow us to expand our network of researchers and decision makers.

Finally, I like to thank the Center administrative staff for their phenomenal work. Keeping the

house in order in a micro world of administrative details, donor relations, steady stream of small projects, activities, and workshops, is not easy. But they have been very successful in doing so. This allowed others to do better their tasks in the other micro world of research, training, and policy incidence.

Just like the year the 2010, the one to come will be very interesting and full of challenges as well. 2011 marks the beginning of new phase in other important projects related to the Centre, as is the case of LACEEP. We signed a four year agreement with EFD, from 2011 to 2014. We must look ahead in our challenge to maintain our strong relation with existing donors and to seek more. We continue working on it as there are many opportunities ahead.

Thanks to everyone for their commitment, for joining our ambition to create a world-class center for research and independent thought, and for your confidence in believing that it is here, together, that we can be achieved this goal.

Francisco Alpizar
Coordinator EfD-CA



FOURTH EFD ANNUAL MEETING COMPLETED

THE EFD ANNUAL MEETING 2010 IN ETHIOPIA, October 28-31, started with one day at UN Economic Commission for Africa focusing on how to make the most use of environmental economics research for development. Three days of research presentations and discussions followed together with key note speeches and a lecture on a multi-disciplinary approach to analyze Social Ecological Systems, designed by Nobel Laureate Elinor Ostrom and applicable for EfD's planned thematic research collaboration.

"Our objectives of the Policy Day was to disseminate selected work of EfD's research and its potential contributions to a key policy institution, UNECA, and other key stakeholders present at the meeting. We also wanted to share information across EfD centers on successful research-policy interactions, as well as increase our learning on how to translate research to policy more in general", says EfD Director Gunnar Köhlin.

The Policy Day was hosted by UN Economic Commission for Africa (UNECA) together with the Ethiopian EfD Center (Environmental Economics Policy Forum for Ethiopia which is hosted by the Ethiopian Development Research Institute).

Among the speakers were Desalegn Mesfin, Deputy Director General, Federal Environmental Protection Authority of Ethiopia, who opened the meeting. Anders Ekbom, EfD Research Fellow and policy analyst at the University of Gothenburg, spoke about research-policy interactions: models, approaches and lessons learned. Chantal Line Carpentier, Sustainable Development Officer, Division for Sustainable Development United Nations Department of Economic and Social Affairs, spoke about needs and opportunities to strengthen policy-research links on the economics of environment and climate change – perspectives from UNDESA.

Successful cases of EfD research-policy interactions were presented



The EFD Annual Meeting 2010 in Ethiopia was held at UNECA, UN Economic Commission for Africa, in Addis Abeba, and in Debrezeit. In the photo spread (page 6-7) from the left: Rahel Deribe, (lunch break in Africa Hall), Francisco Alpizar, Precious Zikhali and Wilfred Nyangena, group: Lunyu Xie, Edwin Muchapondwa, Ping Qin, and Razack Lokina. Precious Zikhali. Middle row: Ping Qin, Jintao Xu. Bottom row: Roger Madrigal, Razack Lokina, group: Thomas Sterner, Wisdom Akpalu, Peter Berck, and Chantal Line Carpentier, Jo Albers and Alemu Mekonnen, Mare Sarr, Gunnar Köhlin.

by Menale Kassie, former Efd Research Officer and now working for CIMMYT in Kenya, and by the Efd coordinators Jintao Xu, Professor at Peking University, and Francisco Alpizar, CATIE, Costa Rica. Please see all Policy Day speakers in the full program below.

The following three days of the Efd annual meeting were hosted by Alemu Mekonnen, Efd Research fellow and Coordinator of Efd Ethiopia, and held at Kuriftu Resort in Debrezeit. Most of the time was devoted to presentations and discussions on ongoing and planned Efd research.

One of the key note speakers was Roger Sedjo, RFF Senior Fellow and Director of RFF's Forest Economics and Policy. Sedjo spoke on the role forests can play in carbon capture: principles, costs and policies. The other key note speaker was World Bank Lead Economist Klaus Deininger, who spoke on large scale land acquisitions.

Efd Research Fellow Roger Madrigal from Costa Rica gave a lecture on the Social Ecological System Ontological framework, designed by professor Elinor Ostrom, who was awarded the 2009 Nobel Memorial Prize in Economic Sciences for her analysis of economic governance, especially the commons. Roger Madrigal made a long research visit to professor Ostrom at Indiana University before she received the prize, in order to develop the design of his research project on drinking water management.

"The ontological framework is a conceptual map for analyzing the interactions between humans and ecosystems. It builds on the last decades of findings in the literature of common-pool resources and collective action towards the management of natural resources", says Madrigal:

"This framework might help to conduct systematic diagnosis of the structure of the interactions between humans and ecosystems analyzed by Efd's scholars in different parts of the world."

RESEARCH POLICY INTERACTION

The EfD-CA Center for Central America is thus designed with the clear purpose of providing proactive, science based advice on available policy options, and a critical analysis of existing initiatives that affect environmental protection, sustainable natural resource management and poverty alleviation, based on the construction of a research agenda that prioritizes problems and policy processes in close interaction with stakeholders at all levels.

We believe this is particularly important for the Central American region for several reasons. First, governmental institutions as well as local governments in the region are frequently characterized by low in-house capacity, resulting in little if any analysis of available policy options and no ex post evaluation of the impact of alternative policies.

Second, non-governmental institutions are focused on the implementation of projects and technical assistance. Even in the cases in which solutions are constructed with a bottom up approach that involves communities and stakeholders, the very nature of project implementation (in terms of time, budget and narrow objectives) reduces NGOs capacity

Success factors for rural drinking water supply identified by EfD Costa Rica researchers

Why can some communities succeed in solving collective problems such as provision of drinking water while others fail? Roger Madrigal, EfD Research Fellow, conducted fieldwork in 41 Costa Rican rural villages in order to identify success and failure factors. He made a substantial effort to present the results in an accessible way to people from all the communities as well as to academic peers and high level policy makers.

Water taking point in a rural aqueduct, Costa Rica.

for critical, scientific analysis. CATIE is by no means an exception to this rule, and the EFD-CA Center is expected to provide scientific backstopping to these types of institutions in general and CATIE in particular.

Third, policy and decision makers in the Central American region are proudly distrustful of top down, over generalized solutions, and even more so if they are perceived to have been designed for other contexts. Issues of monitoring, the lack of available resources, and technical requirements are too easily put forward as reasons for disregarding policy advice. Hence, a local research center that involves policy makers from

the outset into the research agenda is fundamental to increase acceptance of policy recommendations.

Highlights in 2010

Determinants of Performance of Drinking Water Community Organizations: A Comparative Case Studies Analysis in Rural Costa Rica

This is an institutional analysis of the underlying factors that affect the performance in the provision of drinking-water by community organiza-



THE NECESSITY OF GOING back to communities and showing the research results is something I learned from Nobel laureate Elinor Ostrom," says

Róger Madrigal.

"She always stresses it. And I agree. As a researcher you have an ethical responsibility. You can't just take information from people in order to write an academic paper. You should also give the results back to the people you interviewed. That's the only way you can build trust, and it is also important for the impact of your research," says Madrigal.

Madrigal spent two months with Elinor Ostrom at Indiana University in Fall 2008, before she received the Nobel Prize in Economics (The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2010). Madrigal notes:

"She gave a lot of support regarding the design of the research project and the methods as well as on how to deal with communities. She always insists on devolving and giving back, which has really influenced my research."

Hence, Madrigal and his team took the challenge to move from tables and regressions for journals to accessible information translated to Spanish.

Sorted out key messages

"It was difficult. As scholars we are not familiar with communicating our ideas to non-experts. Of course we could not use the traditional scholarly approach of Power-Point presentations and papers. Instead, we sorted out key messages and printed them on small cards that we used at a workshop for all the investigated drinking water community organizations," says Madrigal.

The preparation of accessible material and practical arrangements required a total of three full weeks of work. A one-day workshop was held on March 6th, 2010 at CATIE in Turrialba, a location suggested by the community representatives. Most communities (2/3) wanted to commit resources to attend the meeting.

"That reflects their interests in the results of the study, and created more pressure and responsibility for our team to deliver something useful for them," says Madrigal.

"The only way you can build trust"

For each community, Madrigal wrote an individual four-page report about the results. Thus, each community could review the evaluation of their performance in private. The top-three performance communities were awarded a diploma during the workshop, and all participants discussed what makes them successful.

"It was a lot of work. But it's the only way you can build trust, and it was very rewarding to see how communities use our results," says Madrigal.

The 41 investigated drinking water community organizations provide water to more than 60 percent of the rural population. On average each of them comprises 200 households. The aim of the research was to understand how geophysical characteristics of watersheds and infrastructure as well as governance and socioeconomic attributes of local users affect three key dimensions of performance in rural communities: financial health, infrastructure condition, and user satisfaction.

The human capital - a key factor

"One important key factor that we found to affect performance is the human capital of the people in charge of water provision, their formal education, experiences, and leadership. This evidence allows us to recommend policy makers to support capacity building," says Madrigal.

He and his colleagues found that the capacity of local leaders to generate appropriate incentives to involve the community in sustainable solutions for collective-action problems is one of the most important mechanisms that can be linked to high performance.



tions. These organizations, locally called ASADAS (Administrative Associations of Aqueducts and Sewerage Systems), provide water to more than 60 percent of the rural population. The study was conducted in 40 communities in rural Costa Rica to explore how a complex configuration of geophysical characteristics of watersheds and infrastructure, and governance and socioeconomic attributes of local users affect three dimensions of performance: financial health, infrastructure condition, end-user satisfaction. A qualitative approach and matching techniques were used to ensure comparability among cases.

The main results of the study suggest (i) there is great disparity in performance across water Associations across communities. And (ii) there are three main conditions that promote higher levels of performance were:

- relevance of a demand-driven approach coupled with downward accountability
- working rules for tariff collection and infrastructure maintenance
- appropriate support from the government

This study is an example of a bottom-up approach for policy change. Several indicators were developed to evaluate the three dimensions of performance. The results of the study were disseminated in the

participating communities through workshops. The information provided helped local leaders identify ways to improve performance in the provision of potable water. Furthermore, the information was shared with representatives of the ICAA (Instituto Costarricense de Acueductos y Alcantarillados); this is the Costa Rican Water Authority. The results captivated the interest of ICAA to develop a scheme based on the performance indicators to implement it nationwide. However this has not been done by ICAA. Also the study provided evidence of the need to target government assistance to communities with less performance capacity.

Financing of State Protected Areas (series of studies)

Several studies have been done on methods to improve financing of State Protected Areas (SPAs). Some of them provide clear examples of how decision-making by government authorities is starting to be informed by research based results. In specific, optimal entrance fees to SPAs in Costa Rica is now set according to price discrimination and technical recommendations. This is relevant because entrance fees are currently one of the main sources of funding for the Costa Rican System of SPAs. A key partner in this initiative has been the Costa Rican office of The Nature Conservancy (TNC).

Working rules and accountability improve performance

Equally important are working rules created by the local communities, and not least that these rules are enforced. Yet another mechanism linked to high performance is local accountability. Downward accountability to the consumers exerts pressure on water committee members to act according to the interests of water users.

“Our research work meant that for the first time these communities were evaluated on their performance. They were eager to see how they were doing compared to other communities,

and requested us to come back next year and do some exercises to track changes over time. This reflects the necessity of performance benchmarking standards and yardsticks,” says Madrigal.

He has presented the project as well as its results to top managers of the rural water sector in different meetings and forums since 2008. What remains now is a meeting to present the final results.

Publications

High-quality research, with the potential of

being published in high-ranked journals, is of course an equally important objective of the project. In 2010, Madrigal and his research colleagues Francisco Alpízar and Achim Schlüter published an EfD/RFF Discussion Paper based on the results; see “Determinants of Performance of Drinking-Water Community Organizations, A Comparative Analysis of Case Studies in Rural Costa Rica”. Some other papers are forthcoming. See also a policy brief and an opinion article, published in *La Nación*, a Costa Rican newspaper.

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Another study contributed to creating a methodology to estimate the costs of concession of non-essential services within SPAs. This type of concession is governed by the country's Biodiversity Law of 1998. A first study was based in the Chirripó National Park. The office TNC was a key partner in the project. The methodology created by EfD-CA has been approved by CONAC (National Commission of Conservation Areas) as the official method for estimating the costs in the concession of non-essential services in SPAs. It is probable EfD-CA may replicate the study to determine the costs of the concession of non-essential services of room and board, rental of outdoor equipment, souvenir store, transportation of material and equipment, and guiding in the Corcovado National Park and the concession of tour operations in the Marino-Ballena National Park.

A third study requested by officials from Cahuita National Park is exploring a fund raising strategy based on pro-social behavior. This study is relevant for policy makers because it fills the gap on the connection of the importance of conservation for tourism and vice versa but adds the question on how relevant is this for communities around protected areas. This research program (in consultations with Park officials and local leaders) was focused on how donations are affected by individuals' behavior in a social context. It assesses the effects of an imposed suggestion on how much to donate; the presence of other individual and contexts; and one's beliefs with regards to the behavior of others. An important feature of this case is that it is being conducted in a State Park that is co-managed by the government and the local community. Thus, it opens a window of opportunities to further explore the impacts of co-management of SPAs in Costa Rica. In turn this issue is closely linked to the concession of non-essential services in SPAs.

Studies that evaluate the impact of policy changes

EfD-CA has conducted research that was not aimed at changing actual policy but to assess the impact of a change in policy informed by other sources.

One example is the study on Fuel Tax Incidence in Costa Rica. This analysis contributed to a more accurate evaluation of the effects of the driving restrictions on transport fuel sales in Costa Rica by accounting for changes in fuel prices over time, as well as changes in the vehicle fleet. The study used data from a 2005 household income and expenditure survey and a 2002 input-output matrix. The analysis was done by: estimating the upper and lower bounds of total monthly expenditure; identifying monthly fuel expenditures; calculating the average expenditure on fuel taxes as a percentage of total expenditure; comparing these averages of expenditures devoted to taxes; and measuring income inequality. The results suggest that increases in gasoline taxes, imposed to mitigate vehicle negative externalities or for other reasons, would not exacerbate income inequality since wealthier strata would bear most of the burden of the increase. But increases in diesel taxes have a greatest effect on lower and middle income strata. Policy makers can avoid adverse distributional consequences of fuel tax hikes by differentiating taxes on diesel and gasoline and reserving steep increases for the latter which is being practiced in Costa Rica.

Another example is the study on Costa Rica's Payment for Environmental Services (PES) that evaluated the intention, implementation, and impact

of Costa Rica's PES program. Payments are given to private landowners who own land in forest areas in recognition of the ecosystem services their land provides. To characterize the distribution of PES the study combined remote sensing with geographic information system databases and then used econometrics to explore the impacts of payments on deforestation. Payments were distributed broadly across ecological and socioeconomic gradients, but the 1997–2000 deforestation rates were not significantly lower in areas that received payments.

Yet the implementation of the PES Program reduced deforestation rates between 2000 and 2005 by a small amount (only 2% of the land enrolled in the program would have been deforested), the program's potential for impact was increased by explicitly targeting areas with deforestation pressure and increasing some payments to enroll land that would have been cleared. This impact is greater if the results are compared with the 1997–2000 period in which reduction in deforestation rates is estimated to be 0.6%.

Other successful Costa Rican conservation policies, including those prior to the PES program, may explain the current reduction in deforestation rates.

Future research needs in relation to these issues:

- Research to address climate change impacts on the provision of potable water services by ASADAS and performance their performance.
- Studies on institutional approaches to increase capacity in communities that lack assistance to improve capacity
- Creative schemes for financing on State Protected Areas
- Comparative studies of ecosystem services schemes

In service training

The international course on Economic principles for environmental management took place from July 19 to July 30, 2010 at EfD - CA Headquarters, Turrialba Costa Rica. The 25 participants enrolled in the program came from several countries in Latin America.

The course aimed at contributing to the understanding of the causes and effects of environmental degradation in the region through a multidisciplinary approach. Participants were able to propose economic solutions suitable to the social, cultural, and political environment of their home countries. Due to the importance of the water issues in the national and global agenda, the course emphasized the development of Payment for Ecosystem Services (PES) schemes that seek to improve the availability and quality of drinking water.

Policy links

- CATIE - Tropical Agricultural Research and Higher Education Center
- LACEEP - Latin American and Caribbean Environmental Economics Program
- The School of Business, Economics and Law at the University of Gothenburg
- RFF - Resources for the Future
- Focali - Forest, Climate, and Livelihood research network



- MINAET - Costa Rica Ministerio de Ambiente Energía y Telecomunicaciones
- SINAC - Costa Rica National System of Protected Areas
- FONAFIFO - Costa Rica National Forestry Financing Fund
- TNC - The Nature Conservancy
- FCR - Forever Costa Rica Foundation
- INE - Mexico National Institute of Ecology
- The Sanford School of Public Policy at Duke University
- Inter-American Development Bank
- Inter-American Institute for Global Change Research
- GIZ - German Society for International Cooperation

Policy seminars, workshops and conferences

Seminar series in climate change

The year 2010 was very active in terms of seminars, workshops and conferences. As a highlight, EfD-CA presented on March 23, the seminar "Consequences of Copenhagen: What are the challenges and opportunities?" With this first seminar, EfD-CA launched a series of seminars on environmental issues, targeted to the public and private sector and civil society.

The objective of this seminar was to analyze the outcome of negotiations on the Climate Change Summit held in Copenhagen in December 2009. It provided a space for participants to learn how to build a decision-making framework based on uncertainty and risk minimization, and expand the opportunities posed by carbon markets and competitive implementations of carbon neutrality within companies.

The main speaker was Álvaro Umaña, former Chief Negotiator of the Costa Rican delegation to the Climate Change Summit (COP15). Umaña was the first Minister of Environment and Energy of Costa Rica (1986-1990) and is a recognized researcher. Besides, Lawrence Pratt, Deputy Director for Latin American Center for Competitiveness and Sustainable Development (CLACDS) at INCAE appeared as a guest speaker. Mr. Pratt is also a founder and project director of the Center Ecobanking and Sustainable Markets Intelligence.

Furthermore, between November 29 and December 10, 2010 the Framework Convention United Nations Convention on Climate Change (UNFCCC) held its 16th Conference of the Parties (COP16) and the sixth session of the Meeting of the Parties to the Kyoto Protocol (MOP6) in Cancun, Mexico. Francisco Alpizar and Carlos Muñoz from EfD-CA participated as part of a delegation from CATIE. They both attended several informal meetings with representatives of organizations and delegations. They also were present at numerous official and unofficial side events during the Conference, including Forests Day 4 where CATIE's Director General gave one of the key note speeches. As a remark "It was exciting to have the opportunity to attend three meetings of the Costa Rican delegation, listened to their concerns and strategies, and provided small advice. Needless to say it was a thrilling to greet people like Sir Nicholas Stern, Connie Hedegaar, Zhenhua Xie, Mario Molina, Marco Gonzalez, and many others in Cancun" said Carlos.

The final results of the negotiations at the COP16/MOP6 are contained in the Cancun Agreement which includes many of the elements of the

Copenhagen Agreement. It is widely recognize this agreement advances the agendas on climate change on a step-wise approach rather than a comprehensive agreement that is legally binding; a so-called "balanced package."

Participation in WCERE 2010

Between June 28 and July 2, EfD-CA actively participated in the 4th World Congress of Environmental and Resource Economists (WCERE 2010), in Montreal, Canada. Seven people from EfD-CA attended the congress, including six researchers (mostly thorough scholarships) and a person responsible for the information booth. "I saw no other group in Latin America that had such presence" said Francisco Alpizar.

At the event EfD-CA presented five different paper results and research fellow Juan Robalino served as facilitator in one of the sessions.

According to Laura Villalobos, a young researcher at EfD-CA and speaker in the Congress "One of the most valuable things of this event was to meet people from around the world, that you know are doing similar research," said Villalobos. "It is important to make contact to exchange ideas, emails, essays, etc. and work among research professional networks, and universities".

Workshop on benefits of Coffee Certification

On November 17, 2010, María A. Naranjo presented the results and conclusions from the research project "Adoption of sustainable management practices by Costa Rican coffee growers". The activity was in charge of Naranjo with support from Carlos Muñoz center fellow and Joselyne Hoffmann, communications liaison for EfD-CA.

The results were based on the latest EfD-CA discussion paper by Allen Blackman and María A. Naranjo titled "Does Eco-Certification Have Environmental Benefits? Organic Coffee in Costa Rica."¹ Information was carefully presented in a simple way according to the audience who receive a Spanish version of a policy brief written for this purpose together with a copy of the data collected during the research.

Key participants such as Buenaventura Gamboa, representing the Organic Farmers Association of Turrialba (APOT)² and Gabriela Soto, CATIE's organic coffee certification expert participated in the workshop, sharing with us their point of view and contributing to the validation of our results.

According to Gabriela Soto, the results indicate that producers are reducing negative practices, but are not making sufficient efforts to maximize the benefits of applying positive practices. "Organic is not just what I don't do, but what I do to improve. During what we call the 'organic coffee crisis', we see that the producer reduce inputs for productivity and did not applied other practices to improve. They stopped the use of several things, including organic fertilizers. Therefore productivity is very low. Costa Rica's Coffee Institute (ICAFE) data show that premium is still increasing, but productivity is low and profitability of organic coffee is the worst of all certifications."

Arenal Volcano, in Spanish Volcán Arenal, is an active andesitic stratovolcano in north-western Costa Rica around 90 km northwest of San José



RESEARCH 2010: PUBLICATIONS

PEER REVIEWED

Madrigal, R; Alpízar, F; Schluter, A. (2010). Determinants of performance of community based drinking water organizations. To be publish in World Development.

Rivera, Jorge. 2010. Business and Public Policy: Responses to Environmental and Social Protection Processes. Cambridge University Press

EFD DISCUSSION PAPERS

Blackman, Allen and Maria A. Naranjo (2010) Does Eco-Certification Have Environmental Benefits? Organic Coffee in Costa Rica. Environment for Development. Discussion Paper EfD 10-25. November 2010.

Alpízar, Francisco and Peter Martinsson (2010) "Don't Tell Me What to Do, Tell Me Who to Follow! Field Experiment Evidence on Voluntary Donations", EfD Discussion Paper 10-16, Environment for Development Initiative and Resources for the Future, Washington DC, June 2010.

Blackman, Allen, and Jorge Rivera (2010), "The Evidence Base for Environmental and Socio-economic Impacts of "Sustainable" Certifica-

tion", EfD Discussion Paper 10-10, Environment for Development Initiative and Resources for the Future, Washington DC, March 2010

Alpízar, Francisco and Peter Martinsson (2010) "Paying the Price of Sweetening Your Donation Evidence from a Natural Field Experiment", Discussion Paper, EfD DP 10-06. Environment for Development Initiative and Resources for the Future February 2010.

Madrigal, Róger, Francisco Alpizar, and Achim Schülter (2010), "Determinants of Performance of Drinking-Water Community Organizations: A Comparative Analysis of Case Studies in Rural Costa Rica", EfD Discussion Paper 10-03, Environment for Development Initiative and Resources for the Future, Washington DC, February 2010.

Robalino, J and Laura Villalobos (2010). Conservation Policies and Labor Markets: Unraveling the effects of national parks on local wages in Costa Rica. Environment for Development. Discussion Paper 10-02. February 2010.

POLICY BRIEFS

An analysis of the driving restriction implemented in San José, Costa Rica, by Rebecca Osakwe

<http://www.efdinitiative.org/research/publications/publications-repository/an-analysis-of-the-driving-restriction-implemented-in-san-jose-costa-rica>

Costa Rican transport policies: a stakeholder analysis, by Rebecca Osakwe
<http://www.efdinitiative.org/research/publications/publications-repository/costa-rican-transport-policies-a-stakeholder-analysis>

Does Eco-Certification Have Environmental Benefits? by Allen Blackman and María A. Naranjo

<http://www.efdinitiative.org/research/publications/publications-repository/does-eco-certification-have-environmental-benefits>

EFD RFF/OTHER BOOKS

Bovarnick, A., F. Alpízar, C. Schnell, Editors. The Importance of Biodiversity and Ecosystems in Economic Growth and Equity in Latin America and the Caribbean: An economic valuation of ecosystems, United Nations Development Programme, 2010.

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Bann, C., Seild, A., Chacon, A., Arriagada, A. Agriculture. In Bovarnick, A., F. Alpizar, C. Schnell, Editors. The Importance of Biodiversity and Ecosystems in Economic Growth and Equity in Latin America and the Caribbean: An economic valuation of ecosystems, United Nations Development Programme, 2010.

Madrigal, R. (2010). Estimating the cost and benefits of supplying hydrological ecosystem services for municipal drinking water systems, in *Ecosystem Services from Agriculture and Agroforestry: Measurement and impact*. Edited By Bruno Rapidel, Fabrice DeClerck, Jean-Francois Le Coq and John Beer. Earthscan Press April 2011

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PROJECTS

Impact of uncertainty and pro-social attitudes on household's solid waste management decisions: starting from scratch in a LDC

Solid waste management is a severe environmental problem in many urban areas in the developing world. In particular, Costa Rica has been faced with an increasing amount of waste generation, with one quarter of total waste being collected and disposed by households only. Therefore, a good understanding of households as the source of waste generation and their response to policy incentives is necessary to achieve effective and efficient environmental protection.

This project addresses whether increasing uncertainty about the beneficial consequences of collected waste or other aspects of the collection-recycling process affect contribution levels and in turn prosocial attitudes. The main purpose of this research is to identify the implications that follow from these behavioral assumptions for the selection of specific environmental policy instruments for solid waste management. We aim to collect experimental and empirical data to illustrate our theoretical arguments and test our hypotheses in the context of solid waste management practices in urban areas of Costa Rica. Alternative institutions based on behavioral findings can thus be identified and used to guide innovative demand driven policy including insights from other-regarding preferences.

Exploring the potential of safety nets as part of an adaptation to climate change strategy in Central America

A better understanding of individuals' respons-

es to extreme climatic events is fundamental for the design of adaptation strategies in developing countries. Safety nets (created by the government, communities, organized groups or families) could be a key component of an adaptation strategy to minimize expected losses. In a climate change scenario in which more frequent and aggressive extreme events are predicted, the risk of suffering losses from extreme events might be correlated across individuals in a given landscape; and adaptation as a strategy can take a collective action dimension. In this light, efforts to insure individuals against extreme events can lead to reduced private adaptation, i.e., individual incentives to take preventive measures could be a function of the government/community investment in public safety nets and vice versa.

Our objective is to explore the effects and the role of safety nets in adaptation to climate change in Central America. First, we propose to apply a survey designed to explore whether and how households share risk with a network of peers. Based on what we learn from the collected data, we will refine an experimental design to be applied first with students and then on selected populations of Central America.

The results from this study will be an important input into the design of local and national policies to reduce the adverse effects from climate change. To maximize policy impact, both academic and more popular publications will be included as outputs, as well as a dissemination strategy targeting policy makers involved in the increasingly popular process of decentralization of decision-making from the central to local governments.

The role of coastal communities on the management of marine turtles in Central America: The case of Ostional Wildlife Refuge

The livelihoods of poor people in many coastal areas of Central America depend heavily on marine ecosystems. The direct consumption of marine turtles (meat, eggs, shell, leather and bone) and their non-consumptive uses (mainly tourism) have had important economic and cultural benefits to these people. Beyond these, marine turtles are considered as a flagship species for conservation. Still, different factors (mostly human) threaten the biological sustainability of these endangered species and hence, the well-being of people that depend on them.

Our general objective is to better understand under which conditions a co-management alternative (a shared effort between the central government and the local community) might work to guarantee the sustainable use of a complex mobile common pool resource such as marine turtles. In addition the project aims to study, from the individual perspective, the compliance with locally devised rules for harvesting turtle eggs. Learning about the violations of these rules might teach us how well the institutions are working and how cooperation might be increased.

We have selected Ostional Wildlife Refuge as a case study due to its peculiarities: host of one of the largest marine turtle egg nesting population in the world; different institutional arrangements (with different degrees of community participation) have been implemented leading to significant differences in outcomes; consumptive use of eggs is legal under certain restrictions; and tourism industry is growing



National Park Chirripó

fast, among other important characteristics.

Our project will contribute to the existing literature on the conditions that fosters the effectiveness of co-management institutions for wildlife management. We also want to contribute to the local efforts to devise new policies to cope with external shocks/disturbances that threaten the population of turtles and hence, the flow of economic benefits to local people and the human kind.

Measuring the effects of flood risk on migration flows: An application for Costa Rica

Climate-change-induced extreme events have exacerbated risks associated to floods in vulnerable areas in Central America. Experts forecast that the rise in global temperatures will increase the frequency and intensity of extreme natural events (UNFCCC 2007, IPCC 2007). Central American countries are regularly affected by floods caused by cyclone events and hurricanes. Examples are Hurricane Mitch, which devastated long areas in Honduras and Nicaragua in 1998 and Hurricane Stan that heavily hit Guatemala in 2005. What is worrisome is that the intensity of such storms is forecasted to increase to levels never seen before.

Population displacement to less or none affected areas is one of the most abrupt socio-economic consequences of weather extreme events. However, there are still many unanswered questions regarding the relationship between migration and flood risk.

The objective of this project is to estimate to what extent migration movements within a country are explained by occurrence of

extreme weather events in general and more specifically by floods. Our initial proposal is to perform an initial analysis and to define an analytical framework for Costa Rica, to later be expanded to other Central American countries where the degree of exposure to natural disasters is significantly high.

The Project is envisioned in three main stages. The first one consists on estimating the impact of floods on migration rates; the second will identify the most vulnerable areas to migration movements and the last one, involves projecting local migration flows under different climate change scenarios, under the assumption of limited or null governmental prevention and mitigation policies and actions.

CATIE began research on payments for environmental services

EfD-CA at CATIE began study sponsored by The Tinker Foundation.

Environment for Development initiative in Central America (EfD-CA) has started a two-year study on the subject of payments for environmental services (PES). The study is made possible through funding from The Tinker Foundation and is coordinated by EfD-CA at CATIE. The foundation selects proposals that promote the exchange of information on specific issues of policy, governance and environmental economics.

Arranca investigación en pagos por servicios ambientales

EfD-CA del CATIE inició estudio de dos años en el tema de pagos por servicios ambientales (PSA) financiado con fondos de la Fundación Tinker

Concessions of services in protected areas of Costa Rica incorporate methodology created by EfD-CA

Methodology based on environmental economics principles, to be replicated in wildlife protected areas. The concession of non-essential services offered at Costa Rica's wildlife protected areas (PAs) is one of the alternatives pursued by the administration of these areas to obtain additional resources and open spaces for the involvement of organized local groups. The study requested by SINAC to the Environment for Development in Central America (EfD-CA) initiative at CATIE estimates costs for non-essential goods and services to grant as concessions at the PAs. The report shows the results of the joint work of ACLA-P, TNC, PNCh authorities and key informants from the protected area's surrounding community.

Conservation Polices and Labor Markets: Unraveling the Effects of National Parks on Local Wages in Costa Rica

The parks' entrance location and the possibility of agricultural workers to switch to service activities can be important tools to take advantage of the economic benefits of parks. Despite of the clear global environmental benefits of increasing the amount of protected areas, how these conservation policies affect the well being of individuals in nearby localities is still under debate. Using household surveys with highly disaggregated geographic reference, we explore how national parks have affected wages in Costa Rica. We show conditions in which the effects on local welfare can be positive or negative in different parks or even within different areas of a park.

PRESENTATIONS AT ACADEMIC CONFERENCES, SEMINARS AND WORKSHOPS

Protected Nature Areas Congress – Merida, Mexico

Francisco Alpizar (Keynote Speaker)

- Pragmatism and Innovation in Financing Protected Areas

WCERE 2010 Congress. Montreal, Canada

Francisco Alpizar

- Don't tell me what to do, tell me who to follow
Juan Robalino

- Parks and people. Session organizer.

Laura Villalobos

- Conservation Policies and Labor Markets: Unraveling the effects of national parks on local wages in Costa Rica

Rebecca Osakwe

- Fuel Tax Incidence in Developing Countries: The Case of Costa Rica

Luis Diego Herrera

- Evaluating the impact of protected areas on deforestation in the Brazilian Amazon.

Róger Madrigal

- Centro American Conference on Drinking Water Community Organizations

21 Century Watershed Conference, EARTH, Limón, Costa Rica.

Róger Madrigal

- What affects the perception of people of water quality?

EfD Annual Meeting 2010 in Ethiopia, October 28-31

Róger Madrigal

- What affects the satisfaction of people with drinking water in small rural communities?
- The role of coastal communities on the management of marine turtles in Central America: The case of Ostional Wildlife Refuge
- Measuring the effects of flood risk on migration flows: An application for Costa Rica

Francisco Alpizar

- Pragmatism and Innovation in Financing Protected Areas: Mixing research and policy impact in Costa Rica's protected areas
- Donations versus Fees in Protected Area Finance? Evidence from Stated Behavior in Cahuita National Park

- Exploring the potential of safety nets as part of an adaptation to climate change strategy in Central America

Allen Blackman

- Does Eco-Certification have environmental benefits? Organic Coffee in Costa Rica

LACEA - XV Annual meeting, Latin America and Caribbean Economics Association Medellín, Colombia

Francisco Alpizar

- Exploring a fund raising strategy based on prosocial behavior:
- Natural field experimental evidence from a protected area in Costa Rica

Seminar: The effect of Copenhagen: what are the challenges and opportunities? Hotel Marriot, Costa Rica

Alvaro Umaña

- Copenhagen: what are the challenges and opportunities?

Seminar on Climate Change Alumni Congress, CATIE Campus, April 2010.

Alvaro Umaña

- Adaptation and Mitigation for CATIE

Seminar on Climate Change after Copenhagen, University for Peace Campus, May 2010.

Alvaro Umaña

- Climate Change after Copenhagen

Presentation at the Presidential house. San José, Costa Rica

Francisco Alpizar

- EfD research on Climate change

University of Costa Rica-OdD, San José, Costa Rica

Róger Madrigal

- Determinants of performance in drinking water community based organizations

Instituto Tecnológico de Santo Domingo (INTEC), Dominican Republic.

Róger Madrigal

- Institutional considerations for implementing

Payments for Ecosystem Services

CASA Seminar: Certification as a strategy to promote the provision of ecosystem services

María A. Naranjo

- Does Eco-Certification have environmental benefits?
- Organic Coffee in Costa Rica

XXXI International Course on Protected Areas. Organized by the Tropical Research and Higher Education Center (CATIE). June 2010.

Laura Villalobos

- "Socio-economic effects of the implementation of Protected Areas in the surrounding communities"

Róger Madrigal

- Incentive mechanisms for land use conservation

Camp Resources XVII at North Carolina. Organized by the United States Environmental Protection Agency, the Center for Environmental and Resource Economics (CEnREP), and the Department of Agricultural and Resource Economics at North Carolina State University

Laura Villalobos

- Paper "Conservation Policies and Labor Markets: Unraveling the effects of national parks on local wages in Costa Rica"

Diego Herrera

- Participant

NSSA. National Social Science Association AERE Academic Seminar

Juan Robalino

- Discussion on papers

Norwegian Institute for Nature Research (NINA)

Juan Robalino

- Costa Rica National Parks study

LACEEP-IX Workshop and Short Course, Hotel Bougainvillea, Costa Rica.

LACEEP IV Training Long Course. LACEEP X Workshop and Short Course, Quito, Ecuador

Francisco Alpizar and Juan Robalino

- Coordinators

Workshop on results of the EfD-CA project related to determinants of performance of drinking water community organizations. Representatives from 28 drinking water communities attended.

Róger Madrigal

International Course: Economic principles for environmental management. EfD- CA Headquarters. 25 participants July 19 – July 30.

Róger Madrigal

Course on Applying Game Theory and Behavioral Economics, Montreal June 27-28. Organizer: Beijer Institute of Ecological Economics.

Diego Herrera, Laura Villalobos, Rebecca Osakwe, Róger Madrigal

Workshop in Agro-sustainable product chains and dairy cattle in Costa Rica.

Adriana Chacón

Presentation on WORKSHOP on impact of Climate Change in coffee growing and adaptation strategies, Organizer Café Forestal Foundation

María A. Naranjo

Gtz REDD Program workshop. National REDD strategy for Costa Rica

Carlos Muñoz, Anna Nordén y María A. Naranjo

UNFCCC COP 16/CMP 6. Cancun, México

Carlos Muñoz and Francisco Alpizar

Forest Day 4. Shaping the Global Agenda for Forest and Climate Change: time to act. 5 December 2010, Cancun, Mexico

Carlos Muñoz and Francisco Alpizar

High Level Conference on Agriculture, Food Security, and Soil Carbon: Launch of a Road for Action. Ministry of Economic Affairs, Agriculture, and Innovation and the World Bank. 9 December 2010, Cancun, Mexico

Carlos Muñoz and Francisco Alpizar

Conference on The Role of Trade and Markets in Addressing Climate Change and Sustainable Development. ICTSD. 8-9 December 2010, Cancun, Mexico

Carlos Muñoz

Conference on Areas of Intersection Between Trade and Climate Change Mitigation. WTO and ICTSD. 8 December 2010, Cancun, Mexico

Carlos Muñoz

Presentation to the Board of Directors SINAC, Concessions of services in protected areas of Costa Rica incorporate methodology created by EfD-CA

Francisco Alpizar and María A. Naranjo

Workshop: Exploring working opportunities with Alvaro Umaña

Francisco Alpizar, Juan Robalino, Róger Madrigal, Adriana Chacón, María A. Naranjo, Carlos Muñoz, Irene Burgés, Catalina Sandoval.

Presentation of results: Analysis of different financing schemes for the National Park Cahuita. Limón, Costa Rica

Francisco Alpizar and Anna Nordén

Presentation of results: Does coffee certification have environmental benefits? Agroforestry Seminar, CATIE.

María A. Naranjo

Policy Mix, NINA. Evaluation on payments for environmental services. INBio, Costa Rica

Juan Robalino

General Comptroller of the Republic. Evaluation on payments for environmental services, San José, Costa Rica

Juan Robalino

Fundraising Workshop, EfD-CA research work in Central America Canada.

Juan Robalino

Quality of life workshop with municipalities. Guatemala

Juan Robalino

General Comptroller of the Republic. Study on Coastal development in Costa

Rica. San José, Costa Rica

Juan Robalino and Laura Villalobos

IV Simposio Mesoamericano de Corredores Biológicos. Sociedad Mesoamericana para la Biología y la Conservación. Hotel Crown Plaza Corobicí, San José Costa Rica.

Irene Burgues

I Congreso Nacional de Desastres: Grandes Desastres ¿Estamos Preparados? Impactos económicos, sociales y otros y del II Foro Nacional de Gestión de Riesgos, Preventec/ Universidad Costa Rica and Comisión Nacional de Emergencias (CNE) Hotel Radisson Europa, San José, Costa Rica

Irene Burgues

Seminars

22 January, Experimental evidence on remittances, Diego Aycinena

2 March, Ecohealth and watersheds, Álvaro Fernandez

19 March, Responses to arsenic contamination in groundwater in Bangladesh, Alex Pfaff

6 May, Risks, behavior and safety nets, María Damon

10 May, Morals and mores. Experimental evidence on equity and equality, James Konow

12 May, Experimental evidence on water markets, María Alejandra Velez

18 June, Proyectos de investigación desarrollados por ProDus, Rosendo Pujol

25 June, Estrategias efectivas para el manejo efectivo de recursos hídricos, Kees Prins

27 August, Análisis de la Ley de Aguas en Nicaragua, Paula Novo

8 October, Soluciones para la contaminación del aire y la degradación de ecosistemas en Mesoamerica, Irene Burgues

12 October, Donations versus Fees in Protected Area Finance? Evidence from Stated Behavior in Cahuita National Park, Anna Nordén

15 October, Preserving the world's tropical forests: the promise of REDD, the threat of biofuels, Martin Persson

5 November, Changes in productivity and socioeconomic resilience, Juan Hoffmaister Stockholm Environment Institute

12 November, Making North-South value-chains work for small-scale producers: The Fair Trade Las Nubes coffee case study in Costa Rica", Elizabeth Nadurilly

10 December, Participatory forest management in Kenya, Tobias Wurchert

ACADEMIC CAPACITY BUILDING

One of the priorities at the EfD-CA Center is educational support at different levels. In particular, our objective is to increase the local capacity of people at academic and non-academic organizations (NGO's, public institutes, and civil society organizations) to conduct, critically evaluate and interpret research on environmental and natural resource economics and policy. Our support for education is built on three pillars: i. strengthening the quality and reach of CATIE's MSc Program in Environmental Socioeconomics, ii. education of people from non-academic organizations, and iii. mentoring of bright young researchers.

The educational support to academic institutions is mainly conducted by the different courses taught at CATIE by EfD-CA scholars as well as the tutoring of students on their dissertations. EfD-CA is planning to continue its strong support of the MSc Program in Environmental Socioeconomics by offering high quality courses updated with recent research results and methodologies. Complementary to this objective, the supervision of MSc and PhD students will continue to be a priority, especially because some of the students become critical in developing many of our research projects.

In relation to education of people from non-academic organizations, our main contribution will be offering capacity-building courses adapted to the target audience and updated with the most recent findings in policy design

and evaluation in the region. In the last two years of operations at EfD-CA, we have trained more than 50 people from all over Latin America in environmental economics and policy issues. The participants in these courses have included government policy makers at different levels, technical staff of NGO's, and local leaders, among others. The presentation of EfD-CA research agenda and results has been very useful as a didactic tool as well as a mechanism to disseminate our work.

CATIE Master's Program

GSEBSA, in association with two other of CATIE Groups, is responsible for a Master of Science in Environmental socioeconomics. We receive students from all over Latin America and the Caribbean.

This master's program aims to prepare professionals with strong analytical skills and a critical, objective vision essential to confront the interrelated challenges of development and environment protection, whether in the private or public sectors, non-governmental organizations, or in academic institutions.

One of the most appealing characteristics of this program is the strong participation of our students in projects and programs of CATIE and the permanent feedback from those programs into the academic curriculum.

The Central American EfD Center is hosted by CATIE, Programa GSEBSA, 7170, Turrialba 30501, Cartago, Costa Rica, Coordinator: Dr Francisco Alpizar, Email: efd@catie.ac.cr, Tel: +506 2558 2624, www.efdinitiative.org/centers/central-america



Under graduate courses in environmental economics

Course 1: Public Economics I University of Costa Rica
 Course 2: Public Economics II University of Costa Rica

Students

40
20

Fellow

Juan Robalino
 Juan Robalino

Master courses in environmental economics

Course 1: Economic Valuation of the Environment - Postgraduate School, CATIE
 Course 2: Environmental Economics and Natural Resources -
 Postgraduate School, CATIE

Students

10
18
10
10

Fellow

Francisco Alpizar and Róger Madrigal
 Róger Madrigal, Francisco Alpizar
 and María A. Naranjo
 Adriana Chacón and Laura Villalobos
 Juan Robalino and Adriana Chacón

MSc thesis titles and names of MSc and PhD students supervised by research fellows

Title: Analysis of compliance and cost estimation of the implementing additional standards for sustainable cattle for milk production in Paiwas, Nicaragua

Student: Diana Ochoa
 Adriana Chacón (committee member)

Title: Diagnosis of the adaptation and vulnerability of producers to climate change and proposal to improve productivity during the dry season in Matagalpa, Nicaragua

Student: Carlos Guillermo Chuncho
 Adriana Chacón (committee member)

Title: Livelihoods strategies of plantain producers in Panamá

Student: Lilliam Marquinez
 Róger Madrigal (committee member)

Title: Effects of the Free trade agreement between Central America and the United States (CAFTA) on white maize and paddy rice chains in El Salvador

Student: Gabriela Guadalupe Alfaro
 Carlos L. Muñoz B. and Róger Madrigal (committee members)

Title: Carbon sequestration in biomass and financial performance of agroforestry systems with coffee in Turrialba, Costa Rica and Masatepe, Nicaragua.

Student: Jhenny Liliana Salgado
 María A. Naranjo (committee member)

Title: Evaluation of the impact caused by the use of germplasm distributed in the period from 2003 to 2008 in Costa Rica and other countries and analysis of maintenance costs of the seed bank in CATIE

Student: Rita Carolina Girón
 María A. Naranjo (committee member)

Title: Additionality and protected areas: Measuring the effect of protected areas on deforestation in the lowlands of Bolivia 1986 – 1991

Student: Susan Butron
 Juan Robalino (committee member)

Title: Carrying Capacity of Human Populations in Rural Areas

Student: Jean Pierre Morales
 Juan Robalino (committee member)

Title: Barriers and opportunities for marketing legal native wood from silvopastoral systems in the region and area Hojancha Nandayure low, Costa Rica

Student: Lozano Grendis
 Juan Robalino (committee member)

Title: Eco-payments Design Given Behavioral Responses: who gets paid, why, and how do others respond?

Student: PhD. Candidate Anna Nordén, Gothenburg University
 Francisco Alpizar (committee member)

SPREADING THE WORD

News about research and policy interaction.



The role of coastal communities on the management of marine turtles in Central America: The case of Ostional Wildlife Refuge. Read more at page 16.

2010-11-10 | CENTRAL AMERICA | BEHAVIOR EC.

FORESTRY PARKS & WILDLIFE POLICY DESIGN

CATIE began research on payments for environmental services

EfD-CA at CATIE began study sponsored by The Tinker Foundation

2010-11-09 | CENTRAL AMERICA | FORESTRY PARKS &

WILDLIFE POLICY DESIGN

Concessions of services in protected areas of Costa Rica incorporate methodology created by EfD-CA

Methodology based on environmental economics principles, to be replicated in wildlife protected areas

2010-10-29 | CENTRAL AMERICA | FORESTRY PARKS &

WILDLIFE POLICY DESIGN

Concesiones de servicios en áreas protegidas en Costa Rica Metodología

del EfD-CA en CATIE basada en principios de economía ambiental por replicarse en áreas silvestres protegidas

Methodology based on environmental economics principles created by EfD-CA at CATIE soon to be replicated in other protected areas.

2010-10-29 | CENTRAL AMERICA

Arranca investigación en pagos por servicios ambientales

EfD-CA del CATIE inició estudio de dos años en el tema de pagos por servicios ambientales (PSA) financiado con fondos de la Fundación Tinker

2010-10-20 | CENTRAL AMERICA

Investigador del EfD-América Central candidato a junta directiva de AERE (In Spanish)

Francisco Alpizar, Coordinador del Centro EfD-

América Central, es uno de los candidatos a la junta directiva de la Asociación de Economistas de Recursos Ambientales (AERE). El plazo para votar vence el 1 de diciembre 2010.

2010-10-20 CENTRAL AMERICA

Francisco Alpizar candidate for AERE

Francisco Alpizar, Coordinator of the Environment for Development in Central America, is one of the candidates for Association Of Environmental Resource Economists (AERE) Board Members. The deadline to vote will be December 1, 2010.

2010-10-12 | CENTRAL AMERICA

Open application for doctoral students in Evaluating resilience of ecological and social systems in changing landscapes of Idaho and Costa Rica

The project is being implemented jointly with



Maria Angelica Naranjo and Francisco Alpizar in National Park Chirripó for a case study: Cost based pricing tool to estimate the cost of providing non-essential services in protected areas



Martin Persson

the University of Idaho and the Tropical Agricultural Research and Higher Education Center (CATIE) in Costa Rica.

2010-09-30 | CENTRAL AMERICA

Martin Persson to EfD Central America

Martin Persson, currently Post Doc at the Gothenburg Centre of Globalization and Development (www.gcgd.gu.se) will spend the next six months as a guest researcher at the EfD Center for Central America at CATIE, Costa Rica.

2010-03-25 | CENTRAL AMERICA | CLIMATE CHANGE

Seminar: Consequences of Copenhagen

The EfD-Central America presented on March 23th, the seminar “Consequences of Copenhagen: What are the challenges and opportunities?” This was the first seminar in a series given in Spanish, and hence, titled “SEMINARIO: Consecuencias de Copenhagen”.

2010-03-18 | CENTRAL AMERICA

Research-policy dialogue improves drinking water management

“To do high-quality research, you need to find out what policy makers need and nurture the interaction,” says Maria Angelica Naranjo, EfD researcher in Central America. Her research colleagues Roger Madrigal and Francisco Alpizar are exploring why some Costa Rican communities are successful in drinking water management while others are not. Policy makers and local communities are already using some of the researchers’ recommendations to bring change.

2010-03-18 | CENTRAL AMERICA

Research helps save Costa Rica's beaches

Unplanned, aggressive coastal development is threatening beautiful beaches. To help address



Carlos L. Muñoz and Nicholas Stern.

one of Costa Rica’s most serious environmental problems, researchers from the Environment for Development initiative (EfD) are evaluating the performance and impact of a voluntary environmental regulation and certification initiative called the Blue Flag Ecological Program.

WEBSITE VISITORS AND NUMBER OF DOWNLOADS

The website is an important channel for making EfD research work visible – and it is becoming more and more visible. The web statistics for 2010 shows that more than 35,000 people visited our website this year, and the number of visits was 48,000. When we compare 2010 and 2009, we find that there are more visits, more unique visitors, and more pageviews in 2010 than in 2009. File downloads is another web statistics figure. In 2010, 267 different files have been downloaded a total of 4,901 times.

EfD Website

47,695

Visits in 2010

Of all these visits were 72.84 percent new visits, a 32.29 percent increase compared to previous year (36,054 visits.) Unique Visitors: 35,435 an increase of 34.58 percent compared to previous year (26,330 unique visitors.)

133,296

Pageviews in 2010

This is +16.26 percent compared to previous year (114,654 pageviews.)

4,901

File Downloads in 2010

In 2010, 267 different files have been downloaded a total of 4,901 times.

EfD Central America Website Section

6,940

pageviews in 2010 (610 pages).

Top 6 Most visited Central American webpages 2010

Home central-america	1,089 views	About	167 views
People	863 views	Conseguenciasde-copenhague-bfculares-son-	
En-espanol	386 pageviews	losretos-y-las-opportunidades	148 views
Newspress	216 pageviews		

File downloads - Top 5 list of 2010

- First a policy brief/workshop summary on "Policies to increase forest cover in Ethiopia: A summary of the main outcomes of a workshop in 2007". It has been downloaded 194 times this year.
- Second is a journal article by Jesper Stage, "Economic valuation of climate change adaptation in developing countries". It has been downloaded 119 times this year.
- Third is an EfD/World Bank report by Yesuf Mahmud, Alemu Mekonnen, Menale Kassie, John Pender, 2007, titled "Cost of Land Degradation in Ethiopia: A critical review of past studies", report, EfD/WB. It has been downloaded 109 times this year.
- Fourth is an EfD Discussion Paper by Zenebe Gebreegziabher, Alemu Mekonnen, Menale Kassie, and Gunnar Köhlin, "Household Tree Planting in Tigray, Northern Ethiopia". It has been downloaded 102 times this year.

- Fifth is a job advertisement from CIFOR seeking doctoral students interested in research on REDD for possible collaboration with their four-year Global Comparative Study on Reducing Emissions from Deforestation and Degradation (GCS-REDD). It has been downloaded 97 times this year.

Top Landing Pages

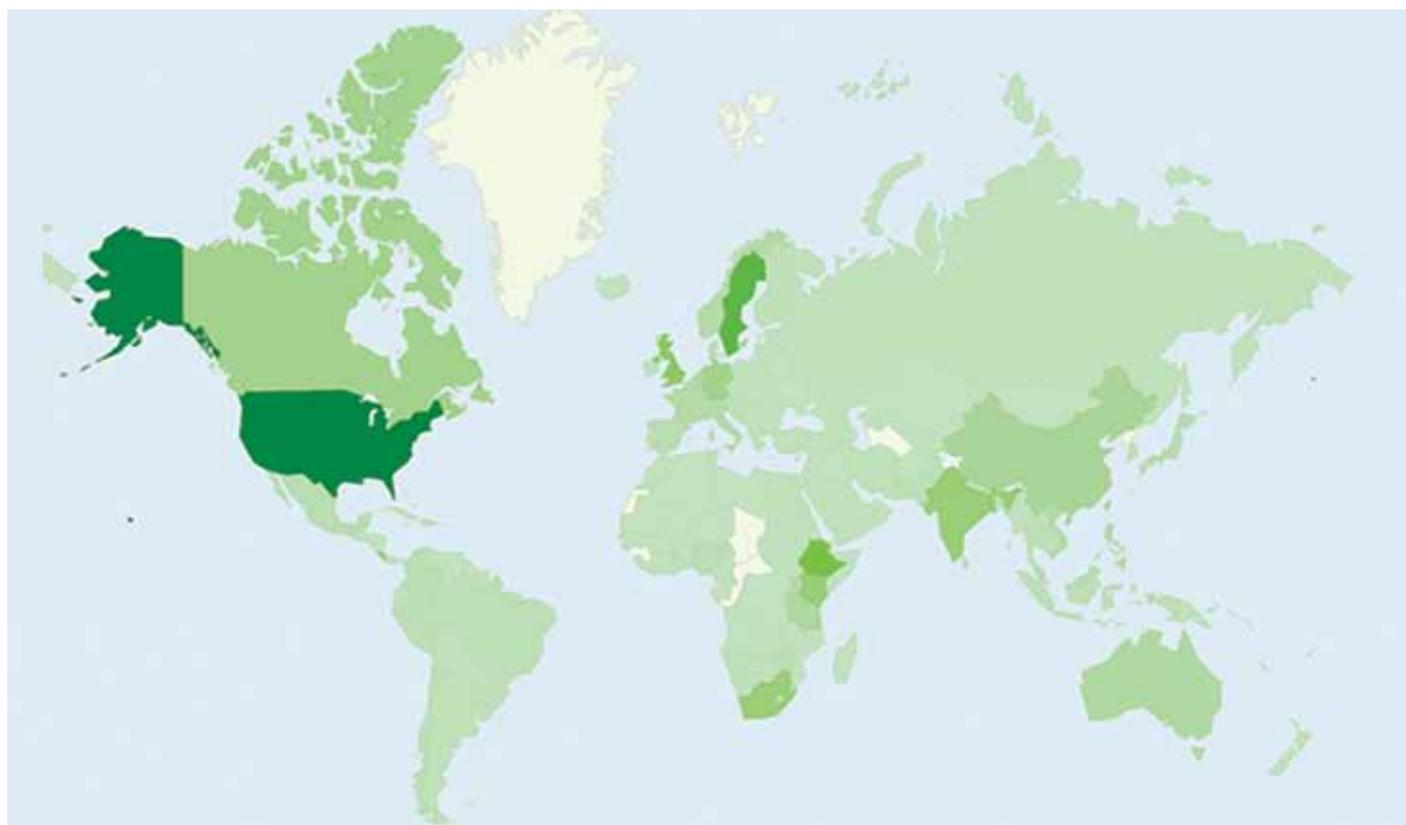
47,660 visits entered the site through 2,949 pages.

The Top Landing pages were:

First page	5,568 entrances
Over-fishing-of-nile-perchin-lake-victoria	724 entrances
Kenyasnatural-resources-need-economic-instruments-efdresearchers-invited-to-public-hearing	611 entrances
Policies-to-increase-forest-cover-in-ethiopia	555 entrances
The-economics-ofsolid-waste-management-	

the-case-of-kampala-uganda	546 entrances
Essays-onenvironmental-policy-making-in-developing-countriesapplications-to-costa-rica	481 entrances
Incentivebased-regulation-of-co2-emissions-from-internationalaviation	479 entrances
The-kenyavision-2030-and-the-environment-issues-and-challenges	479 entrances
Theprogress-of-ghg-markets-opportunities-and-risks	471 entrances
Casestudy-2-zimbabwe-economy-wide-policies-anddeforestation-applied-general-equilibrium-modelling	412 entrances
Unexpert-group-meeting-how-can-researchers-contributeto-productive-and-sustainable-agriculture-in-africa	393 entrances
Job-openings	336 entrances
Eeu-Sweden/Academic-program-phdprogram	300 entrances

Top Countries: People in 190 countries visited the site and as seen in the map below there are few completely white nations on the world map. The darker green color indicates more web traffic.



Greenaccounting-puts-price-on-ethiopian-soil-erosion-anddeforestation 279 entrances
Workshop-on-accounts-of-land-resources-ofethiopia 266 entrances

Top Content

9,660 pages were viewed a total of 133,296 times.

The most visited pages were:

First page	8,615 pageviews
Job-openings	2,083 pageviews
Ethiopia	1,235 pageviews
central-america	1,089 pageviews
EFD/About	1,037 pageviews
Central-america/People	863 pageviews
Policies-to-increaseforest-cover-in-ethiopia	805 pageviews
Overfishing-of-nile-perch-in-lake-victoria	794 pageviews
Kenya	782 pageviews

China	751 pageviews
Researchfellows	728 pageviews
Publications	691 pageviews
Kenyas-naturalresources-need-economicinstruments	681 pageviews
South-africa	663 pageviews
Funding	647 pageviews
The-economics-of-solidwaste-management-the-case-ofkampala-uganda	643 pageviews
People	631 pageviews
South-africa/People	610 pageviews
Tanzania	582 pageviews

Top 20 countries

People in 190 countries visited the site. The Top Twenty countries were:

United States	9,266 visits
Ethiopia	4,213 visits
Sweden	3,321 visits

United Kingdom	2,968 visits
South Africa	2,212 visits
Kenya	2,182 visits
India	2,119 visits
Costa Rica	1,639 visits
Canada	1,448 visits
Germany	1,361 visits
China	1,090 visits
Tanzania	925 visits
Netherlands	800 visits
Australia	792 visits
Norway	624 visits
Italy	587 visits
France	573 visits
Philippines	558 visits
Vietnam	501 visits
Uganda	484 visits

THE CENTRAL AMERICAN NODE IN THE EFD NETWORK

The Efd-CA aims to contribute to the design and evaluation of public policies and local institutional arrangements that affect environmental protection, sustainable natural resources management and poverty alleviation by: i. strengthening the understanding of the causes and consequences of human decisions as key inputs into policy making, and ii. increasing the interaction between academia and policy makers in Central America.

Our purposes

To continue developing the administrative capacity and the infrastructure that enables the Center to:

- conduct high quality research on a broader set of topics,
- increase the number of local and visiting scholars,
- expand the number of international and national collaborators, and
- provide the tools and means for interacting with policy makers in the region

To provide proactive, science-based advice on available policy options and critical analysis of existing initiatives that affect environmental protection, sustainable natural resources management and poverty alleviation based on the construction of a research agenda that prioritizes problems and policy processes in close interaction with stakeholders at all levels.

To increase the Center's capacity to conduct high quality academic, policy relevant research on poverty issues and environmental and natural resource economics in the Central American context.

To increase the local capacity of people at academic and non-academic organizations (NGO's public institutes, and the civil society) to conduct, critically evaluate and interpret research on environmental and natural resource economics and policy.

To communicate our research results in an effective way given the variety of backgrounds, interests and technical capacities of our target audience, and with aim of not only affecting policy making, but also receiving feedback on our research results and agendas.

Headquarters

The Efd-CA is an integral part of the thematic program on Governance and Socio-economics of Environmental Goods and Services (GSEB-

SA) of the Tropical Agricultural Research and Higher Education Center (CATIE, by its Spanish acronym).

CATIE is the leading regional research and higher education institution in the fields of agriculture, agroforestry and natural resource management. Its mission is "contribute to rural poverty reduction by promoting competitive and sustainable agriculture and natural resource management, through higher education, research and technical cooperation". CATIE's unique strength comes from an integrated approach that combines multiple disciplines (from economics to biotechnology) and various strategies that include research, higher education, training and technical assistance.

Staff

Local researchers and staff

Ph.D. Francisco Alpízar

COORDINATOR AND SENIOR RESEARCH FELLOW
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Francisco Alpízar is a research fellow and the coordinator of Environment for Development (Efd) for Central America, as well as the program director of the Latin American and Caribbean Environmental Economics Program (www.laceep.org) at CATIE. His fields of specialization include environmental policymaking and economic valuation of the environment. He has also worked on experimental economics applied to policy design. Recently, his work has focused on sustainable management and funding of protected areas, including both entrance fees and donations, as well as the interaction of communities and economies that interact with a given conservation effort. He has also been involved in the design of Coasian schemes to include negative and positive externalities of watershed management for the provision of ecosystem services. Alpízar has been a consultant to the Global Environment Facility (GEF), Inter-American Development Bank (IDB),

United Nations Development Program (UNDP), World Wildlife Fund (WWF), International Union for Conservation of Nature (IUCN), The Nature Conservancy (TNC), among others. He has been invited as a lecturer to universities in Sweden, the United States, Costa Rica and Colombia.

Ph.D. Juan Robalino

SENIOR RESEARCH FELLOW
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Juan Robalino is currently director of the Latin American and Caribbean Environmental Economics Program (LACEEP) and a research fellow for Efd-CA. His fields of specialization are environmental economics, applied micro-economics and development economics. His current research deals with spatial econometrics and policy evaluation. More specifically, he looks at the causal and spatial effects of endogenous development and environmental policies in Brazil and Costa Rica. Robalino has been a consultant for the Development Economics Research Group at the World Bank. He received his Ph.D. from Columbia University in May 2005 and worked as a postdoctoral fellow at the Earth Institute. His dissertation, entitled "Essays on Environmental Economics and De-



Francisco Alpízar

Our networks

EfD-CA has an extended list of national and international partners which provide a wide range of network support to projects and initiatives around the core issues in research, policy advice, and training. This network has been built on throughout the years the Center has been in operation. Our goal is to solidify our current alliances and to broaden our network in order to achieve greater impact in Central America.

We recently signed an agreement with Costa Rica's National Forestry Financing Fund (FONAFIFO which would allow us to continue our work on Ecosystem Services and payments schemes. In collaboration with Alexander Pfaff from The Sanford School of Public Policy at Duke University, EfD-CA is working on evaluations of impacts of protected areas in Costa Rica, Mexico, and Brazil, with financial support from the Inter-American Development Bank and the Inter-American Institute for Global Change Research.

The work on protected areas in Costa Rica continues to tackle issues on evaluation, financing, and decentralization of the provision of basic services but is expanding by including institutional and policy analysis of the impacts of climate change on biodiversity and ecosystem services provision. This is done in collaboration with The Nature Conservancy, the National System of Protected Areas, and the Forever Costa Rica Association.

Furthermore, other important partners in the Latin America and the Caribbean are the Latin American and Caribbean Environmental Economics Program (LACEEP), and several programs within CATIE, and the National Institute of Ecology in Mexico.

Funders/Donors

EfD-CA offers an attractive opportunity for donors and partners interested in supporting our activities and innovative programmatic agenda. We are grateful to our donors and partners who contributed to our work during 2010:

Total number of staff in full time equivalent: 9.4
Number of donors 5

List of Donors	Funding by donor during 2010
1) LACEEP	17.1%
2) Tinker Foundation	3.2%
3) IAI via Duke University	9.7%
4) Tinker via RFF	11.9%
5) Other via EfD	18.2%

Sida/EfD funding as share of total center budget (incl eg univ salary) 39.9%

velopment Economics," deals with deforestation, income distribution and land policies. His research has been published in Environment and Development Economics, the Journal of Regional Science, and Conservation Biology.

Ph.D. Alvaro Umaña

SENIOR RESEARCH FELLOW
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Alvaro Umaña is a research fellow for the EfD initiative for Central America. He has an important role in promoting the activities for EfD-CA, especially among policymakers, and making alliances with international institutions. Umaña was the first energy and environment minister of Costa Rica, from 1986 to 1990. He received international recognition for his contributions

to nature conservation and achievements such as the creation of the National Biodiversity Institute (INBio). Recently, he has worked with the International Monetary Fund (IMF) as lead counsel for the executive director's Office for Central America, Mexico, Spain and Venezuela in Washington, D.C. He has had extensive experience in academia as professor at INCAE Business School in Costa Rica, visiting professor at Yale and visiting lecturer at American University, UC Berkeley, Duke, Harvard, Johns Hopkins, University of Maryland and University of Washington. He received his master's in economics and a doctorate in environmental engineering and science from Stanford University. He is the author of numerous books and scholarly articles.

Ph.D. Adriana Chacon

RESEARCH FELLOW
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Adriana Chacon is a research fellow at EfD-CA and at the Program of Governance and Socioeconomics of Environmental Goods and Services (GSEBSA). She has a doctorate in economics with emphasis on agricultural economics. Her fields of specialization are applied microeconomics and international trade. After graduating, she worked at as a postdoctoral research fellow, applying quantitative methods to the area of environmental economics. Adriana has done research on international trade of agricultural products and on the impact of trade policies on national welfare for Latin America. She has also studied the socioeconomic ef-



Juan Robalino



Roger Madrigal



Maria A. Naranjo

fects of conservation practices in agriculture and has been invited as a lecturer at Kansas State University, the University of Costa Rica and CATIE. Her current research interests focus on policy analysis, certification, the relationship between agriculture and biodiversity and agricultural risk and productivity.

M.Sc. Roger Madrigal

RESEARCH FELLOW
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Roger Madrigal is a research fellow at EfD-CA. He has a master's degree in environmental economics and is currently enrolled in a doctoral program at Freiburg University in Germany. His scholarly interests are in the areas of community-based management of common-pool resources and institutional analysis of water policies. He has also extensive experience with the design and implementation of PES schemes in Latin America. His current research tries to understand the underlying causes of the observed disparity in performance of community-based drinking water organizations in Costa Rica. Madrigal has been invited to lecture in El Salvador, Argentina and Chile. He has also been a consultant to the IDB, TNC and FAO.

M.Sc. Maria A. Naranjo

RESEARCH FELLOW
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Maria A. Naranjo is research fellow at EfD-CA. She completed her bachelor's studies in the School of Economics at the University of Costa Rica and continued with a master's program at Wageningen University. She completed her thesis in environmental economics and natural resources and, in cooperation with INBio and SINAC, presented a study of the contribution of protected areas toward the socioeconomic development of communities in Costa Rica.

She collaborates with several EfD research projects including adaptation to climate change strategies and voluntary environmental programs. She had participated as a consultant for ARESEP and TNC.

MALD, MA. Carlos L. Muñoz

POLICY ANALYST AND RESEARCH FELLOW
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Carlos is the policy specialist and research fellow at the Environment for Development Center for Central America. He has a broad range of interests in international policies that foster sustainable development. His fields of specialization include environmental governance and political regimes; international environment and resource policies; multilateral negotiations; and development economics. His research interests include institutional and legal mechanisms to promote public and private protected areas; financial schemes for conservation such as ecotourism, debt for nature swaps, REDD+, international investments, and payment for ecosystem services; and water and forest governance. He also follows the climate change negotiations. Carlos graduated in 2010 from the Fletcher School of Law and Diplomacy, Tufts University with a MALD in international affairs with emphasis in international environmental and resource policy and development economics. In addition, he holds a MA in Political Science from Boston College, a BS in Ecotourism from the University of Costa Rica; and license in Natural Resource Management at UNED-Costa Rica. He is former Executive Director of the Monteverde Conservation League and manager of the Children's Eternal Rainforest; the largest private nature reserve in the Costa Rica. He has been invited as a lecturer in Costa Rica and the USA as well as Associate Faculty in the International Program on Negotiations by

Wageningen University and the Sustainability Challenge Foundation in the Netherlands.

M.Sc. Laura Villalobos

RESEARCH FELLOW
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Laura Villalobos is at present working as a junior researcher, collaborating with Juan Robalino. After finishing her bachelor studies in economics at the University of Costa Rica, she received a master's in environmental socioeconomics at CATIE. In the Governance and Socioeconomics of Environmental Goods and Services Program (GSEBSA) at CATIE, she collaborates in a project investigating the spillover effects of the national parks in Costa Rica and Mexico

BSc. Irene Burgues

RESEARCH FELLOW
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Irene gathered information, conducted field work and participated on environmental and social analyses of hydroelectric projects and roads in Mesoamérica, as part of her work with Conservation Strategy Fund. She has also done research and worked on public transport related issues. In 2009 she started an organic farm and a reforestation project, which she is presently tending to. Currently she is an EfD research fellow.

BSc. Catalina Sandoval and Susan Burton

JUNIOR RESEARCH FELLOWS
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Both presently working as a junior research fellows at EfD-CA. Providing support to senior researcher Juan Robalino in studies regarding the impact of forest protection policies on deforestation and social spillovers in Bolivia.



Irene Burgues



Álvaro Umaña



Lizette Delgado

Lizette Delgado

ADMINISTRATIVE AND SECRETARIAL SUPPORT
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Lizette Delgado provides administrative and secretarial support to the Environment for Development Initiative Central America. She coordinates all the logistics and gives research support to all Efd Central America projects. She is currently the Program Officer of the Latin American and Caribbean Environmental Economics Program (LACEEP).

BSc. Alberto Vargas

ADMINISTRATIVE SUPPORT
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Alberto Vargas provides administrative support to the Environment for Development Initiative Central America. He organizes the accounting and gives support to all Efd Central America projects. His tasks and responsibilities are the monitoring and implementation of budgets; assist in financial reporting and reimbursement of expenses, accounting expenses and logistical support for international training courses and other department related work. Domestic research associates

PhD. Raffaele Vignola

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Raffaele Vignola is a research fellow at Efd-CA from the Climate Change Program at CATIE. He has a doctorate from Federal Polytechnic Institute in Zurich (Switzerland). Raffaele did Engineering Studies in the Agricultural University of Florence (Italy) and obtained Masters in Environmental Economics at the Agricultural Center Tropical Research and Education (CATIE). Since 2005 serves as Senior Adviser Scientist and professor for the Climate Change Program at CATIE, is responsible for providing



Laura Villalobos

advice on design management mechanisms and ecosystem services analysis and design of policies for adaptation to climate change. Raffaele supported the coordination of Italian delegation to the GEF-World Bank. He developed watershed management projects in Honduras and coordinated of the DIPECHO-EU Project for risk management in El Salvador. He co-investigated and did a post-doctoral research at the College for Interdisciplinary Studies and at the Institute for Resources, Environment and Sustainability (IRES) at University of British Columbia, Canada. The project, awarded by Social Science Research Council of Canada, focuses on the human dimension of global change characterizing soil degradation in Costa Rica and the relationship between ecosystem services management and poverty in Latin America.

Ph.D. Allen Blackman

RESEARCH ASSOCIATE
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Resources for the Future (RFF) Allen Blackman's research has focused principally on tropical deforestation and industrial pollution in Latin America and Asia. A good deal of this work evaluates environmental management strategies that aim to overcome barriers to conventional regulation in developing countries. For example, his research on industrial pollution control analyzes public disclosure programs, economic incentive instruments and voluntary regulation, while his research on tropical deforestation assesses mixed agroforestry systems and PES initiatives. He has also worked extensively on the U.S. environmental regulatory reform, including voluntary programs and mortgage innovations designed to affect land use.

Dr. Jorge Rivera

RESEARCH ASSOCIATE
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Jorge Rivera is an Associate Professor of Strategic Management and Public Policy at George Washington University. Currently, he is also a Visiting Research Fellow at CATIE in Costa Rica. His research focuses on the relationship between public policy and business strategies. He has published many journal articles and his work received Best Paper Awards from the Academy of Management's Organizations and Natural Environment Division in 2001 and the Policy Sciences Society in 2003. He is also the author of "Business and Public Policy" a book by Cambridge University Press. In 2008, he was appointed as an Associate Editor of jour-

nals: Policy Sciences and Business & Society.

Dr. Rodrigo Arriagada

RESEARCH ASSOCIATE
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Rodrigo Arriagada is an associated research fellow for Efd Central America. His fields of specialization are environmental economics, program evaluation econometrics, applied microeconomics and development economics. Rodrigo's current research interests focus on environmental economics and policy, the use of experimental and quasi-experimental program evaluation methods on conservation interventions, deforestation and land use, issues at the intersection of economic development and environmental protection. More specifically, he has been studying the causal impacts of payments for ecosystem services in Costa Rica. Rodrigo is also postdoctoral research associate at the School of Life Sciences in Arizona State University. He received his Ph.D. from North Carolina State University on August 2008. His dissertation title was "Private Provision of Public Goods: Applying Matching Methods to Evaluate Payments for Ecosystem Services in Costa Rica".

Anna Nordén

PHD CANDIDATE
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Anna Nordén is a PhD candidate from the University of Gothenburg at the Environment for Development Center for Central America. Her specialization is in environmental policy and behavioral economics with focus on different aspects of environmental policy instruments and their relation to human behavior and decision making. She has done some work on stated preference methods and natural field experiments applied to policy design for national parks in Costa Rica, which in addition was part of her Master's thesis in environmental economics. During her Master she spent one semester at the Environment and Development Center in Ethiopia. Currently her research concerns design of payment for ecosystem services and their implications on economic behavior.

THE EFD INITIATIVE IN BRIEF

The overall objective of the Efd initiative is to support poverty alleviation and sustainable development through the increased use of environmental economics in the policy making process. Through local capacity building in environmental economics focusing on research, policy advice, and teaching, the Efd centers in Central America, China, Ethiopia, Kenya, South Africa, and Tanzania strive to contribute to better environmental policies and poverty reduction.

The Efd research emanates from the policy priorities of the host countries. This has led to a research focus on natural resources. The research-policy impact is increasing. The “Efd approach” is to build strong long-term collaborations between academics and with key ministries and decision makers.

In addition, environmental economists are trained in master and doctoral programs in the respective country.

The Environmental Economics Unit at University of Gothenburg is coordinating the initiative. Resources for the Future in Washington DC is a partner involved in research and publication of the Efd/RFF discussion paper and book series. The Efd initiative started in 2007 and receives core support from the Swedish International Development Cooperation Agency (Sida). Efd builds on the environmental economics capacity building program that Sida has been supporting at University of Gothenburg since 1991 as a tool to implement sustainable development. The program, including Efd, is designed to enable researchers trained abroad to come home and become productive as applied researchers, teachers and policy advisors. By now 20 PhD's have graduated from the doctoral program in Gothenburg, and 17 of these are currently working in developing countries. In addition 7 post docs have been recruited to Efd centers from outside the program.

Research

Applied, policy relevant research is a core activity for the Efd initiative. Research is a critical input in a long-term strategy to reduce environmental degradation, eradicate poverty and to ensure sustainable use of natural resources. A major challenge in developing countries is, however, the lack of comprehensive research on environmental resource management and poverty alleviation which can inform national strategic plans and policies. Policymakers, farmers, donors, and others need research based information not only to design policies but also to evaluate their efficiency in reaching their objectives.

At the beginning of 2010, about SEK 2 million

was allocated to the Efd research fund. This fund supported at least 13 research projects of various sizes across the six centers. Some centers used this funding as seed money to crowd-in other funding. By the end of the year, about 29 research projects had been executed across the six centers. Research projects in 2010 focused on all the six Efd major themes: agriculture, climate change, fisheries, forestry, parks and wildlife, and policy design. However, the bulk of projects dealt with climate change and policy design.

Efd-Central America's four research projects which were fully funded by the Efd focused on climate change, fisheries, parks and wildlife, and policy design. Efd-China had eight research projects of which only one was fully funded by the Efd. Efd-China has successfully managed to crowd-in research funding from other sources. The center has demonstrated how beneficiaries from Efd research, especially government departments (notably the Chinese Ministry of Science and Technology, the Chinese Ministry of Environmental Protection and the Beijing Municipal Government), can be roped-in to share in the costs of producing policy-relevant research. The focus of the 2010 research projects in China has been on climate change and policy design, which represents a significant shift from the center's traditional focus on forestry. This demonstrates the center's capacity to respond to new research needs.

The center in Ethiopia has largely continued with its focus on agriculture, an area of great need in that country. The center had four projects in 2010, two of which also addressed climate change, forestry and policy design aspects of agriculture. Efd-Ethiopia is one of the centers which still heavily relies on full Efd funding. Efd-Kenya had three research projects in 2010 which focused on forestry, climate change and policy design. These projects received full Efd funding. One of the Kenyan projects demonstrates a serious attempt by the Efd to promote research on forestry and REDD issues. Forestry and REDD will continue to be a major focus of Efd research in the future. The Efd center in Tanzania teamed up with the Tanzanian Forest Research Institute and the Ruvu

Fuelwood Project on two research projects co-funded by the Efd in fisheries and forestry. There is more work going on in Tanzania which seeks to directly address poverty issues in that country. Efd-South Africa had seven research projects in 2010. These fell into the following themes: climate change, parks and wildlife, and policy design. Three of the projects were co-funded by the Vice Chancellor of the University of Cape Town as part of the newly established African Climate Development Initiative at that university. The case at Efd-South Africa demonstrates how synergies between Efd research and universities' priorities can be exploited to secure additional financial support from host universities.

In terms of research output, 2010 was a successful year in terms of Efd discussion papers, peer reviewed articles and other outputs. There were 36 peer-reviewed articles, 27 discussion papers and 12 books and book chapters.. The figures for these categories represent an overall growth of 4 percent from the 2009 levels but the really remarkable fact is that the number of peer reviewed articles have increased to such an extent, from 14 in 2009 to 36 in 2010. The peer-reviewed articles mainly focused on agriculture (6), forestry (7) and policy design (15) even though there were outputs on each of the Efd themes. Notable in 2010 is that four of the centers also produced and disseminated policy briefs and other reports.

Historically, Efd-Central America and Efd-Ethiopia have been at the forefront in terms of the cumulative number of peer-reviewed publications. It is pleasing to note that Efd-China and Efd-South Africa have drastically increased the number of their peer-reviewed publications in 2010. These two centers jointly produced over two-thirds of peer-reviewed articles in the network. However, the momentum for producing peer-reviewed articles still exists in Efd-Central America and Efd-Ethiopia. This can be seen from the large stock of Efd Discussion papers produced in 2010. It is expected that the outcomes will be better in the future when Efd-Kenya and Efd-Tanzania improve their peer-review output levels. Publications can be found at efdinitiative.org/research/publications.

EFD CENTERS

There are six Efd centers, hosted by universities or academic institutions in each respective country. For more information on each center, please contact the coordinators:

CENTRAL AMERICA

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EFD PARTNERS



UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW



EEU, Environmental Economics Unit

EEU at Göteborg University, Sweden, has initiated the Efd initiative and acts as coordinator and secretariat. For more information please contact:

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RFF, Resources for the Future

RFF in Washington DC, US, is an important partner of the Efd initiative. RFF's research fellows will work closely with their counterparts and RFF's communications staff will help to disseminate the new centers' research products. For more information please contact:

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Sida

Swedish International Development Cooperation Agency, provides the funding for the Efd initiative.



Interview in National Park Chirripó



More information & Contact us

Once you've read this report you might want to know more about our work and the Efd initiative:

Please visit www.efdinitiative.org/centers/central-america

You are most welcome to contact us:

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