

The logo for Environment for Development (EFD) features the letters 'EFD' in a bold, green, sans-serif font. The 'E' and 'D' are connected, and the 'F' is positioned between them. The letters are set against a white background with a thin black border.

Environment for Development



REPORT 2012/13

THE ENVIRONMENT FOR DEVELOPMENT INITIATIVE

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. The EfD initiative is a capacity building program in environmental economics, focusing on research, policy advice and teaching in Central America, China, Ethiopia, Kenya, South Africa and Tanzania

Our vision is a green economy with sustainable economic growth founded on efficient management of ecosystems, natural resources and climate change impacts.

Natural resources and the environment is often mismanaged despite of 25 years of calls for sustainable development and the recent attention given to green growth. The mismanagement and resulting degradation is a major challenge in addressing poverty alleviation in a sustainable way. For developing countries to address these challenges there is a need for serious capacity – and the Paris Declaration makes it perfectly clear that if this capacity is to be effective it needs to be developed and utilized domestically.

The Environment for Development initiative is designed in response to these challenges. It draws on more than 20 years of capacity building in environmental economics and focuses on applied research to address the most pertinent poverty – environment issues. The research is then linked to policy interaction activities to strengthen the interface between research and policy making processes.

So far, there are six EfD centers hosted by well-established academic institutions in China, Costa Rica (for Central America), Ethiopia, Kenya, South Africa and Tanzania. The

Research Fellows in these centers collaborate with an international network of researchers with institutional support from Resources for the Future (RFF), Washington DC, USA and University of Gothenburg in Sweden, which also hosts the EfD secretariat. The EfD Coordination Committee decided in 2012 that EfD will become an independent international organization and that it will be open for more centers to join. This process will be initiated during 2013. The intention is to build an institutional infrastructure that will efficiently channel funds to high quality applied research that efficiently supports important policy processes.

In this report you will find examples from all the activities carried out within the EfD centers during 2012 and some of the plans we have for 2013. You will find evidence from our research and descriptions of our new collaborative research programs. All centers have contributed with their most successful policy interaction stories and you can find overviews of the academic capacity building programs. Finally, you will find lists of all the publications and projects that have been supported over the last year. Enjoy!

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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.

RESEARCH TOP OUTCOMES

A SUMMARY OF EFD RESEARCH OUTCOMES 2012 IN TERMS OF PEER REVIEWED JOURNAL ARTICLES:

The EfD Central America/Research Program in Economics and Environment for Development in Central America

published six papers in peer reviewed journals in 2012 based on previous projects. This year we completed three research projects and launched four new research initiatives for 2012-2013. Our purpose is to contribute to the design and evaluation of public policies and local institutional arrangements that affect environmental protection, sustainable natural resource management and poverty alleviation. We do this by strengthening understanding of the causes and consequences of human decisions. This understanding is a key input for policymaking and increases the interaction between academia and policymakers in Central America.



Community members harvesting sea turtle eggs in Ostional, Costa Rica

EfD China/Environmental Economics Program in China (EEPC)

published eight articles in peer reviewed journals in 2012. The main research themes of these publications are land use, natural resource management, energy use models and taxation, behavioral studies in household decision making, and valuing the health risk of polluting behaviors. For example, one study showed that the auction approach in land use schemes can be both practical and efficient in the Chinese context. Our research suggested potential improvements to the auction process, through increased heterogeneity across bids and lower transaction costs by taking bids from aggregations of farmers. "Another study showed that timber supply in China is projected to increase slightly but that timber consumption is projected to triple between 2008 and 2020, which will result in significant growth in timber imports." These results provide opportunities for improved management of natural resources and for the large population that depends on them.



Chinese forest

EfD Ethiopia/Environmental Economics Policy Forum (EEPFE)

produced 12 publications, including 7 peer-reviewed articles. Main research themes of the peer-reviewed articles include climate change, sustainable agriculture, behavioral economics, energy and forestry, and policy design. Key messages are that changing crops, followed by soil conservation and tree planting, are the most successful strategies for adaptation to climate change. Findings also highlight the crucial role played by information provision in improving farmers' decisions to adopt more productive and sustainable strategies. Policy makers can enhance sustainable agricultural practices, including land conservation investments, by influencing factors such as land tenure security, plot size, and total farm holdings; investing in overall trust; and helping farmers plan over longer time horizons. This research contributes to sustainable development and poverty reduction by enhancing informed decision-making and identifying the factors that policy-makers can influence.



Zenebe Gebreegziabher, Research fellow showing a jatrophia plant with leaves and fruits

EfD Kenya

Natural Resources Management and Climate Change reviews the important linkages between livelihoods and climate change, two of the greatest challenges currently facing many poor people and governments in Africa. The three volumes, comprising conference plenary papers, natural resources management papers, and climate change papers, illustrate that the issues at stake in sub-Saharan Africa are numerous and complex. The significant contribution of good management and the threats to sustainable development in Africa are highlighted. The volumes also review the potentially devastating effects of climate change on poor populations. The EfD Center in Kenya (EfD-K) has been central in editing the three volumes. There is a clear message: sustainability requires an integrated set of policies, not just environmental policy.



A KARI Katumani staff member shows a test plot to the participants of the AARC workshop

EfD South Africa/Environmental Economics Policy Research Unit (EPRU)

published 13 articles in peer-reviewed journals in 2012. For example, one was an analysis of the environmental problems posed by plastic shopping bags and the tax placed on them in South Africa. Another discussed the role of the Khomani San "bushmen" community in biodiversity conservation. A third considered conservation of African penguins in the context of ecotourism. Several other research papers were published as discussion papers in 2012, pending publication in peer-reviewed journals. These included a new approach to saving endangered gorillas from poaching, and an analysis of the complex relationship between abalone overharvesting and drug smuggling. Details are in the "Publications" section of this report.



South African penguins

The EfD Tanzania published four peer reviewed articles about forestry in 2012. This research is important because, in a world of very restricted budgets for forest management and high levels of poverty and resource dependence, a framework that adequately addresses the spatial costs and decisions that underlie extraction can identify patterns of policies that lead to improved forest quality results while addressing rural people's welfare.



The retired forest officer Mr. Mushi showing an EfDT researcher (not in the picture) the illegal harvesting of trees and timbering in Maposeni Forest Reserve in Songea, Tanzania

RESEARCH PROJECTS

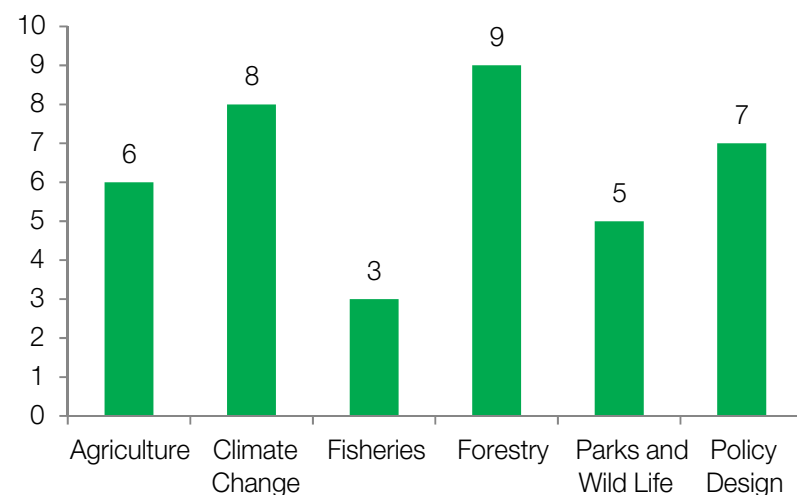
ALL ON-GOING EFD RESEARCH PROJECTS (2012/2013) ARE LISTED IN THE PROJECT LIST ON PAGE 49

In the 2012 EfD budget, SEK 3 million was allocated to the EfD research fund. This fund supported 38 individual research projects of various sizes across the six centers. Following the increasing trend, some centers used this funding as seed money to crowd-in other funding.

Research projects in 2012 focused on all the six EfD major themes: agriculture, climate change, fisheries, forestry, parks and wildlife, and policy design. However as can be seen from the figure below, a significant proportion of the projects dealt with forestry, climate change and policy design.

The 2012 **EfD Central America's** seven research projects which were fully funded by the EfD focused on policy design, parks and wild life, and climate change. EfD China had four research projects focusing on policy design in the transport sector in China. Following the extensive experience the research fellows of the center have on the topics, the focus of the 2012 research projects in EfD China has been on climate change and policy design. Eight projects were running in EfD Ethiopia in 2012 focusing on agriculture, forestry and climate change for which funding

was secured from EfD and other sources. EfD Kenya had five research projects running in 2012, two of which focused on household energy choice and conservation and two others on forestry and climate change respectively. These projects received full EfD funding and some of them involved collection of detailed household level data from rural Kenya which would be used for rigorous analysis on deforestation and land use. Researchers at EfD South Africa managed eight projects in 2012 funded by EfD. Given the centers extensive experience in undertaking high quality research on climate change adaptation related research, which applies tools of behavioral and experimental economics, two of its projects in the calendar year focused on these topics. In addition, the center ran six other projects focusing on the EfD parks and wildlife, and fisheries themes. Following its demonstrated experience in research related to forestry, EfD Tanzania, among other projects, managed four on forestry. In addition, the center's researchers were undertaking research related to productivity-enhancing technology adoption in the agricultural sector of Tanzania.



EfD Research projects by theme 2012

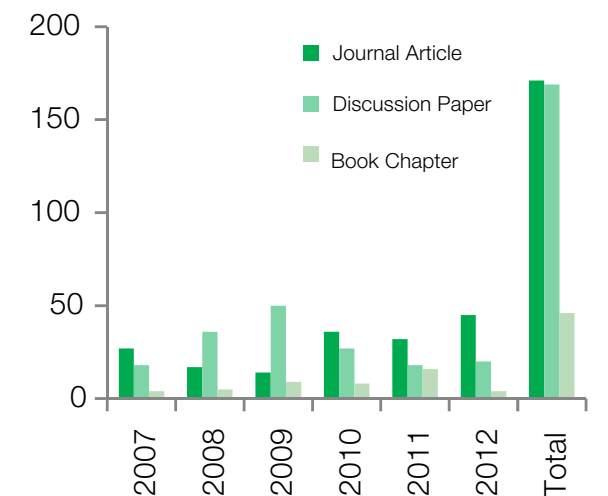
PUBLICATION STRATEGY

A key indicator of EfD success is of course the output in terms of publications. The figures below provide a graphical summary of these outputs by publication type, while all references of all types of publications are presented by type and center in the Publications 2012 list on page 46.

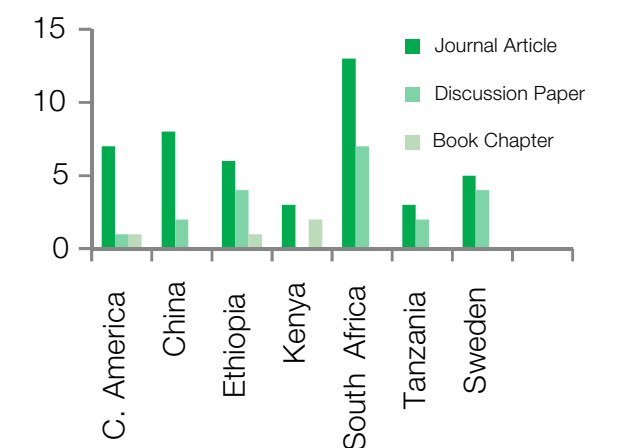
In terms of publication, 2012 has been a productive year for the whole EfD with a total of 45 peer-reviewed articles in international journals. In addition, 20 working papers and 4 books and book chapters have been produced. All in all, the figures show that the research and publication activity within the EfD network continues to grow.

In cooperation with Resources for the Future (RFF) in Washington DC we produce a discussion paper series. This EfD/RFF Discussion Papers Series is a very important part of the research, communication and publication strategy of EfD. It is expected that almost all of the research articles produced as EfD discussion papers go through an intensive peer reviewing process and get published in international journals which will improve the position of the network in terms of publication record of high quality relevant research. In 2012, the EfD appointed Professor Peter Berck of the University of California Berkeley who is experienced in editing reputable peer-reviewed international journals as the chief editor of the EfD Discussion paper series. As a result, the EfD is hoping to improve the quality of its research output further in the near future.

The total number of research output in 2012 is decomposed by center as presented in Figure 3. It can be seen that, EfD South Africa took the lead in terms of the number of peer-reviewed journal article with 13 articles. It was followed by EfD China and Central America which produced eight and seven journal articles respectively. The year in terms of research was remarkable with not only more publications compared to last year but also with publications which have been published in reputable top field journals.



Research output by publication type 2007-2012



Research output by center and publication type, 2012.

COLLABORATIVE RESEARCH PROGRAMS

In order to increase the quality of policy relevant and informative research in the EfD countries, the EfD launched collaborative research programs in 2012. The main aim of these programs is to design and kick-off medium-sized relevant research programs involving a minimum of three EfD centers. It is believed that collaboration among researchers and research associates in the different centers provides a unique advantage to undertake policy relevant and high quality research through better access to data, complementary analytical skills by researchers in the different centers and better access to a large group of policy makers and stakeholders. With this aim, the EfD provides seed money which would be used to kick-off a research program and development of larger research programs for which funding is to be secured from other donors. The EfD research and coordination committee approved funding of around 1 million SEK to finance these collaborative programs. Below is a brief description of the active collaborative programs which kicked-off in 2012.

Adaptation to climate change in Sub-Saharan Africa

The scientific literature on climate change documents that over the coming decades, global warming and changes in the pattern of rainfall driven by climate change will affect agricultural output significantly. Agriculture in developing countries in general and Sub-Saharan African agriculture in particular, where the capacity to adapt is limited will be affected adversely by the phenomenon. It would therefore be important to identify the drivers and impact of adaptation to climate change in the agricultural sector of the region. In view of this, the main aims of this collaborative research programs are to: (i) investigate the impact of climate change on agricultural productivity, (ii) analyze the scope for adaptation for example in the form of crop choice, and the role of social networks, (iii) reveal the links between risk preference and decisions for adaptation, and (iv) investigate the factors that limit the adoption of productivity-enhancing agricultural technologies. The research team is led by Professors Peter Berck of the University of California Berkeley and Salvatore Di Falco of the University of Geneva and involves researchers from EfD Ethiopia, Tanzania, South Africa and Costa Rica.

In order to kick-off the research process, the team conducted two workshops in 2012, one in Gothenburg February 2012, and another in Costa Rica November 2012 where the main approaches and data sources have been discussed. The team also managed to undertake documentation of relevant farm and district-level data for analysis in the countries involved.

The main research aspect to be conducted in 2013 consists of experimental approach on the links between risk taking behavior and adaptation to climate change by farmers in Africa and Costa Rica.



The 2011/12 European Report on Development (ERD) focuses on managing water, energy and land for inclusive and sustainable growth – the case of Lake Naivasha. © European Commission

Marine Protected Areas and Small-Scale Fishing Behavior: a Comparative Analysis between South Africa, Tanzania and Costa Rica

By 2020, ten percent of coastal and marine areas have been agreed to be allocated to “Marine Protected Areas (MPAs)” by signatories of the Rio Convention. However, the progress in achieving the goal has been varying at different countries with for instance countries such as the Republic of South Africa almost reaching the target. One major challenge in convert-

ing coastal areas to “Protected Areas” is the impact on livelihood of coastal communities in the form of lost or modified access to fishing grounds. It is therefore important to understand how small-scale fishermen respond to the policy. The main aim of this collaborative program is to investigate the potential impact of MPAs on the livelihoods of poor coastal communities and come up with viable policy advises to policy makers. The research team is led by Prof. Jo Albers of the University of Oregon and involves researchers in EfD Costa Rica, South Africa and Tanzania.

In 2012, the collaborative program undertook a focus group interview in Costa Rica, and spatial modeling of fisheries using theoretical tools. The work is planned to extend in the coming few years with main activities of running comparable surveys during 2013 in the countries involved.



Fisher with net

Optimal Pricing of Parks and Wildlife Resources in Eastern and Southern Africa

The optimal pricing of parks and wildlife resources in Eastern and Southern Africa is a collaborative research program focusing on designing of optimal pricing of parks in Eastern and Southern African countries. Given the fact that the region has the potential to generate significant amount of resources for the economy and the communities near the parks, investigating the possibilities of optimal pricing of park services is important. With this motivation, the collaborative program aims to design optimal pricing of park resources to achieve sustainable park management and to maximize the value of parks in Eastern and Southern Africa for a combination of parks and national interests.

The collaborative research program, which is led by senior professor Gardner Brown of the University of Washington, and Dr. Edwin Muchapondwa of the University of Cape Town, involves researchers from EfD Ethiopia, Kenya, Tanzania, and South Africa, and research associates from the University of Gothenburg. The team held its second workshop in Hazyview, South Africa, in October 2012, which was attended by about 20 participants including representatives of the park agencies in Ethiopia, Kenya, South Africa, Tanzania, and Uganda. The team is expected to undertake field surveys in the respective countries which will be used to conduct empirical research on the issue.



Park Pricing Workshop Kruger National Park

The design and evaluation of forest tenure reforms

A number of developing countries introduced forest tenure reforms which have implications on ecosystem services, livelihoods of forest dependent communities, and new payment mechanisms. However, there have been almost no studies investigating the impact of the reforms. Through documentation of case studies from several countries, the collaborative program aims to reveal empirical evidence which could be used to improve the design and outcomes of forest tenure reforms in developing countries with a particular focus on EfD countries.

Professors Randy Bluffstone of Portland State University and Dr. Elizabeth Robinson of University of Reading lead the team and they involve researchers from EfD China, Ethiopia, Kenya and Tanzania. In June 2012, the research group conducted a workshop at the University of Gothenburg and discussed preliminary findings from individual research undertaken by research fellows involved.



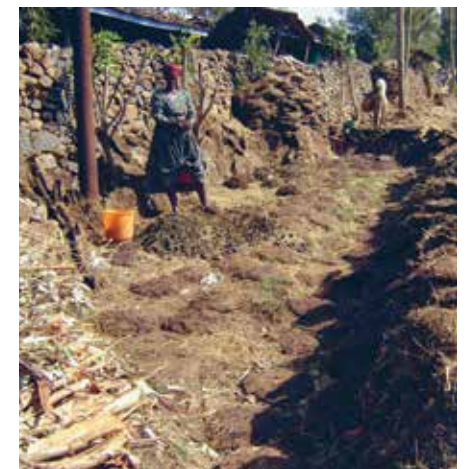
EfD field trip to Chinese forest

Household Energy demand

Household energy in developing countries is linked to indoor and outdoor air pollution (especially in relation to use of biomass fuels such as fuel wood and dung) as well as climate change (especially in relation to use of fossil fuels such as kerosene for cooking, lighting and heating). The use of energy and climate policy to address these issues requires

knowledge on how households respond to changes in important variables such as prices and income. However, rigorous empirical studies that address these issues and make comparison across countries using comparable methods and data are limited.

With this motivation, the collaborative program on energy use in developing countries kicked-off in 2012 to fill the existing knowledge gaps. A workshop on the subject was hosted by EfD-Ethiopia in Feb. 23-24, 2012. The objectives of the workshop were to discuss: (1) the focus of the research, (2) alternative methodologies needed to deal with common issues and methodologies identified for comparison, and (3) the way forward including funding issues. Participants of the workshop agreed that the proposal to be developed would focus on the analysis of household energy demand and its implications for energy and climate policy and to make a comparison across countries in Africa (including Ethiopia, Kenya and Tanzania) and Asia (including China). There was an agreement to work towards developing a proposal taking into account the need to clearly identify a research gap in the area for each country involved and look for funding of a larger scale program on the subject.



A lady in Amhara region preparing manure for fuel

RESEARCH POLICY INTERACTION

The EfD initiative is built on the premise that if relevant applied research is introduced in policy making processes, then this will result in improved policies and subsequently poverty reduction and a more sustainable development. The experiences over the last decades are that it is of utmost importance for policy impact that there is a close dialogue between researchers and policy makers/civil servants over an extended period. Below are some examples of successful policy interactions.

RESEARCH POLICY INTERACTION TOP OUTCOMES

EfD Central America has a longstanding policy interaction with SINAC (National System of Protected Areas), the agency within the Ministry of Environment and Energy that oversees both marine and terrestrial protected areas in Costa Rica. The latest outcome, completed early in 2012 by EfD-CA researchers, was a study on tariffs for the concession of non-core services in Corcovado and Marino Ballena National Parks. This research is important because it provided the parks' managers with a methodology to assess the cost for this type of concession. Financial resources are needed for the sustainability of protected areas and, most importantly, to free up time so park rangers and other staff can be fully dedicated to their core responsibilities of protection and management rather than dealing with services that can be provided by a third party. Concessions also provide business opportunities for socio-environmental entrepreneurs and job creation in local communities.



Marino Ballena National Park, Costa Rica

EfD China has made many successful contributions in the forest sector of China. Beginning in 2005, EfD China has been studying possible reform paths for the northeast state forest regions. Funding from the World Bank, Ford Foundation, and EfD initiative has allowed researchers to conduct two rounds of comprehensive surveys in 2005 and 2009 by considering data spanning the thirty year period between the 1980s and 2010s. In 2012, EfD China (EEPFC) formed a research team consisting of Jintao Xu, Xuemei Jiang, Ping Qin, and Haipeng Zhang that conducted rigorous analyses on data from the two rounds of surveys. They also organized a study tour in the US for a senior delegation of the Chinese Society of Forest Economics. In May 2012 a policy workshop was held in the Beijing World Bank Office and summarized the findings on state forest reform and management for six senior central government officials.



Chinese forest

EfD Ethiopia/ EEPFE organized a consultative stakeholder workshop in the second quarter of the year to identify and prioritize research needs of four of the main ministerial offices working on issues related to the environment and to assess training needs for future capacity-needs initiatives. The results of the workshop were used to frame EEPFE's 2013 research activities, and helped EEPFE to focus on policy-relevant and pressing research issues. In fact, some government organizations (e.g., the Ministry of Water and Energy) have already expressed their willingness and commitment to collaborate with EEPFE in research on their priority areas, including partial funding of such research. In addition EEPFE organized three national workshops on climate change; impact and profitability of biofuels; and community forestry, climate change and REDD+. The purpose of these meetings was to discuss findings on these current issues with policy makers, academicians, implementers, and other stakeholders.



Stakeholders' meeting to discuss priority research and training needs, 3 May 2012

It has been an important learning experience, not least for the researchers, that the policy interaction entails much more listening – affecting the research design – than dissemination of final results. The ambition within the EfD initiative is to increase the involvement even further in the analysis that lead to national policy documents. Increased interaction is indeed underway, as illustrated by the outcomes from the consultative workshop organized by EfD Ethiopia, where the Ministries of Water and Energy immediately expressed will and commitment to collaborate. Another great example is found in Tanzania where EfDT are working directly with key policy makers and government institutions, among them the Planning Commission of the President's Office.

EfD Kenya's Director Dr. Wilfred Nyangena delivered the keynote presentation, a synthesis of literature on climate change, at the workshop Regional Strategic Analysis and Knowledge Support System for Eastern and Central Africa (ReSAKSS-ECA), held a regional workshop on the 11th of June, 2012, on the theme, "Strategic Analysis to Inform Agricultural Policy".

The workshop brought together fifty participants representing a wide range of agriculture and rural development stakeholders representing regional economic communities, the private sector, researchers, development agencies, government agriculture and related ministries, national statistical authorities, and civil society. The participants were from Burundi, Democratic Republic of Congo, Ethiopia, Kenya, Malawi, Rwanda, South Africa, Tanzania, Uganda and Zambia, as well as the East African Community (EAC), the Common Market for Eastern and Southern Africa (COMESA), and the NEPAD Planning and Coordinating Agency.



EfD Kenya's Director Dr. Wilfred Nyangena

EfD South Africa/EPRU researchers have been working with government officials at all levels, from the Premier's office to provincial and local governments, on such diverse issues as climate change, water conservation, biodiversity preservation, marine protection, and more. An example of the interaction between research and policy is a project to apply the interdisciplinary ideas of behavioral economics to change everyday behavior about using water and other utilities. Another example is a research project that includes working with insurance companies and disaster preparedness agencies to develop products to allow poor people to prepare for the risks of severe weather. A third example is providing expertise in an ongoing legal case dealing with the environmental impacts of coal mining on poor farmworkers. These and other exciting research-policy collaborations are detailed in this report.



A dragline in action on the site of coal mine dumps in the Mpumalanga province. Photo David Larsen

In the quest for sustainable development, **EfD Tanzania** has been consistently working to strengthen the research capacity in environmental economics at the Department of Economics. EfDT has extended its research interaction by involving key policy makers and government institutions. In its current initiatives, EfDT is working on several research and consultancy assignments mandated by the Planning Commission of the President's Office in Tanzania. One of these research works is entitled "Poverty and local ecosystems income generation using economic instruments for sustainable utilization of environmental resources: Case study – Lake Victoria Basin." This important and timely research work is being undertaken by EfDT Researchers. It will fill in the knowledge gap on the extent to which local ecosystems-based initiatives can potentially be adopted for sustainable utilization of environmental resources in Lake Victoria Basin. The research work is undertaken in the regions bordering Lake Victoria, Mwanza, Kagera and Mara.



Group photo during the expert workshop held at Blue Pearl Hotel in Dar es Salaam. EfDT team members: Elizabeth Robinson, John Ked Mduma, Stephen Kirama and Salvatory Macha. Policy makers: Ms. Gladness A. Mkamba, Assistant Director, Forestry and Beekeeping Division -Ministry of Natural Resources and Tourism; Dr. Benjamin Peter Ngatunga, Director General, Tanzania Fisheries Research Institute -Ministry of Livestock and Fisheries Development; Mr. Arnold Mapinduzi, Senior Environmental Management Officer - The National Environment Management Council (NEMC); Ms. Amina Akida, Principal Forest Officer – Management Information Systems, Ministry of Natural Resources & Tourism; Mr. Humphrey Muhand –Warden, Marine Parks and Reserves of Mafia Island.



The 6th Annual Meeting of the Environment for Development (EfD) Initiative took place in La Fortuna, Costa Rica, between October 25 and 29, 2012. More than 70 people participated.

THE EFD ANNUAL MEETING 2012 IN COSTA RICA

The 6th Annual Meeting of the Environment for Development (EfD) Initiative took place in La Fortuna, Costa Rica, between October 25 and 29, 2012. More than 70 people participated at the rendezvous this year, including researchers from all EfD centers around the world and their collaborators, as well as key stakeholders, to discuss and exchange research results from EfD projects, ideas, and proposals.

Decisions and Discussions on Research

The highlight of the meeting this year was the establishment of EfD as an independent legal entity which will be governed by a board with representatives of the EfD centers. The Board will be the highest decision making body and will appoint the Research Committee and the Secretariat. "This is a historic moment!" said Gunnar Köhlin, Director of the Environment for Development (EfD) Initiative, and a professor in the Department of Economics at the University of Gothenburg. "This will enable EfD to become a truly global organization, with the ambition of becoming the largest and most efficient organization to channel funds for research on environmental economics in developing countries."

The meeting opened with an enthusiastic welcome by Gunnar Köhlin, followed by wel-

coming remarks by Francisco Alpizar, director of the EfD Central America Center (EfD-CA), based in Costa Rica. There were three keynote speeches and a panel discussion. The first keynote speech, by Ed Barbier of the University of Wyoming, was on Structural change, dualism and economic development. The second, entitled Measuring the impacts of environmental policies on the environment and the poor: protected areas and ecosystems services, was by Paul Ferraro, from Georgia State University. Lastly, Erin Sills of North Carolina State University gave a presentation on Understanding REDD: What and how can we learn from pilot projects? (REDD stands for Reduced Emissions from Deforestation and Forest Degradation.)

In addition, there were several very informative presentations during the plenary session and the parallel sessions. These covered a series

of issues, including interdisciplinary synthesis research, adaptation to climate change, transportation and congestion, water use and pricing, and fisheries. All of these presentations were given by experts from around the world.

The next EfD Annual meeting will be held in South Africa in 2013.

EfD Policy Day at the Annual Meeting

The Policy Day is becoming a tradition during EfD Annual meetings. This event serves as a stage for researchers, policymakers, and politicians to interact around seminal policy-relevant issues to which EfD researchers can contribute. The 2012 Policy Day kickoff on October 25 brought together more than 55 participants in Santo Domingo de Heredia, Costa Rica. This invited group included both current and

former members of the Costa Rican Congress, ministers of the government of Costa Rica, and representatives from seven government agencies. There were also national and international representatives from eight NGOs, five research institutions or universities, and two private corporations.

The central theme of the Policy Day was research and policy interactions in climate change, water, and conservation of natural resources. Francisco Alpizar, the director of EfD-CA, celebrated the presence of a diverse group of people interested in moving forward research-based policymaking. "We are here to position EfD in the national context, to present developments in research that is relevant for policy design and decision making, to identify key needs for research on issues around the theme of the day, and to facilitate a dialogue between researchers, policy makers, and stakeholders working on defining policies around these subjects," said Alpizar. Most importantly, he added, "we are here because we want to help and to hear from you about the issues on which you need our help; researchers at EfD can provide a small contribution to resolving some of the myriad issues we need to confront."

After Alpizar's opening remarks, Jose Joaquín Campos, the Director General of the Tropical Agriculture and Higher Education Center (CATIE), gave a presentation about climate-smart territories and stressed the opportunities for CATIE and EfD to support human well-being in Latin America and the Caribbean. Campos praised the quality of work and accomplishments of EfD and wished for an even more productive, successful, and consolidated presence of EfD in the region. This presentation was followed by a talk by EfD director Gunnar Köhlin. Köhlin presented on The impact of international cooperation through EfD's research and capacity building. One of his key messages was that, through capacity building, rigorous research, and communica-

tion of issues, EfD's work around the world contributes to well-grounded environmental analysis. This analysis supports key national plans and policies, as he demonstrated with an extended list of examples. Finally, the welcoming session closed with two presentations about cooperation to advance research and capacity building as part of South-South cooperation toward the "green economy." One was by Sergio Musmanni of the German Agency for International Cooperation (GIZ) Office in Costa Rica. The other was by Dr. Yue Zhai, First Secretary for Science and Technology, based at the embassy of the People's Republic of China in Costa Rica, who gave his talk in Spanish.

The Policy Day continued with three plenary sessions. The first brought up the topic of Opportunities for development: from adaptation and mitigation to climate change, starting with a presentation by Thomas Sterner. Sterner is Professor in the Department of Economics at the University of Gothenburg, an EfD Senior Research Fellow, and Visiting Chief Economist at the Environmental Defense Fund (EDF). He spoke about policy options and political feasibility in climate change and other environmental policies. Then, Álvaro Umaña, a Senior Research Fellow at EfD-CA, talked about needed changes in international negotiations on climate change en route to a low carbon economy. He was followed by Celia Harvey, Vice President for Global Change and Ecosystem Services, Conservation International (CI). Celia presented a newly launched collaboration between CATIE and CI called Ecosystem-based Adaptation for Smallholder Subsistence and Coffee Farming Communities in Central America: The CAS-CADE Project.

The second session focused on challenges and opportunities for the green economy and conservation with two presentations. Juan Robalino, another Senior Research Fellow at EfD-CA, presented his work about impacts of conservation policies. After that, Jorge Mario

Rodríguez Zúñiga, Executive Director of The National Forestry Financing Fund (FONAFIFO), talked about the future prospects for REDD+ and other Payment for Environmental Services (PES) schemes in Costa Rica. (The "plus" in REDD+ is for forest conservation, sustainable forest management, and the enhancement of carbon stocks.)

The last session on research and policy interaction on water and climate change consisted of three presentations. First, Róger Madrigal, Research Fellow at EfD-CA, showed the work the center is doing on adaptation to climate change and water governance. Maureen Ballesterio from the Global Water Partnership for Central America and former member of Congress in Costa Rica talked about shaping and advocating for the political agenda on water. Dr. Darner Mora, Director of the Blue Flag Program and the National Water Laboratory, Institute of Aqueducts and Sewage (AyA), ended the session with his presentation about the role of the AyA and its programs in water management.

The Policy Day was a cordial meeting full of exchanges between the speakers and the audience. For a moment, the participants were stranded under the colonial tile roof of the conference venue, which was at a distance from the restaurant where a delicious lunch was being served. The loud sound of the rain falling did not dim the lively discussions and enthusiastic questions between politicians, civil servants, and researchers alike. More than one person suggested that "this type of meeting should take place more often for all to learn and start speaking in the same language".

The media was also present during the day and covered a lot of the issues being discussed. Several EfD researchers and other participants were interviewed by both local and international news reporters. To see the list of media coverage for the Policy Day, visit media coverage EfD in media on www.efdinitiative.org.



Jesper Stage, Research Fellow, Sweden, Stephen Kirama, Research Fellow, Tanzania, Sied Hassen, Ph.D. Student, University of Gothenburg, Moses Ikaria Research Fellow, Kenya



Adolf Mkenda, Research Fellow Tanzania, Thomas Sterner, Research Fellow Sweden and Mintewab Bezabih, Research Associate, Ethiopia



Yonas Alem, Research Fellow EFD-Ethiopia and EFD Research Officer, Sweden; (back) Jonathan Colmer, Ph.D. Student, London School of Economics; Francisco Alpizar, Centre Director and Research Fellow EfD-CA; (back) Miguel Quiroga, Universidad de Concepción; Simon Wagura, Junior Research Fellow EFD-Kenya and Ph.D. Student at the University of Gothenburg



Panel discussion with Dr. Darner Mora, Director of the Blue Flag Program and the National Water Laboratory, Institute of Aqueducts and Sewage (AyA), Maureen Ballesterio, Global Water Partnership for Central America and former member of Congress in Costa Rica, Róger Madrigal, Research Fellow Central America and María A. Naranjo, Deputy Director and Research Fellow, Central America.



Participants in the 6th annual EfD meeting



Jane Mariara and Peter Kimuyu, Research Fellows, Kenya



Alemu Mekonnen at Sida Green Growth: Development Talk

EFD POLICY ENGAGEMENT ON GREEN GROWTH: DEVELOPMENT TALK AT SIDA

Alemu Mekonnen, EfD-Ethiopia and **Thomas Sterner**, EfD-Sweden, participated as resource persons and experts in a high-level seminar (Development Talks) at Sida in Stockholm Sept 17, 2012. The theme of the seminar was “After Rio +20; Inclusive Green Growth for Sustainable development – Lessons learned, Next steps and Implications for development and development cooperation”. Mekonnen shared the experiences from Ethiopia’s work towards a green economy and presented and commented on Ethiopia’s Climate Resilient Green Economy (CRGE) strategy. Mekonnen has acted as technical expert in the formulation of the CRGE Strategy. Sterner presented more generally on the concept of Green Growth/Green Economy, and if there indeed

are some new perspectives or implications following these concepts.

The conference was well attended with more than 100 participants, from Sida, other Swedish ministries and agencies, Swedish and international NGOs, universities, civil society and the business sector. Besides the participation from Environment for Development Initiative and University of Gothenburg, the conference also included prominent speakers and resource persons from the World Resources Institute, The World Bank, UNEP, UNDP Poverty-Environment Initiative, IIED, Stockholm Environment Institute, and Stockholm Resilience Centre. The conference was organized by Sida’s helpdesk for Environ-

ment and Climate Change, and moderated by its team leader and the EfD research fellow **Anders Ekblom**.

Besides large participation the conference attained large exposure with webstreaming, publications and unique web-site presentation. This was facilitated in collaboration with Sida Partnership Forum (SPF), Sida’s Communication Department, and Sida’s Department for Global Programs and the Environment and Climate Cluster.

The rationale behind the conference is Sida’s and Sweden’s interest in Green Economy/ Green Growth as a possible route towards Sustainable development and a need to learn

more on the key components of the concept and what it can imply for Sida, Swedish and international development cooperation, and development in general. Sida observes that several initiatives have been created around this theme among key actors, globally and in development cooperation, such as UNEP, OECD DAC, World Bank, regional development banks, ILO, Poverty-Environment Partnership, IIED, World Resources Institute, and Environment for Development Initiative (EfD). The focus in these initiatives varies. The theme has given rise to intense debates about what Green Growth is, what it isn’t, and how it differs conceptually and in practice from other broad concepts that have guided the development policies in low-income countries. It has also attracted criticism among stakeholders, who believe that this may crowd out poverty reduction efforts, reduce the importance of Poverty Reduction Strategies (PRS) and prevent poorer countries to formulate and follow their own development strategies.

In view of this debate, the significance of the Rio +20 Conference for global development (including development cooperation), the

conference speakers and panelists (including Mekonnen and Sterner) presented and discussed: what green economy is, initiatives that are underway (including Ethiopia’s CRGE Strategy), knowledge that has been generated, criticisms, and more specifically, how green economy/green growth is supposed to be put into practice.

Another rationale behind the conference was the fact that Sida, over the years, has supported several international actors which can offer important insights on Green Growth/Green Economy. Therefore Sida took the opportunity to gather this expertise and conduct the Development Talks conference, and therefore learnt more about Green Growth/Green Economy and discussed implications for its own work ahead and next steps from the conclusions reached in the Rio+20 Conference.

Questions which guided the discussions at the conference were: a) what was said at the Rio+20-meeting? b) What commitments were made regarding attaining Green Growth/Green economy?; c) What are the implications for

development, and development cooperation in particular? d) What new initiatives are there to support, follow, and learn from?; e) What needs are there regarding new knowledge, and enhancing the research-policy interface? f) How can we transform economies and societies to implement Green Economy in practice?

In light of these questions and issues, the presentations by Sterner and Mekonnen were very well received and there was a large expressed interest in Ethiopia’s transformation towards climate-resilient green economy.

Other issues and questions which were discussed were: How can GG/GE be operationalized? What policy instruments can be useful? How can it be measured? How can progress be tracked? What are the main obstacles, issues to consider and potential goal conflicts linked with GG/GE? What are the links with poverty reduction and the risks of crowding out and failures of making it inclusive? What are the new/changed responsibilities – North-South as well as across ministries in low-income countries?

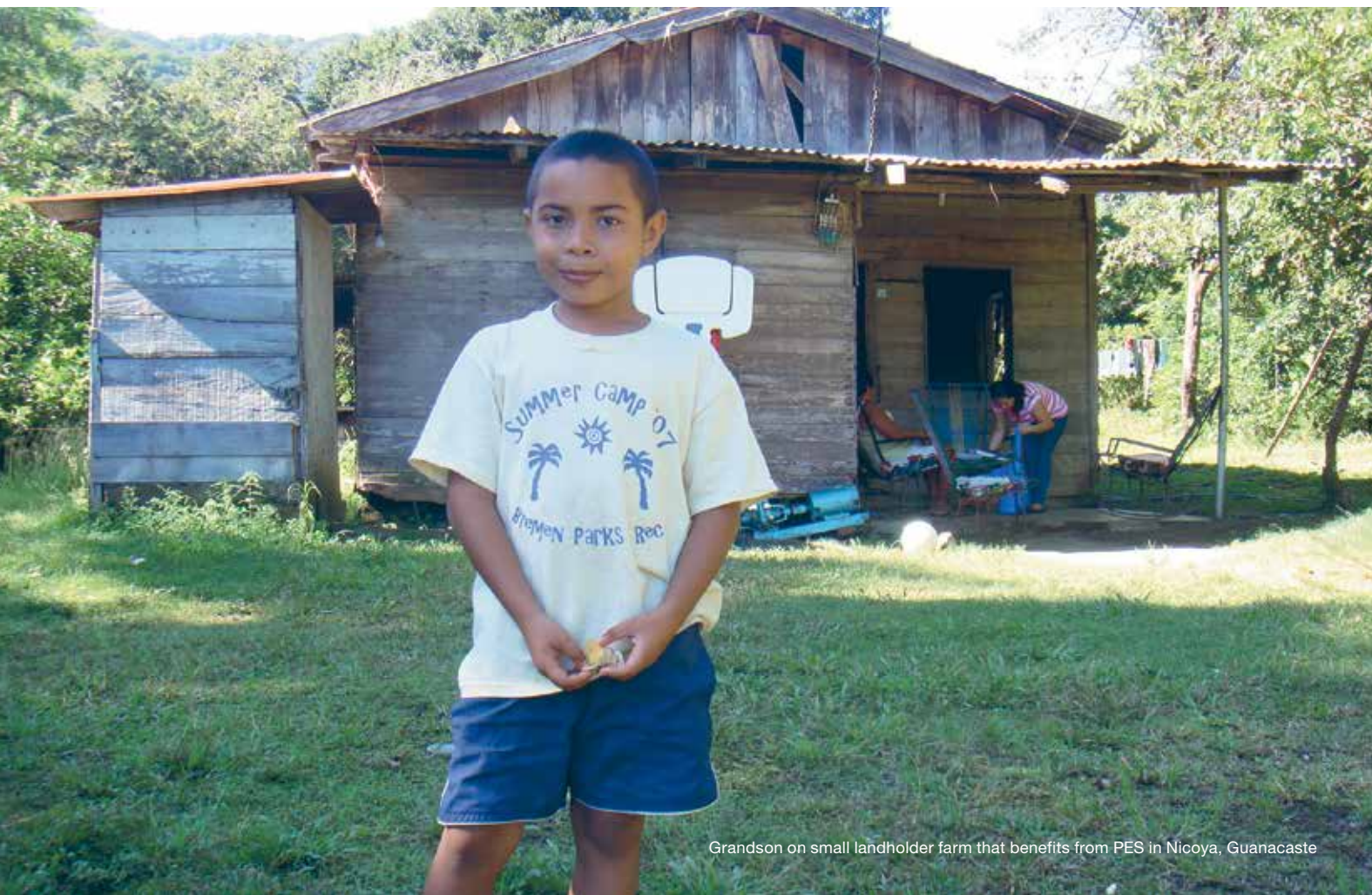
ENVIRONMENTAL ECONOMICS AND POLICY GROUP

To improve outreach of EfD research and identify opportunities to link to international policy processes EfD cooperates with the Environmental Economics and Policy group based at the Centre for environment and sustainability (GMV) at Chalmers/University of Gothenburg. GMV hosts Sida’s Helpdesk for environment and climate change which has a strong network among donor agencies and international organizations like OECD, UNDP and the World Bank.

During the year GMV staff has coached and discussed how EfD centers can advance their policy engagement both via skype and during the EfD annual meeting in Costa Rica. The GMV hosted Sida Helpdesk is also an outlet for knowledge generated within EfD. For instance EfD research fellows provided input on sustainable agriculture that informed the Helpdesk contribution to Sidas development of a new cooperation strategy with Zambia.

RESEARCH POLICY INTERACTION STORIES

Central America Payments for Ecosystem Services—no positive effect on incomes and jobs



Grandson on small landholder farm that benefits from PES in Nicoya, Guanacaste

EfD researchers have shown that a Payments for Ecosystem Services program had neither positive nor negative effects on people's income or jobs. And, in the first three years of its implementation, the program had no effect on the deforestation rate. However, in the following five years, the program did slow down deforestation.

“Ideally, people should be better off by providing forest ecosystem services or at least they shouldn't be worse off”

“PEOPLE EXPECT payments for ecosystem services to improve lives. So, it is important to test whether the program does that or not. Our findings show that, in socioeconomic terms, people are not benefitting from this program, for example when it comes to employment, wages or poverty,” says EfD researcher Juan Robalino.

Together with his EfD colleagues Laura Villalobos, Catalina Sandoval, and Francisco Alpizar, Robalino conducted a household survey that covers the whole country and, based on that, a study of the socioeconomic impact of Payments for Ecosystem Services.

The idea behind Payments for Ecosystem Services is to compensate people who generate services such as leaving a forest untouched, leaving alone land that is already deforested so that forest can grow again, or planting trees and producing timber in a sustainable way.

“Ideally, people should be better off by providing forest ecosystem services or at least they shouldn't be worse off,” says Robalino. “We found that they were no better off.”

The original purpose of payments for ecosystem services is to reduce deforestation. Conservation of forests means increased carbon sequestration or, in other words, storage of carbon in order to avoid dangerous

climate change. Other benefits associated with forest conservation are biodiversity protection, watershed protection, and scenic beauty that can translate into ecotourism.

However, with this program come restrictions on the use of land for agriculture. This in turn can affect wages and employment for local people. In fact, the EfD researchers show that unemployment increased and wages fell slightly 2007-2009 due to the payments for ecosystem services program, but the impact was very small.

The impact on deforestation is also slight, according to Robalino. Ninety-seven percent of the forest land in Costa Rica enrolled within the program would not have been deforested even without the program during 2000-2005.

“How much carbon the three percent of saved forest can capture is very difficult to measure because of the uncertainty about where the land would have been deforested, but this doesn't mean the program is not worth the efforts. Now we at least know that the program on average doesn't hurt people.”

Yet, the outcomes of the program could improve with better targeting. An important conclusion from other EfD studies is the need for a combination of incentives that includes better targeting of landowners at high risk of deforesting their land.



Juan Robalino, Senior research fellow

RESEARCH POLICY INTERACTION STORIES

China Possible reform paths for the northeast state forest regions



“Key messages resulting from the multi-year study include redistributing management responsibility between central and local governments, and allowing localized decision on reforming state forest enterprises,” says Jintao Xu.

REFORM OF STATE FOREST regions in China is of particular interest to EfD. Beginning in 2005, EfD China has been studying possible reform paths for the northeast state forest regions. Funding from the World Bank, Ford Foundation, and EfD initiatives has allowed researchers to conduct two rounds of comprehensive surveys in 2005 and 2009 by considering data spanning the thirty year period between 1980 and 2008. The research focused on demonstrating the impact of local innovations on forest management and the livelihood of the forest workers and their families.

In 2012, a research team consisting of Jintao Xu, Xuemei Jiang, Ping Qin, and Haipeng Zhang conducted analyses on data from the two rounds of surveys. They also organized a study tour in the US for a senior delegation of the Chinese Society of Forest Economics, according to Jintao Xu. This was designed to enrich their understanding of the management of national forests with multiple goals. A May 2012 workshop held in the Beijing World Bank Office summarized the findings for six senior central government officials, some of whom were surprised by the results.

“Our judgment is that the study tour and the workshop provided very innovative insights into the minds of the senior officials, which in the future will influence the way that the state forest reform is considered,” Jintao Xu says. The officials were presented with data from the multi-year study that indicated it would be beneficial to redistribute management responsibilities between central and local governments and allow more localized decisions regarding reformation of state forest enterprises. Those attending the workshop welcomed most of these ideas.

“Reform of state forest regions in Northeast China is important because of its historical significance in timber supply and forest management structure. It is the political foundation of the central government forest administration,” says Jintao Xu. He explains that regional reforms will affect the efficiency of the affected enterprises and will also affect the reorganization of the central forest authority, which complicates the issue. The complexities of restructuring have made it a

hotly debated topic. State forest reform is currently stalled due to the opposition of the central forestry authority, despite strong pressure from private enterprises and local governments. For this reason, Xu believes the EfD’s research is extremely relevant.

The debates around state forest reform are focused on the division of responsibilities between central and local governments. The survey data could assist the Central Forest Authority in making an informed decision regarding these divisions in the context of national reform, while considering the national forest policies of other countries.



EfD members walking through a young forest in the province of Yunnan

“Key messages resulting from the multi-year study include redistributing management responsibility between central and local governments, and allowing localized decision on reforming state forest enterprises,” says Jintao

Xu. If reforms are made, this could result in more local innovations, which would meet the urgent need to allow greater efficiency and economic viability. This would support families and workers living and working in state forest regions by providing local autonomy in making decisions on state forest enterprise reforms, including the tenure structure of state forests.

When asked about the influence of the collected data and what difference it has made, Xu said “We have helped people from the Central Forest Authority realize that forest tenure dictates decision-making power.” He believes that the research indicates that the central government should restrict its intervention and focus it in areas where it has true management capabilities, such as making a commitment to investment and monitoring, while regulating cost.

In terms of environment and development, Xu says that during the course of the research, the opinions of several of his colleagues’ minds were changed. “Important Central Forest Authority officials agree that the central government should re-nationalize a small share of the whole forest area under the state forest category, leaving a large share of this category as local public forests under control of local government. The reform of local public forests should be the responsibility of local governments.”

Furthermore, the EfD researchers have supported innovation in the conversion of state forest enterprises to local government in the Heilongjiang Province, the largest state forest province. This conversion was supported by establishing household based forest tenure, which has been advocated by EfD China since 2005. More individualized forest tenure is to be expected in the future.

Jintao Xu considers the project a success due to the large amount of empirical research and data collection. The study tour afforded the team the opportunity to present their research to government officials and encourage reform. Additionally, the research conducted by Xu, Jiang, Qin, and Zang has been cited twice in Science magazine.

RESEARCH POLICY INTERACTION STORIES

Ethiopia Biofuels increase incomes of poor, EfD Ethiopia study shows

Zenebe Gebreegziabher, Research fellow showing a jatropha plant with leaves and fruits



Contrary to the notion that increased biofuels production will undermine the food security of developing countries, EfD research results show that it can increase production of both food cereals and cash crops in Ethiopia. However, the effects vary by region. Also, to be successful from a poverty reduction perspective, biofuels investments must be made on unutilized land. Transfer of technology know-how from biofuel firms to farmers is also required.

IN 2007, the UN Special Rapporteur on the Right to Food, Jean Ziegler, said in a press briefing “It is a crime against humanity to convert agriculturally productive soil into soil which produces foodstuffs that will be burned into biofuel.” He called for a five-year moratorium on biofuel production as the conversion of maize, wheat, and sugar into fuels was driving up the prices of food, land, and water. Other skeptics see the trend of biofuels investments as land grabbing by transnational corporations and foreign governments, and as the new scramble for Africa.

“It is imperative for researchers in a country like Ethiopia, with low income, food insecurity, and external sector imbalance, to undertake empirical research and provide evidence-based policy advice in this area where little is known,” says EfD researcher Zenebe Gebreegziabher.

The significant outcome of an assessment study conducted by EfD researchers is that biofuels investments can also have beneficial effects, especially when they involve technology transfers and when they are made on unutilized land, so that smallholders do not lose land.

The debate in Ethiopia, according to Gebreegziabher, is that some of the land that seems unutilized because it is not under cultivation might be in use, for example, as grazing land.

“No farmers are actually losing land used for food crops to biofuels production by firms,” explained Gebreegziabher. “But some firms are involved in contract farming, where farmers act as ‘out-growers’ and supply biofuel crops to firms. This has led to worries in Ethiopia that farmers may let more of their land to the firms, which in turn might threaten the farmers’ food security. There have also been worries that farmers are not getting good prices from the firms for the biofuels crops they grow through contract farming.”

Technology transfers can occur either informally or through conscious intervention, according to Gebreegziabher. The idea is that farmers will be employed in the newly established biofuels firms as farm laborers. The firms will then provide training to their employees on modern production practices. Then, know-how gained from biofuels firms will naturally be used by farmers in their own food production. Alternatively, firms can engage in conscious technology transfer. Some biofuels firms that are engaged in

contractual farming agreements provide training to the farmers on how to grow the crops, e.g., seeding, weeding, pest control, and harvesting. Finally, the NGOs studied in this research are interested in biofuels as a community development option, and are engaged in knowledge and technology transfer activities.

“Our findings show that biofuel expansion can help improve economic growth if such investment generates technology transfer. Without knowledge transfer, however, the effect of biofuel investment on economic growth is negligible,” says Gebreegziabher.

The findings from Ethiopia also show that biofuels investments can improve smallholder food security and increase household welfare, depending on the region. Production of both food cereals and cash crops increases in four of the seven scenarios investigated by the EfD team, but with some negative effects in two of these.

Moreover, the analysis makes projections covering the period 2005-2020. These projections suggest that, when the biofuels sector operates at full scale, Ethiopia will be producing less export commodities (given the current land allocated for biofuels investment). The reduced production of traditional Ethiopian export commodities such as coffee, pulses, oilseed, fruits, vegetables and tea implies that the impact on the external sector, exports and imports, is negative. Biofuels expansion affects both the real exchange rate and production of export commodities.

In summary, biofuels expansion has both positive and negative impacts on Ethiopian smallholder farmers depending on the region, or the agro-ecological zone. Smallholder farmers in areas where biofuels crops are located benefit, whereas farmers elsewhere are negatively impacted.

“Although biofuels expansion might have a negative effect on food production in some regions, the beneficial effects elsewhere outweigh the negative effects. Overall it does not undermine the country’s food production or food security, but is instead pro-poor,” says Gebreegziabher.

Biofuels investments are new to the Ethiopian economy. Therefore, there was little public information available to EfD researchers in conducting this analysis. Hence, the team

collected and used data from 15 biofuels firms and two NGOs, and formulated seven biofuels investment scenarios in different regions of Ethiopia. The data collection process wasn’t easy. Obtaining data from businesses required a lot of diplomacy and a number of revisits, according to Gebreegziabher. However, the use of actual firm-level data was a real strength of the study, according to an EfD collaborator who reviewed the work.

The survey also revealed that one company has started exporting biodiesel, and that local innovations are being made, such as the invention of biodiesel stoves and biogas driven-vehicles.

“This suggests that the sector could possibly be an avenue to reducing poverty and enhancing growth. However, the sector suffers from lack of appropriate institutional setup in terms of better regulatory framework and follow up, particularly at the regional level,” says Gebreegziabher.

The findings were presented to stakeholders from both governmental and non-governmental organizations at a workshop organized by the Environmental Economics Policy Forum for Ethiopia on September 14, 2012, in Addis Ababa. The participants represented the Ministry of Water and Energy (the Biofuels Development and Utilization Directorate), Ministry of Agriculture (the Natural Resources Directorate), Ministry of Industry, Ethiopian Investment Agency, Federal Environmental Protection Authority, regional energy agencies, firms/investors, representatives of UN agencies, and local NGOs.

“As a researcher, it is extremely exciting to contribute in an area where there is indeed a knowledge gap. Ethiopia’s biofuels development and utilization strategy is in the process of being revised, so our findings will be good inputs. The research-based knowledge can be applied in deciding where in the country biofuels investments can be promoted, and how to make the best out of them,” says Gebreegziabher.

Gebreegziabher, Zenebe, Alemu Mekonnen, Tadele Ferede, Fantu Guta, Jörgen Levin, Gunnar Köhlin, Tekie Alemu, and Lars Bohlin. 2013. “The Distributive Effect and Food Security Implications of Biofuels Investment in Ethiopia: A CGE Analysis.” Environment for Development Discussion Paper Series January 2013. EfD DP 13-02.

RESEARCH POLICY INTERACTION STORIES

Kenya Climate Change Research in the COMESA region



A KARI Katumani staff member shows a test plot to the participants of the AARC workshop

EfD-Kenya fellows Wilfred Nyangena and Geophrey Sikei, were engaged in the review and synthesis of literature on climate change research in the COMESA region and how it has influenced policy. This was at the request of the Regional Strategic Analysis and Knowledge Support System for Eastern and Central Africa (ReSAKSS-ECA). Special focus was on the links between climate change, agriculture and food security.

This review was informed by the vulnerability of the poor and the marginalized to impacts of climate change. Thus, the review was meant to guide policy makers to target and implement effective adaptation initiatives. The study provided an assessment of the extent to which information from climate change studies is being integrated into development practice and decision making in agricultural activities in the COMESA region.

Within the COMESA region, little is known about the research evidence available to inform policy formulation. Moreover, it is not clear how the policy initiatives being implemented are informed by scientific evidence. There are relatively few studies on the extent of impacts of climate change or even the effectiveness of available adaptation strategies. There are even fewer studies on climate change mitigation. The existing studies are scattered in various sources; there is lack of a comprehensive synthesis of the available knowledge.

The review has shown that climate change is already here with us and its effects are predicted to worsen, with serious implications on food security, income generation and livelihood systems. Evidence shows that there are very few peer reviewed papers by African scientists on almost any aspects of climate change, from social to scientific works. The majority of the work is by experts from elsewhere, an indication that either local capacity is lacking or there are no research funds or interest from local institutions. Studies on estimations and modeling of climate change have been done at a very high scale or at a global scale. These global models are unable to represent finite atmospheric features that occur at local levels. Yet, these smaller details can have a big impact on local climate, which is one reason the effects of climate change are expected to vary from one geographic location to the other. Downscaling climate models is critical as it can allow for examination of relatively small areas in detail - in some cases down to 25 square kilometers, a

far higher resolution than that offered by global climate model simulations. Downscaled data can be used to develop more precise climate change adaptation plans. Without such data, this inadequacy results in high climate risks.

Governments have reacted by formulation of policies and strategies for dealing with climate change causes and impacts, both at national and regional levels, which is a good starting point. However, the main challenge lies in the implementation of the identified priorities, a step that remains largely unfulfilled due to financial, technical and even capacity constraints. Worse still is that the priority identification may not be well embedded in science, given the paucity of precise information on climate change at a local scale.



Dr. Wilfred Nyangena, Research fellow and Coordinator of EfD Kenya



Geophrey Sikei

RESEARCH POLICY INTERACTION STORIES

South Africa
70 million ZAR fund needed to address
post-closure pollution from proposed mine



A healthy lake in the Mpumalanga Province. Photo Paul Weinberg

Within the unique wetland area Mpumalanga Lake District lies the site of a proposed, and controversial, opencast coal mine, the Lusthof colliery. It will require a preliminary ‘set-aside’ of about 70 million South African rands (9 million USD) to fund maintenance of water quality in the area’s rivers and lakes for a hundred years after closure, EfD research shows. Such set-asides to meet mine closure costs are required by South Africa’s mining legislation.

South Africa has very good mining legislation, but making it work has been a problem. Mining can do a lot of environmental damage, not just when it is happening, but once it has finished and the mine is closed. In 2011, EfD researcher Anthony Leiman was part of a small team who authored a discussion document entitled Financial Provisions for Rehabilitation and Closure in Mining Projects. The project was initiated by WWF in response to a perceived weakness in the application of the country’s mining legislation. The insights obtained from this source document were later used to assess the set-aside fund needed to ensure there would be enough money to mitigate post closure pollution from the Lusthof mine.

According to South Africa’s legislation, a trust fund or something similar has to exist before mining can begin. There is still a moratorium on coal mining in the area. The potential economic benefits of the proposed mining are apparent, since coal in this area is of good quality and close to the surface. Sadly, much of it lies under sensitive wetlands.

“The two biggest problems are dust from old dumps, and water that seeps from old workings. The rock has been exposed to air, and minerals in it, such as sulphur and arsenic, oxidise and dissolve in the rising waters. When this acidic and toxic water decants out of the mine, it flows into nearby rivers and poisons them,” says Anthony Leiman.

Such problems often worsen over time as old mines flood. Such acid mine drainage is a serious and growing concern. Addressing it is costly, and only once the results are approved can a mine get a closure certificate. One result is that many mines simply don’t formally close:

though operations cease, the mine is ostensibly open and is registered as such. The group’s research into this problem was later extended by Shaun Hewittson, a master’s student supervised by Leiman with help from EfD.

Current legislation requires that, before mining can commence at a new site, a fund has to be set up with sufficient money in place for mine closure to be effected. There is always a chance that the mine will prove a failure, so initially funds have to be in bank guarantees. But as mining proceeds and profits start flowing, a growing amount can be located in an interest earning fund. “The question that our team investigated was whether the rules of thumb widely used to estimate the initial set-aside fund have been underestimating the costs involved. The final document was released to the public a few months ago, and as a result the team leader, my former student Dr. Hugo Van Zyl, and I were asked to give an opinion on the proposed Lusthof colliery,” says Leiman.

The proposed mine has a short life expectancy, roughly eight years, and has been heavily opposed by local activists as well as researchers. It also has significant support based on the growing local demand and rising price of good quality coal.

The Chrissiesmeer area in the Mpumalanga Province is known as the Lake District of South Africa. It is a very uncommon habitat in South Africa, a combination of grassland, wetland and lakes, and is a noted breeding site for many rare water birds. Unfortunately, the Mpumalanga Province, which is home to much of SA’s coal mining, has a history of serious environmental pollution, affecting both its human and wildlife

populations. The proposed mine would provide short term profits, but the ongoing costs of mitigating its long term ecological costs needs to be estimated and their present value calculated.

The demand was for a combination of theoretical insights into mine closure costs with the available engineering estimates of the cost of the water treatment needed over the next 100 years to prevent acidic drainage from the mine adversely affecting the Mpumalanga lakes and wetlands. The aim was to give an honest estimate as an input into the impact assessment so that the colliery owners and decision makers could put the short term gains and long term costs into a common context. The most likely scenario is that it will cost 69 426 855 ZAR, or about 9 million US dollars at current exchange rates. (See table.)

“We tried to be completely objective in doing this, and to establish what it would cost to keep the water quality acceptable for 100 years after the mining was complete. Based on our estimates, we made recommendations concerning the amount of money that the mine would need to set aside before they were allowed to begin mining,” says Anthony Leiman.

The resulting document has been accepted and is now part of the impact assessment decision process currently under way.

See also:
Van Zyl, H.W., Bond-Smith, M., Minter, T., Botha, M. and Leiman, A. 2012. Financial Provisions for Rehabilitation and Closure in South African Mining: Discussion Document on Challenges and Recommended Improvements. Report to the WWF. WWF, Cape Town.

Discount rate	Present value of financial provision required		
	Most likely scenario (base case)	Sensitivity analysis for:	
		Lower trust management costs	Higher trust management costs
2.50%	R 93 794 399	R 89 988 622	R 96 849 525
3.50%	R 69 426 855	R 66 695 898	R 71 666 784
5.00%	R 48 840 666	R 47 017 086	R 50 388 579

RESEARCH POLICY INTERACTION STORIES

Tanzania Poor fishermen and farmers lack benefits from government sustainable growth investments

What a catch! Stephen Kirama, Efd Tanzania Researcher admiring a Nile Perch, popularly known by its Swahili name Sangara, at Kyamalange Village on the shores of Lake Victoria. The species was introduced in Lake Victoria in the 1980s. This is one of the best known fish species in Lake Victoria, the one that has attracted fish processing industries along the shores of Lake Victoria in Tanzania, Kenya and Uganda. It is also responsible for reducing the stock of indigenous fish species at Lake Victoria, such as Tilapia (Sato). Fish catch is usually stored in ice-filled containers along the shores, waiting for the fish industry trucks for sorting and loading.



A child was killed by bees from the new beehives. The fish in the new fishpond did not survive. These were two sad outcomes of the investments in alternative income sources for fishermen in marine protected areas in Tanzania. Field observations by Efd researchers were reported directly to policy makers at an experts' policy meeting in 2012. An Efd review of how the country's most important policy documents are addressing sustainable growth and poverty reduction was presented at the dissemination workshop in January, 2013. The review will include a discussion of the outcomes, good and bad, of ongoing efforts to link poverty reduction with environmental protection.

“We are fishermen by tradition. Bee-keeping is not our area,” said a fisherman in one of Tanzania's marine protected areas to Efd Tanzania researcher Stephen Kirama, when he visited the park with his research colleagues.

“An important finding from the field is that we need to better address how to associate sustainability with poverty reduction. By talking with fishermen, we realize how enforcement of the restrictions in marine protected areas affects fishermen's livelihood, and why they are so angry with the management of protected areas,” says Stephen Kirama.

Fishermen are prevented from fishing in their traditional areas, and are supposed to fish in deep waters instead. Also, there are restrictions regarding the types of fishing gear, for example, concerning mesh size of fishing nets.

“Enforcement of restrictions, like confiscation of fishing gear, should come with a fair exchange to legal gear. Fishermen are aware that restrictions are there for environmental purposes. The problem is that they still lack legal fishing gear, appropriate boats, and engines for deep sea fishing,” says Kirama.

He explains that, while some fishermen have received fishing nets and boats from the government through the marine management programme, others have had their equipment confiscated. The limited funds for providing legal equipment have been used for those who heeded the call to form user groups. User groups allow communities to collectively manage resources in order to reduce the overuse of a common pool of resources.

“The key point is that the wider population is lacking the knowledge that environmental sustainability can increase productivity, harvest, and income, and alleviate poverty,” says Kirama. “If people can see these links, they will understand that they are right now jeopardizing their own present and future.”

Since 2007, Efd Tanzania has conducted research in the marine protected areas of Mafia, Tanga, Mnazi Bay and Ruvuma Estuary Marine Park (MBREMP). An equally important area for research policy interaction is agriculture. “Agriculture first” or “Kilimo Kwanza” in Kiswahili is Tanzania's most important current policy aimed at boosting agricultural productivity.

Efd researcher Aloyce Hepelwa is conducting research on subsidies on fertilizers and seeds to poor farmers.

“Our observations in the field revealed that the fertilizer subsidy voucher covers only a quarter of the costs, since the price of fertilizer has gone up,” says Aloyce Hepelwa. “Moreover, subsidies are either not delivered to farmers, or they are delivered too late. They are not used as intended for maize and rice, and farmers are selling them instead of using them on their own land. In addition, the quality is not good. Our recommendation is to increase both the quality and the fertilizer subsidy value.”

This field research demonstrates how Efd associates can form a link between local communities and policy outcomes, figuring out what does and doesn't work. Years of high quality research has brought Efd Tanzania to a new level of research policy interaction, according to Kirama and Hepelwa. The research in recent years on marine protected areas, peri-urban forests, REDD mitigation, and agriculture has been particularly important.

Now the government can approach Efd Tanzania directly rather than going through the Department of Economics as it has done in the past. One example is the assignment that Efd Tanzania received from the Planning Commission of the President's Office to analyze how policy documents in different sectors of the economy are addressing linkages between environmental sustainability, growth, and poverty, and to point out what is lacking. The report from sectors such as natural resources, agriculture, fishery, forestry, minerals, and energy were presented at the dissemination workshop in January, 2013.



Stephen Kirama and Aloyce Hepelwa

“Efd Tanzania is conducting research that results in important information with policy implications. Yet, this will not help anyone if the findings are not communicated. So this is why the Planning Commission decided to fund our outreach in 2012, through an experts' policy meeting on forest and fisheries management, and through policy briefs that we are now finishing,” says Kirama. That meeting was held in May 2012.

When asked about successful ways for researchers to approach policy, Kirama and Hepelwa do not hesitate. “It is important to bring research to the areas that are the topics of the day and that are relevant to the problems facing our country,” says Kirama. “We must orient our research on current problems of Tanzania, invite policy makers, and make sure that our research is up to date and relevant for the policy issues of the moment,” added Hepelwa.

An equally important element for success, underlined by Kirama and Hepelwa, is that key players in the country's decision making are members of Efd Tanzania's policy board. For example, the Chairman of the Efd policy board is Mr. Amon Manyama, Assistant Resident Representative at the United Nations Development Program (UNDP). In this initiative, Efd Tanzania is undertaking a number of research and consultative works in the areas on Poverty Environmental Indicators and Public Expenditure Reviews on the environment and locally based ecosystems solutions. In addition, Efd Tanzania has also received some funding to facilitate dissemination in the areas of marine, fishery, and forestry resources, as well as agriculture.

ACADEMIC CAPACITY BUILDING

The EfD academic capacity building component is designed to increase the synergies between existing academic programs in the academic host institutions and the EfD research and policy interaction. By instilling policy relevant research in the academic programs, EfD supports the development of capacity that can make a real difference as the students take office in government organizations. EfD is thus alleviating the shortage of trained environmental economists in developing countries by supporting undergraduate and postgraduate studies in environmental economics and by building the capacity of local public universities through teaching support, research grants, books and other support. Linking research and policy interaction with graduate academic programs is one of the unique features of EfD.

ACADEMIC CAPACITY BUILDING TOP OUTCOMES

EfD Central America: Environmental and Resource Economics Training

Course: "Water and Climate Change" The Water and Climate Change course examines the economics of climate change impacts and adaption with respect to a variety of water resources planning and policy issues, including infrastructure investment decisions, flood risks, health issues, pricing and demand management, and decision-making. This course is part of LACEEP, a partner of the EfD-CA Center, and was taught by EfD Research Associate Dale Whittington (University of North Carolina at Chapel Hill), Michael Hanemann (Arizona State University), and Marc Jeuland (Duke University). EfD-CA Research Fellows Roger Madrigal, Juan Robalino, and José Jiménez were part of the guest faculty. Participants in this course came from all over Latin America and met in CATIE, Costa Rica from July 23 to August 3.



2012 LACEEP Course on Water and Climate Change Participants

EfD China/Environmental Economics Program in China (EEPC)

In 2012, the EfD Center China has been teaching a greater number of courses on environmental economics and economics, i.e., natural resource and environmental management, microeconomics, econometrics, quantitative methods in economic analysis, etc. These courses are given to both undergraduate and graduate students, including both Master's and PhD students. Six research fellows are involved in this teaching. The EfD Center China in 2012 supervised one PhD dissertation on a forest-products marketing model, and two Master's theses on the performance of the forest processing industry in China and transport mode choice in Beijing. These students have finished their dissertations and theses with distinction in the College of Environmental Sciences and Engineering, Peking University (PKU).



Professor Jintao Xu (third from left, row 1), Director of EfD China/EEPC, with PhD and Master's students on Graduation Day. Row 1: Ying-ao Chen, Hongfei Jiang, Jintao Xu, and Xiaoli Hou. Row 2: Yuanyuan Yi, EfD research fellow, and Dr. Ping Qin, Deputy Director EfD China/EEPC.

EfD Ethiopia/The Environmental Economics Policy Forum (EEPFE)

2012 was a successful year for the research seminar series held at the Department of Economics in Addis Ababa University. This year alone, EEPFE hosted about eight seminars in collaboration with the department and the Ethiopian Strategic Support Programme II at EDRI. The number of participants has been progressively increasing due to extensive advertising. In addition, EEPFE research fellows gave both undergraduate and graduate level economics courses at Addis Ababa University, Mekelle University, and Hawassa University and supervised over 10 graduate thesis works on various topics. EEPFE has also continued book support and thesis grants to graduate students researching topics related to environmental economics. Building academic capacity is important in expanding the use of environmental economics tools in efforts to reduce poverty and achieve sustainable development.



Zenebe Gebreegziabher, Research Seminar Series at the Department of Economics in Addis Ababa University.

Apart from research, EfD research fellows are teaching and supervising a number of undergraduate and postgraduate environmental economist students. Students are getting a chance to learn evidence based courses. In addition to teaching their university students, African EfD researchers are also assisting the African Economics Research Consortium (AERC) postgraduate economics program by teaching environmental related courses.

EfD research fellows mainly teach environmental economics, natural resource economics and environmental valuation courses. The table "Academic capacity building – Number of courses 2012" summarizes number of courses taught in environmental economics, total number of students attending these courses and number of thesis supervised by EfD fellows at the respective center in 2012. When it comes to teaching, Kenya stands out with almost 410 undergraduate students taking environmental economics courses along with 19 MA students. All centers are involved in PhD programs and there is also a close collabora-

tion between these programs and the specialization courses given at the Environmental Economics Unit, University of Gothenburg. While the actual courses are the responsibilities of the academic institutions, EfD supports with these grants and links and experiences to make the academic programs more grounded in research and policy work.



Students at University of Capetown

EfD Kenya

During the year 2012, Wilfred Nyangena taught part two of the Environmental Economics course for the Collaborative PhD Programme (CPP) conducted by the African Economic Research Consortium (AERC) in Nairobi. The programme brings together several Anglophone and Francophone students from Africa studying for doctoral degrees. The training has been critical in building capacity in the various countries represented. All 12 candidates are writing their dissertations on environmental economics projects. They will be critical in teaching and working on environmental economics in their universities and governments upon completion.



Rodney Lunduka, Jesper Stage, Calvin Atewamba and Gunnar Kohlin (front row L-R) were some of the trainers at the workshop Economic Analysis of Adaptation Options to Climate Change

EfD South Africa/Environmental Economics Policy Research Unit (EPRU)

EPRU research fellows teach environmental and resource economics courses in the School of Economics at the University of Cape Town. In addition, the fellows supervise master's, Ph.D. and postdoctoral researchers. By the end of 2012, EPRU research fellows will have produced two Ph.D. candidates and 3 master's degree students.



A student giving her view at Kerri Bricks field experiment on flood adaption strategies

EfD Tanzania

EfDT continues to provide support for young researchers studying environmental and poverty related issues. Most of the students need more scientific skills in analysing data. Thus, EfDT in collaboration with the Environment Economics Unit of Gothenburg University conducted a Panel Data Econometrics Training Course to provide a fairly detailed introduction to the micro-econometric models often used to analyze panel data in applied economic research. The course focused on applications rather than proofs and derivations of the alternative estimators. The models presented both matrix approach and the approach without matrix notations. The participants to this course were graduate students, interested faculty members of the Economics Department, and applied researchers from other departments and institutions.



Mkruma Hall in University of Dar es Salaam. In this unique building, students enjoy the clean air from the tall trees surrounding the university campus as a favorable place for studies.

COURSES TAUGHT AT EFD

Central America

Undergraduate courses

Introduction to Impact Evaluation, EARTH University

Graduate courses

Public Economics I, University of Costa Rica
Public Economics II, University of Costa Rica
Quantitative Methods, Graduate School CATIE Graduate School, CATIE
Environmental Economics and Ecotourism. Interdisciplinary Master in Environmental Management and Recreation, University of Costa Rica.
Environmental Policy for a Changing World, Graduate School CATIE Graduate School, CATIE

China

Undergraduate courses

Econometrics
Intermediate Microeconomics
Environmental Economics
Economics Principles
Public Policy

Graduate courses

Advanced Resource Economics
Environmental Economics
Methods in Economic Analysis
Risk Analysis and Management

Ethiopia

Undergraduate courses

Natural resource and environmental economics

Graduate courses

Natural Resource Economics
Environmental Valuation and Policy

Kenya

Undergraduate courses

Resource Economics
Environmental Economics

Graduate courses

Resource Economics
Environmental Economics
Environmental Valuation and Policy
Research methodology

South Africa

Undergraduate courses

Environmental economics (Honours courses)

Graduate courses

Natural resource economics (Master courses)
Environmental and resource economics module (Master courses)
Natural resource economics (Ph.D. courses)

Tanzania

Undergraduate courses

Environmental and Resources Economics

Master courses

Environment Economics I
Environmental Economics II

PHD PROGRAM IN CLIMATE ECONOMICS STARTED AT THE UNIVERSITY OF GOTHENBURG

The Environmental Economics Unit (EEU) at the University of Gothenburg offers a PhD program in Climate Economics which is intended to build analytic capacity in the area of climate economics in developing countries. This program is a continuation of the former Sida supported program but with a greater focus on climate change as the prime environmental problem of our time. The PhD program is intended as a first step towards a more ambitious capacity building program in Climate Economics, spanning all Efd centers, and beyond.

The program had its first admission in September 2012, and seven PhD candidates where recruited from Bangladesh, China, Costa Rica, Ethiopia, India, Kenya and Tanzania.

The program builds on the past experiences of the PhD program in Environmental Economics. As before, the program includes one year of general economics courses, followed by one year of specialization courses and two and a half years of data collection and thesis writing. The new program is, however, even more ambitious with regards to the number of specialization courses. The program will now offer six specialization courses. In the fall of 2013 there will be two, integrated, courses on Environmental Valuation and Behavioral Economics. This

will be followed by a full Spring semester 2014 with courses on Climate Modeling, Natural Resource Economics and Climate Change Adaptation, Policy Instruments for Environmental and Climate Economics and finally a course on Micro Development Economics with applications on Adaptation to Climate Change.

The objective of the program is to strengthen capacity in developing countries, and in particular the capacity to teach environmental and climate economics at university level and to establish a firm basis for research that can be used for policy advice.

This program leads to a PhD in economics – but it does more than that. We believe that climate, as many environmental issues, requires a proper grounding and collaboration with other disciplines and we will work in close collaboration with Physical Resource Theory at Chalmers Technical university and the International Beijer Institute of Ecological Economics to give students a deep understanding of climate and energy issues from the viewpoint of the relevant natural science and technical aspects. The PhD candidates will also receive dedicated training in policy interaction from the Environmental Economics Helpdesk.



1 year PhD students on balcony

SIX EFD CENTERS

CENTRAL AMERICA
MESSAGE FROM OUR CENTER DIRECTORS

For us at EfD Central America, the last five years have been amazing: exciting, challenging, and very successful. In this year’s report, allow us to take a look back at the main achievements of the past five years, and reflect on our strategy for the upcoming years.

With the establishment in 2007 of the Environment for Development Research Program for Central America, the practice of economics at CATIE took a sharp turn, moving away from a reactive, short term approach that was heavily dependent on short courses and consultancies. Instead, we adopted a long term perspective, centered on the research capacity of our staff.

Five years later, our main achievement has been the consolidation of a dynamic research team, successful in terms of publications and research funding, and with strong international recognition. Moreover, our team has enough resilience to meet the challenge of recruiting young researchers and preparing them to go out and pursue doctoral studies. In total, six members of our team have entered doctoral economics programs in top universities in Europe and the USA. They all remained linked to our program, and two of them have now returned to work with us, assuming leading roles in research and project management. Another key element in securing a critical mass of researchers has been our visiting scholar program, which has attracted top notch researchers to our offices. Those colleagues remain linked through research and capacity building long after their stay with us. Our strategy for the future is to continue to grow in terms of research projects, in order to provide a suitable landing platform for the capacity we have helped create. Keeping our former colleagues closely linked to our program —both those pursuing doctoral studies and also se-

nior scholars who spend their sabbatical with us—is a key element of our strategy.

Our second major achievement is closely related to the previous one: our funding strategy rests, daringly, almost entirely on sources that support research and capacity building. We have attracted the attention and interest of research funding institutions, and have competed successfully for funds from foundations (e.g. the Tinker Foundation and 3ei), multilateral agencies (e.g. the World Bank and the Inter-Development Bank), and bilateral donors (e.g. Sida and International Development Research Center, or “DRC”). Currently, our research portfolio is better funded and more stable, with a longer term perspective, than it was five years ago. Especially important, it is much more diversified. Additionally, we have secured continued funding to the Latin American and Caribbean Environmental Economics Program (LACEEP). This program has earned a great reputation in Latin America and worldwide, and has positioned CATIE as a point of reference on the subject of environmental economics. The synergies between our own research activities and LACEEP are enormous.

Our third achievement comes from our interaction with partners and associates. Our efforts make sense only to the extent that research is designed for a particular decision maker, in response to a major problem for the region. We cannot assume that decision makers are passive agents awaiting our results. Their special knowledge should be incorporated into our research design, as they are both facilitators and recipients of information generated by research. In recent years, we have managed to build learning partnerships with decision makers that have improved our research agenda on issues such as protected area management, ecosystem services, public policy analy-

sis, impact evaluation, and water management, to name a few central areas of our work.

The challenge for the future is to maintain an upward trend in terms of research capacity, with a diversified portfolio of funding sources, always in close collaboration with the relevant decision makers. As new topics emerge (climate change and water, and management of marine ecosystems, to name the two latest), the need to secure technical capacity, funding and policy contacts to strategically approach these topics constantly creates new challenges to our program. We look to the future full of confidence and a great feeling of adventure.

We thank all of you —funding partners, policy makers, colleagues everywhere— for trusting us and for being part of this fantastic journey.

Francisco Alpizar María A. Naranjo
Director Deputy Director



María A. Naranjo, Deputy Director, and Francisco Alpizar Director

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NETWORKS

EfD-CA, together with other initiatives within the Research Program in Economics and Environment for Development in Central America at CATIE, 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 up 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. EfD-CA staff will continue to collaborate with the Latin American and Caribbean Environmental Economics Program (LACEEP).

Our network with government agencies and universities is strengthening and continues to grow. 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. We maintain our strong collaboration with Alexander Pfaff from the Sanford School of Public Policy at Duke University, which is working with EfD-CA on evaluation of impacts on 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. In addition, we are about to begin a new project with IDRC on climate change, communities and water, which will include work with guest researcher Paul Ferraro from Georgia State University.

The work on protected areas in Costa Rica continues to tackle issues of 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; performance based payments for protecting turtles; and marine conservation policies and artisanal fishing. This is done in collaboration with the National System of Protected Areas (SINAC), the Forever Costa Rica Association, the National Meteorological Institute, and the newly created office of the Vice-Minister for Water and Seas.

DONORS AND FUNDING

EfD Central America/Research Program in Economics and Environment for Development in Central America offers an attractive opportunity for institutions providing financial support for research and partners interested in our activities and innovative programmatic agenda.

We are grateful for the trust and support provided by donors and partners during 2012:

- Latin American and Caribbean Environmental Economics Program (LACEEP)
- The Tinker Foundation
- International Development Research Centre (IDRC)
- Conservation International
- Other sources of funding include The Nature Conservancy, FONAFIFO, Inter-American Development Bank, and others.
- Swedish International Development Cooperation Agency (Sida) through the EfD Initiative

Number of donors		5
List of Donors		Funding by donor during 2012
1)	LACEEP (SIDA and IDRC)	18.8%
2)	Tinker Foundation	4.7%
3)	IDRC (Water and climate change project)	11.3%
4)	Conservation International	2.0%
5)	Other via EfD	30.1%
Sida/EfD funding as share of total center budget (incl. univ. salaries)		33.3 %

List of donors EfD Center Central America

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SIX EFD CENTERS

CHINA
MESSAGE FROM OUR CENTER DIRECTOR

In China, many economic analyses point to the fact that policies for environmental protection, such as pollution control and emission reduction, have been undercut by over-emphasis on economic development goals at the local level. On the natural resources side economic opportunity has been very much limited by fast expansion of government sponsored ecological programs. Examples of failures of government programs dealing with poverty reduction are abundant in the natural resource sector in particular, while the government is realizing the importance of sustainable development and paying more attention to it. The Chinese government, in its newly promulgated Guideline of the “Twelfth Five-Year Plan (2011-2015),” has addressed its strong determination and emphasis on clean, green technology and sustainable development, and ranked as No.1 in clean energy investment globally, and will likely take the lead in the Green Race while maintaining a stable economic growth rate at 8 percent in the coming years.

The Environmental Economics Program in China (EEPC) is a research program focusing on applied policy research. In particular, it attempts to identify the areas of climate and environmental policy improvement and address the policy needs in conducting social and economic assessment of ongoing public programs. In recent years, most of the EEPC work focused on forest policy and reforming of the state forest sector and collective tenure system. These two themes have been of top priority on central government’s agenda and have merged into the broader national agenda of establishing a new countryside. EEPC’s other research arenas include water pricing policies, carbon sequestration monitoring, air

pollution control and urban transportation, industrial enterprise behavior in pollution, etc. EEPC’s research has provided academia and the government agencies the most comprehensive information with regard to baseline situations in both state and collective forest sectors. It has been widely acknowledged that a lack of appropriate mechanisms and incentives in the state forest sector underpins more severe poverty in forested areas and unsatisfactory performance of forest resource conservation. Forest tenure reform policies were launched in more than 20 Chinese provinces in 2012. Policy recommendations made by EEPC researchers are influential during the reform process of China’s forest sectors.

During 2012, EEPC has conducted rigorous analyses on data from the two rounds of surveys on China’s collective forest sector, which were finished in 2006/2007 and 2011. They also organized a study tour in the US for a senior delegation of the Chinese Society of Forest Economics, which was designed to enrich their understanding of the management of national forests with multiple goals. In May 2012 a workshop was held in the Beijing World Bank Office and summarized the findings for the central government.

During 2012, a total of nine peer-reviewed publications were published in international journals. The main research themes of these publications were land use, natural resource management, energy use models and taxation, behavioral studies in household decision making, and valuing the health risk of polluting behaviors.

EEPC has devoted itself to graduate and undergraduate courses on environmental and natural resource economics at Peking University, and collaborated with international universities and institutions such as Resources for the Future, University of California, Berkeley, and University of Gothenburg. As of 2012, EEPC has six faculty members including two professors and three assistant professors at Peking University and one associate professor at Renmin University.

Jintao Xu
Director



Professor Jintao Xu, Director

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- Dr. Gunnar Köhlin
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NETWORKS

EEPC has close collaborations with a broad range of internal and international research networks, including the National Natural Science Foundation of China (NSFC) and our brother research institutes and universities such as the Chinese Academy of Social Sciences (for example, the Rural Development Institute, <http://rdi.cass.cn>), the Chinese Academy of Sciences (for example, the Center for Chinese Agricultural Policy, [www.ccap.org.cn](http://ccap.org.cn)), the Chinese Academy of Agricultural Sciences (for example, the Institute of Environment and Sustainable Development in Agriculture, [www.ieda.org.cn](http://ieda.org.cn)), the Chinese Academy of Forestry Sciences (for example, the Research Institute on Forestry Policy and Information, [www.lyzc.org.cn/kxs.htm](http://lyzc.org.cn/kxs.htm)), Tsinghua University (www.tsinghua.edu.cn), City University of Hong Kong (www.cityu.edu.hk), Renmin University of China (www.ruc.edu.cn), Beijing Forestry University (www.bjfu.edu.cn), Beijing Normal University (www.bnu.edu.cn), the National School of Development (the former China Center for Economic Research of Peking University, www.nsd.edu.cn), the Center for Economic and Development Research of the State Forest Administration, the Beijing Transportation Research Center, and so on.

Internationally, EEPC’s research network embraces the entire EfD family, the World Bank, the Ford Foundation, the Rights and Resources Initiative, Forest Trend in the US, the International Institute for Environment and Development (IIED), UNEP, UNDP, EEPSEA (IDRC), the Environmental Defense Fund, and universities such as the University of California, Berkeley, the Norwegian University of Life Sciences, the University of Gothenburg, Pacific Lutheran University, the University of Rhode Island, and so on.

DONORS AND FUNDING

During 2012, EEPC received both financial and organizational support from the EfD Initiative, the World Bank, the State Forest Administration of China, and the Ministry of Environmental Protection (MEP).

During the six years since the founding of EEPC, we have also received extensive support from the Ford Foundation, Forest Trend, the Rights and Resources Group, the International Institute for Environment and Development (IIED), the International Development Research Center (IDRC), the National Natural Sciences Foundation of China (NSFC), and others.

Number of donors		4
List of Donors		Funding by donor during 2012
1)	Environmental Development Centre of Ministry of Environmental Protection	100,000
2)	State Forestry Administration, P.R. China	210,000
3)	EFD	758,497
4)	World Bank	126,786
Sida/EfD funding as share of total center budget (incl. univ. salaries)		63 %

List of donors EfD Center China

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SIX EFD CENTERS

ETHIOPIA
MESSAGE FROM OUR CENTER DIRECTOR

The Environmental Economics Policy Forum for Ethiopia (EEPFE), based at the Ethiopian Development Research Institute (EDRI), is one of six EfD (Environment for Development).

These centers are coordinated through the Environmental Economics Unit at the University of Gothenburg in Sweden (where the EfD secretariat is based) with Resources for the Future as a partner involved in research and publication of discussion paper and book series. EEPFE has the main objective of supporting sustainable development and poverty reduction through increased use of environmental economics in policy-making processes in Ethiopia. The Forum works to achieve these goals through rigorous policy-relevant research, policy interaction, and capacity building.

In 2012, EEPFE built on its previous achievements in research, policy, and capacity building. It conducted research on natural resource scarcity and household welfare in rural Ethiopia, common pool resource management and forest status, determinants of agro-forestry practices in Ethiopia, and profitability and economy-wide effects of biofuel investments (with focus on effects on greenhouse gas emissions and forests). The Forum organized three workshops (on biofuels, climate change, and community forests and climate change),

which were attended by a wide variety of people from federal and regional government offices, NGOs, donors, embassies, universities, and research institutes.

This year, EEPFE also organized a workshop to disseminate its work and to receive feedback on research and training areas. The training and research areas identified during this workshop are the basis for research proposals prepared for the Forum's work in 2013. EEPFE also provided in-service training to selected experts from federal and regional government offices. The Forum also organized an international workshop on collaborative research on energy in 2012.

In terms of fund raising, the Forum has begun involvement in a research project financed by the World Bank, work that will continue into 2013 and beyond. The Forum is also in the process of negotiating co-funding and collaborative research with the Ministry of Water and Energy of Ethiopia.

The Forum's work in particular, and that of EfD in general, was introduced to participants at international and national conferences and workshops held in Ethiopia, and at exhibitions and display sections where EEPFE staff participated.

As before, the Forum plans to continue its work on research, policy interaction, and

capacity building over the coming years based on its experiences and achievements in the past. Details of the Forum's work during 2012 (presented in this report for 2012) as well as other information about the Forum can be found at www.efdinitiative.org/centers/ethiopia.

Alemu Mekonnen
Director

Alemu Mekonnen, Director



EFD Ethiopia/EEPFE Staff from left Zenebe Gebreegziabher, Samuel Abera, Rahel Deribe, Abebe Damte, Alemu Mekonnen, Tadele Ferede, Fantu Guta, Tsehay Atakit, and Zelealem Gebremedhin

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DEPARTMENT OF ECONOMICS, UNIVERSITY OF GOTHENBURG
- Professor Erwin Hendricus Bulte**
TILBURG UNIVERSITY, THE NETHERLANDS
- Professor Jesper Stage**
DEPARTMENT OF ECONOMICS, UNIVERSITY OF GOTHENBURG AND MID-SWEDEN UNIVERSITY
- PhD. Menale Kassie**
CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH (CGIAR), KENYA
- Professor Peter Martinsson**
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DEPARTMENT OF ECONOMICS, UNIVERSITY OF GOTHENBURG
- Ph.D. Dambala Gelo**
UNIVERSITY OF PRETORIA, SOUTH AFRICA

NETWORKS

To achieve its goal, EEPFE is working with different governmental and non-governmental organizations, including the Ministry of Agriculture (MOA), Environmental Protection Authority (EPA), Ministry of Water and Energy (MWE), African Climate Policy Center (ACPC), Forum for Environment (FfE), Climate Change Forum for Ethiopia, Sustainable Land Use Forum (SLUF), and the International Food Policy Research Institute (IFPRI).

DONORS AND FUNDING

Sida is the main funding agency for the EFD initiative. In 2012, additional funding was acquired for the research project on "Impact of Bio-fuel Investment on growth and poverty reduction in Ethiopia: Computable General Equilibrium Analysis" from Formas.

Number of donors 2

List of Donors	Funding by donor during 2012
SIDA	94 %
Formas	6 %
Sida/EfD funding as share of total center budget (incl. univ. salaries)	94 %
List of donors EFD Ethiopia	

CONTACT US

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SIX EFD CENTERS

KENYA MESSAGE FROM OUR CENTER DIRECTORS

It is my pleasure to present to you the 2012 EfD-Kenya annual report. In this report, I will provide an update of some of the things we have “enjoyed” during the year. The year marked the first time that we operated in a university environment and a time that will see the EfD family embark on new directions and test new waters. Among the highlights of the past year is our shift from KIPPRA offices to the University of Nairobi-School of Economics.

I am particularly excited to be involved in the transition as our host, the University of Nairobi, takes the centre stage in providing leadership in tackling serious policy challenges facing Kenya. As a country, we need to tackle growing concerns about unsustainable development of natural resources, disastrous impact of climate change, food security, and other concerns. These issues demonstrate the need to provide an evidence base for economic policy decisions. The essential requirements remain: sound economic research and competent researchers to achieve a permanent reduction in poverty and to bring shared prosperity to all Kenyans.

During the reporting year, and due to the protracted transition process, the program engaged in few research and policy related activities. Notable activities for the year include: hosting the workshop on Economic Analysis of Adaptation Options to Climate Change, held at Maanzoni in Machakos District. Around the world, many governments have started crafting adaptation plans and policies to respond to climate change. However, many are still struggling to understand which policies and approaches are required to prepare effectively for an uncertain and potentially dangerous climate future. Since many governments are launching an endeavour that will continue for many decades, they are grappling with many questions. The workshop

under the auspices of the African Adaptation Research Centres (AARC) initiative, with funding from IDRC Canada, brought together several participants from Anglophone and Francophone Africa for a three day workshop to answer some of these questions. A number of EfD-K staff from the School of Economics and those from Gothenburg University attended the workshop.

In a similar vein, EfD-K staff led a team of researchers conducting an assessment of Green Economy Scoping Study for the Ministry of Environment and Mineral Resources and the United Nations Environment Programme (UNEP). The assessment included a diverse set of stakeholders, with consultation taking place in various parts of the country throughout the assessment period. This culminated in a multi-stakeholder meeting in preparation for the RIO 20+ meeting in June 2012.

On the research front, a number of research projects were approved in the following areas: Climate Change, Food Security and Vulnerability; Energy Choice and Pricing; and Water Sector Reforms in Rural Kenya. Following from this effort, the first half of 2013 will be a period of receiving feedback and preparation of discussion papers. We will be setting up several research meetings in the late spring to discuss these projects.

The research project between EfD-K and Re-saKSS, initiated in the previous year, was also completed in 2012, with its focus on reviewing all studies done in the region on climate change and food security and identifying the potential gaps and areas for further research. This work forms the basis of our policy interaction report this year. We also engaged with the United Nations Economic Commission for Africa (UNECA) in a research activity focusing on

assessing the agricultural sector policies and climate change in Kenya: the nexus between climate change-related policies, research and practice. The year also saw the completion of the Action Plan for the National Climate Change Response Strategy (NCCRS).

With regard to staff, the Centre lost its program officer, Mr. Geophrey Sikei, to Land O Lakes Inc., although he continues to serve EfD-K on a voluntary basis. His position has been taken up by Ms. Maimuna Kabatesi, who brings a wealth of experience and youthfulness into the centre.

We hope that you will find this report comprehensible, informative and interesting. Your feedback regarding the information contained here will be highly appreciated. Enjoy your reading.

Wilfred Nyangena, Ph.D.
Coordinator, EfD-Kenya.



Wilfred Nyangena, Coordinator



Maimuna Kabatesi

Geophrey Sikei

Peter Kimuyu

Jane Mariara

Moses Ikiara

Local researchers and staff

Ph.D. Wilfred Nyangena

COORDINATOR AND RESEARCH FELLOW

MSc. Geophrey Sikei

JUNIOR RESEARCH FELLOW/ PROGRAM ASSISTANT

MA. Maimuna Kabatesi

PROGRAM ASSISTANT/ASSISTANT ANALYST

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INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE (ILRI)

Ph.D. Candidate, Maurice Ogada -

INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE (ILRI)

Ph.D. Candidate, John Mutua,

UNIVERSITY OF NAIROBI AND ENERGY REGULATORY COMMISSION OF KENYA

Ph.D. James Njogu

KENYA WILDLIFE SERVICES (KWS)

Ph.D. John Omiti

KIPPRA

Ph.D. Richard Mulwa

DEPARTMENT OF AGRICULTURE ECONOMICS, UNIVERSITY OF NAIROBI

Ph.D. Joseph Onjala

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Ph.D. Candidate, Fred Owegi

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Ph.D. Peter Kimuyu

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SCHOOL OF ECONOMICS, UNIVERSITY OF NAIROBI

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CIMMYT, NAIROBI

Ph.D. Kofi Vondolia

UNEP, NAIROBI

NETWORKS

In order to effectively make an impact in its mandate, EfD-K has developed good working relationships with other regional and national research and policy oriented organizations in the country. It has gained considerable trust and credibility with both public and private institutions. It has a strong working relationship with reputable institutions in the country. These include National Environment Management Authority (NEMA), Kenya Institute for Public Policy Research and Analysis (KIPPRA), United Nations Environment Programme (UNEP), ICRAF, World Wildlife Fund (WWF), Kenya Wildlife Service (KWS), the CGIAR centers (ILRI, CIMMYT), United Nations Economic Commission for Africa (UNECA), Ministry of Environment and Mineral Resources (MEMR), Ministry of Finance, and Office of the Prime Minister, among others.

DONORS AND FUNDING

EfD Kenya is mainly supported by the Swedish International Development Cooperation Agency (Sida).

CONTACT US

You are most welcome to contact the EfD Kenya center and the Kenya Institute for Public Policy Research and Analysis (KIPPRA)

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SIX EFD CENTERS

SOUTH AFRICA
MESSAGE FROM OUR CENTER DIRECTORS

Over the past four years, EPRU has striven to produce policy-relevant research in areas important to South Africa: community-based wildlife conservation and poverty mitigation, climate change, coastal management, fisheries, and sustainable and responsible investment. Our close collaboration with the South African National Biodiversity Institute, the Department of Agriculture, Forestry and Fisheries, the Water Research Commission, and the City of Cape Town are a few illustrations of our commitment.

In 2012, EPRU was again jointly coordinated by the Director (Mare Sarr) and Research Convenor (Jane Turpie). We continued to meet off-campus on a quarterly basis to discuss our research ideas and outputs, thrash out research problems, and discuss policy interaction issues. These interactions have been important in strengthening the group and improving research. While endeavouring to develop and improve

its policy interaction strategy EPRU has also been working hard toward diversifying its funding sources. In particular, the group made great strides during 2012 in becoming actively involved in two multidisciplinary groups that have recently formed at the University of Cape Town: the African Climate Change Development Initiative and Aquad'UCT (dealing with water issues), which will bring many opportunities for collaborative and policy-relevant research.

EPRU is raising its research profile by turning important policy-relevant research into high-quality academic papers. In the course of the year, EPRU fellows have published 14 articles in leading international and local peer-reviewed journals, as well as seven discussion papers. Two of our Senior Research Fellows, Edwin Muchapondwa and Martine Visser, together with their Ph.D. students have been particularly productive this year and deserve to be commended and emulated. It is also a pleasure for

me to congratulate five of our Junior Research Fellows who secured prestigious two-year scholarships funded by the Carnegie Foundation. In January 2012, we welcomed Anthony Black as a new Senior Research Fellow.

Finally, on behalf of all EPRU members, we would like to thank Sida for its continued support. Our thanks extend to the coordination team of the Efd Initiative for helping us build what we hope will soon become a centre of excellence in the area of natural resource management in southern Africa.

Anthony Leiman & Jane Turpie
Director Deputy Director



Anthony Leiman, Director



Jane Turpie Deputy Director

Local Researchers and Staff

- Anthony Leiman
DIRECTOR
- Jane Turpie
DEPUTY DIRECTOR
- Anthony Black
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- Edwin Muchapondwa
SENIOR RESEARCH FELLOW
- Mare Sarr
SENIOR RESEARCH FELLOW
- Martine Visser
SENIOR RESEARCH FELLOW
- Sunday Adewara
JUNIOR RESEARCH FELLOW
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- Johane Dikgang
JUNIOR RESEARCH FELLOW
- Reviva Hasson
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JUNIOR RESEARCH FELLOW
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- Harald Winkler
- Andrew Marquard

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- Åsa Löfgren
- Gunnar Köhlin
- Wisdom Akpalu
- Mintewab Bezabih
- Andrea Mannberg



Efd South Africa Center Staff 2012

NETWORKS

EPRU has successfully worked with a number of local and national stakeholders on medium-sized projects, such as the South African National Parks in the wildlife sector, the Department of Water Affairs and Forestry in the water sector, the Department of Environmental Affairs and Tourism on marine and coastal management, and the City of Cape Town on air quality management and energy savings. In the next few years, EPRU plans to bid for larger research projects that will enhance collaboration among EPRU research fellows, with other researchers and, importantly, with key stakeholders.

DONORS AND FUNDING

In 2012, EPRU received funding from the School of Economics (University of Cape Town), the Swedish International Development Cooperation Agency (Sida), the Carnegie Foundation, the Fiscal and Financial Commission, Formas and CEEPA.

Number of funding institutions	6	
List of funding institutions	Funding in ZAR	Share of total funding
UCT School of Economics (University Salaries)	3 141 120.00	45.8%
Efd	2 160 122.00	31.5%
Carnegie Scholarship (UCT School of Economics)	840 000.00	12.3%
Fiscal and Financial Commission	500 000.00	7.3%
Formas	169 835.00	2.5%
6) CEEPA	40 000.00	0.6%
TOTAL	6 851 077.00	100.0%

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SIX EFD CENTERS

TANZANIA
MESSAGE FROM OUR CENTER DIRECTOR

Tanzania has recently discovered huge deposits of natural gas, both offshore and inshore. The country is therefore geared to the energy economy. At this time, more than ever before, we need to take a leading role in policy advice and dissemination activities on the best way of making use of these and other natural resources for the livelihood of the rural community. As academicians and researchers, we need to be more conscious of the task at hand to protect our environment and the economy. The health of Tanzanian society going forward depends upon the country's ability to care for the environment and all that live in it, to provide resources and opportunities for all members to work and make meaningful contributions, to resolve biodiversity degradation and deforestation, and to reduce poverty and inequalities. It is important that the country's resources are properly exploited and managed so that the country can outgrow its dependence on fossil fuel resources and diversify its economic activity. An important challenge to policy makers is to find ways to do this. If natural resource revenue is managed well, it can educate, heal, and provide jobs for the people. To accomplish these goals, we at EfDT, in collaboration with other researchers, need to take a leading role in research and policy advice

Many organizations, agencies, and research centers are in the process of addressing these challenges, and we are pleased to be working closely with a number of experts and researchers from all segments. The task of preparing environmental economists and researchers to perform proficient research within these various settings is a responsibility that we take seriously and fully embrace at EfDT.

Through the Department of Economics, we have developed viable curricular programs that provide insights into a wide range of professional settings where researchers and other experts are doing important work. By providing better information about the ways that economics and environmental skills are employed in various settings, we help our graduate and junior researchers make decisions with greater confidence regarding their own career choices and pursuits. This is beneficial to the individual junior researcher, valuable to the organizations that employ them, and, in an overall sense, helpful to society for the way it assures the reduction of poverty with study that is meaningful, sustaining, and necessary.

Finally, I would like reiterate my earlier call for more collaboration from local and international donors to join the center's effort in building

capacity in the areas of research in environment and natural resources economics, as well as poverty and policy. We look forward to working with you, whether as collaborator, partner, consultant, or associate in prospective research and capacity building. Please make use of the many resources and the expertise of the EfDT initiative to develop new collaborative research on themes that align the reduction of poverty with a healthy environment for better livelihoods.

Razack B. Lokina (PhD).
Director EfD Tanzania



Razack B. Lokina, Director

Local Researchers and Staff

- Razack Bakari Lokina (PhD)**
SENIOR LECTURER, DIRECTOR AND SENIOR RESEARCH FELLOW
- John K. Mduma (PhD)**
SENIOR LECTURER AND SENIOR RESEARCH FELLOW
- Adolf Faustine Mkenda (PhD)**
SENIOR LECTURER AND SENIOR RESEARCH FELLOW
- Aloyce Hepelwa (PhD)**
LECTURER AND SENIOR RESEARCH FELLOW
- Wilhelm Ngasamiaku**
ASSISTANT LECTURER AND RESEARCH FELLOW (PHD STUDENT).
- Onesmo Selejio**
ASSISTANT LECTURER AND RESEARCH FELLOW (PHD STUDENT).
- Salvatory Macha**
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ASSISTANT LECTURER AND RESEARCH FELLOW (PHD STUDENT)
Amosi Mutanaga
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Associate Professor

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- Associate Professor Håkan Eggert**
DEPARTMENT OF ECONOMICS, UNIVERSITY OF GOTHENBURG

NETWORKS

The EfD Tanzania center has been working with the international agencies, government departments, and nongovernmental organizations on policy issues. Our closest association is with the Environment Division of the Vice President's Office. This is the unit that is responsible for coordinating environmental management for the improvement of the welfare of Tanzanians. <http://www.vpo.go.tz/>

EfDT researches works with IFPRI to seek sustainable solutions for ending hunger and poverty. We also work together to understand the economics of land degradation. Recently the discussion paper titled "The Supply of Inorganic Fertilizers to Smallholder Farmers in Tanzania, Evidence for Fertilizer Policy Development" was published, <http://www.ifpri.org/>

The center has drawn the policy board member from the following ministries: Minister for Finance Ministry of natural Resources and Tourism, and the National Environment Management Council (NEMC) these governmental sectors are important for networking especially in the question of prioritising the research themes.

The center continues to work with The Tanzania Forest Conservation Group (TFCG) and the Institute of Resource Assessments and has formed a REDD task force that collaborate with the center on some issues.

DONORS AND FUNDING

We sincerely thank the Swedish International Development Cooperation Agency (Sida), through the EfD initiative based at the Unit of Environmental Economics at Gothenburg University, for their continuing core support. We also thank the University of Dar es Salaam and the Department of Economics, in particular in the area of office space and facilities. We further extend appreciation to UNEP, to the President's Office - Planning Commission, and to the Ministry of Finance - Poverty Eradication Division, for the support of center activities.

EfD Tanzania welcome donors and partners interested in supporting our center activities, especially on the issues related to environmental economics and poverty, as well as supporting training and policy workshops

Number of donors 4

List of Donors	Funding by Donor during 2012
1) University of Dar es Salaam	4%
2) UNEP/President Office – Planning Commission (PO-PC)	30%
3) Ministry of Finance Poverty Eradication Division	2%
4) Sida/EfD funding as share of total center budget (incl. univ. salaries)	64%

List of donors EfD Tanzania

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Miguel Quiroga, Carlos Chávez and Jorge Dresdner at Universidad de Concepción.

NEW PARTNER 2012 — UNIVERSIDAD DE CONCEPCIÓN

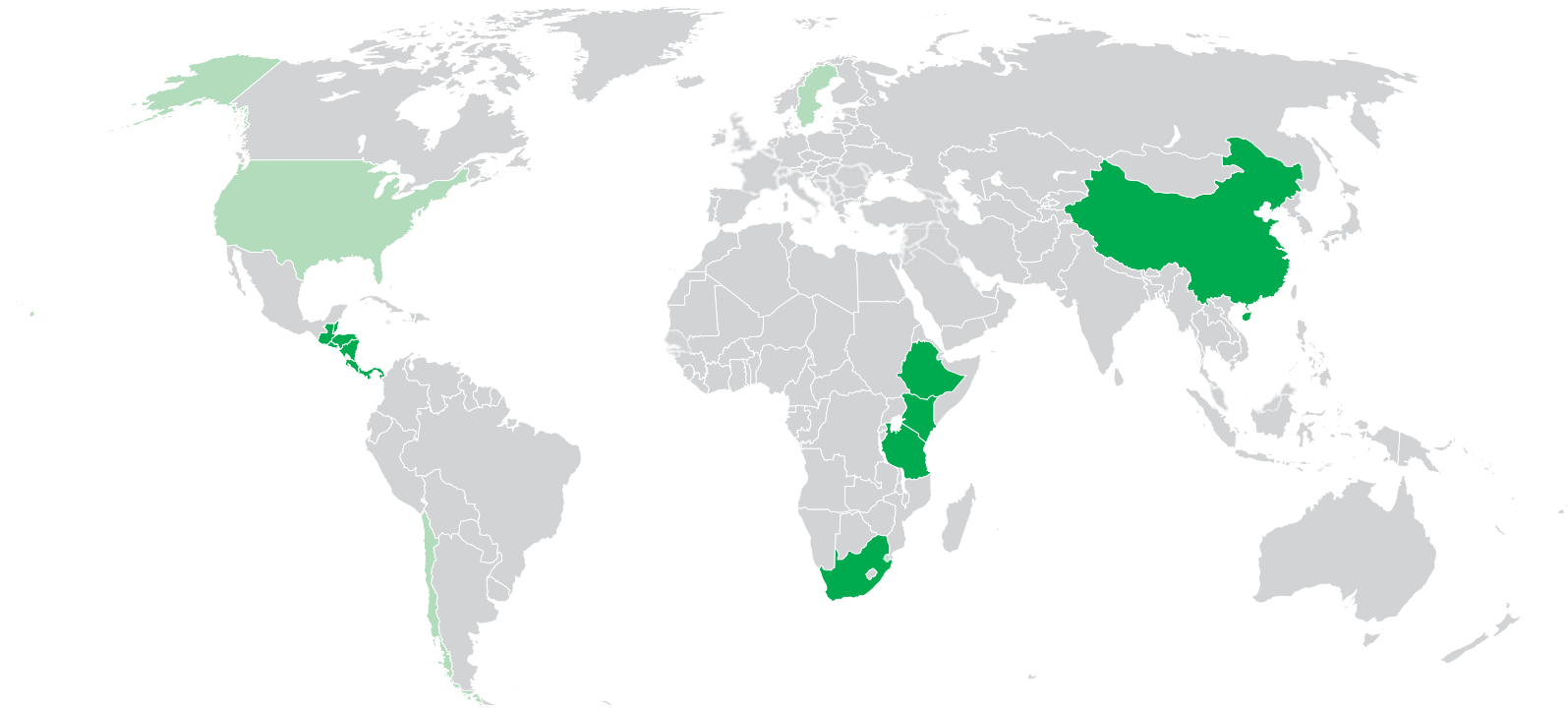
"We are proud to become partners of the EfD family, and plan to work hard to increase and improve our research efforts in partnerships with the EfD Centers. On behalf of my colleagues, who collaborate as researchers in our Nucleus, I would like to thank the EfD Coordination Committee for accepting us an EfD partner, says Carlos Chavez, Director of the Research Nucleus on Environmental and Natural Resource Economics (NENRE), Department of Economics, University of Concepcion.

The Research Nucleus on Environmental and Natural Resource Economics – Universidad de Concepción, is a research group supported by the Millennium Social Sciences Initiative, Ministry of Economics, Promotion and Tourism,

Government of Chile. It is a unique small core of seven researchers. The research group's aim is to conduct research to produce high quality scientific knowledge to help shape sound policies to protect the environment and achieve a sustainable use of natural resources. NENRE conduct theoretical and empirical research primarily motivated by policy relevant problems/questions and has 20 years of experience to share as providers of graduate level training to Latin American students. NENRE has a network of more than 70 international students graduated from the Master Program are all around the world and we actively collaborate with colleagues based in other Universities and research centers in Latin America, USA and Europe, says Carlos Chavez.

"We are very happy to include Concepcion as an EfD partner. Concepcion has a very strong group of environmental economists and the best graduate program in environmental and resource economics in Latin America. We are excited about the prospects of synergies between the Concepcion Nucleus and our EfD centers," says Gunnar Köhlin.

Organizations that have active collaboration with EfD can become partners to EfD. A partnership is a platform to establish closer working relationships with other EfD partners. In the future, partnership can be used as a first step towards membership.



EFD COORDINATION COMMITTEE

A coordination committee is in place to oversee the overall planning and organization of the EfD initiative. It consists of the Directors/Coordinators from all six centers, the EfD Director and the Chair of the EfD Research Review Committee. Also the Research officer, the Communication officer and the Program officer are attending the meeting, but have no vote. The Coordination Committee convenes twice a year, during the EfD Annual Meeting and the European or World Environmental Economics Congress. During 2012 this meant a meeting in Gothenburg in June and during the annual meeting in Costa Rica in late October. During these meetings issues regarding sustainability and collaborative research were particularly discussed.

EFD RESEARCH COMMITTEE

A research committee is also in place and part of the EfD secretariat. The committee is headed by Professor Thomas Sterner. Also the research officer, Yonas Alem, EfD director, Gunnar Köhlin and the Head of EEU's policy advisors, Anders Ekbohm, are members of the research committee.

The Research officer is coordinating the research review process by screening proposals to verify that they are prepared in accordance with the research project guideline. All screened projects will be sent to external reviewers. The reviewers will evaluate the proposals based on their policy, scientific and technical merits (methods and techniques, innovation; academic significance; policy relevance; and whether outputs are clearly defined and are realistic and attainable in the given time frame). The reviews are compiled by the Research Officer and discussed by the EfD Research Committee that prioritizes the proposals and proposes revisions. The proposals are also discussed at the annual meeting. The overall balance between countries and themes, as well as synergies between centers is discussed by the coordination committee. The Research Committee decides on the final approval of projects to be included in the 2013 plan.

EFD SECRETARIAT

The EfD secretariat is the administrative hub of the EfD centers. The secretariat serves the EfD centers with research, communication, core administrative and financial administrative support and as a networking support to help share experiences between the EfD centers and other relevant actors. The secretariat is

hosted by the Environmental Economics Unit, University of Gothenburg, and comprise of:

Gunnar Köhlin, EfD Director
Yonas Alem, EfD Research Coordinator
Karin Backteman, Communications officer
Karin Jonson, Program Officer
Mona Jönfors and Selma Oliveira, Financial Administrators
Anders Ekbohm, Head of GMV's Environmental Economics and Policy group
Thomas Sterner, Head of the Environmental Economics Unit, University of Gothenburg and Chair of EfD Research Committee

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PUBLICATIONS 2012

PEER REVIEWED

Central America

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RESEARCH PROJECTS 2012/2013

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Central America
Impact evaluation of the Payments for Environmental Services Program on welfare in Costa Rica
EFD Theme: Policy design and Forestry

Understanding the tradeoffs between planned marine conservation policies and artisanal fishing in key coastal areas of Costa Rica
EFD Theme: Policy Design

Performance based payments for protecting turtles: understanding the conditions for its success.
EFD Theme: Parks & Wildlife and Policy Design

Impact of uncertainty and pro-social attitudes on household’s solid waste management decisions: starting from scratch in a LDC
EFD Theme: Policy design

Exploring the potential of safety nets as part of an adaptation to climate change strategy in Central America
EFD Theme: Socioeconomic dimensions of climate change

The role of coastal communities on the management of marine turtles in Central America: The case of Ostional Wildlife Refuge
EFD Theme: Fisheries & Parks and Wildlife

Measuring the effects of flood risk on migration flows: An application for Costa Rica
EFD Theme: Climate change

China
An Experimental Analysis of Auctioning Subsidy for Carbon Emission Reduction: Evidence from China
EFD Theme: Climate Change, Policy Design

China’s Climate Change Policies: Competitiveness and Distributional Effects -- An Ex-post and Ex-Ante Analysis
EFD Theme: Climate Change, Policy Design

A behavior model of transport mode in Beijing
EFD Theme: Policy design

Automobile demand analysis in Beijing
EFD Theme: Policy design

Ethiopia
Profitability and Economy-wide Impact of Biofuel Investments in Ethiopia
EFD Theme: Agriculture

Local Common Property Systems in Ethiopia: An Empirical Analysis of the Link between User Characteristics, Resource Characteristics and Institutional Regime
EFD Theme: Managing the Commons

Natural Resources Degradation and Household Welfare in Rural Ethiopia
EFD Theme: Agriculture

Determinants of Farm Households’ Agro-Forestry Technology Adoption in Ethiopia
EFD Theme: Agriculture and Forestry

On Adaptation to Climate Change and Food Security in Ethiopia
EFD Theme: Responses to climate risk

Common Property Forest Management: Implications for REDD in Ethiopia

EfD Theme: Forestry

Impact of Biofuel Investment on Growth, the External Sector and Poverty Reduction in Ethiopia: CGE Analysis

EfD Theme: Agriculture

Review of local common pool resource management institutions in Ethiopia

EfD Theme: Management of the commons

Kenya Climate Change, Food Security and Vulnerability in Kenya

EfD Theme: Climate Change

Data Collection for Land Use Analysis

EfD Theme: Forestry

Adoption of Solar Energy in Kenya

EfD Theme: Energy

Household Energy Conservation in Kenya

EfD Theme: Energy

Water Sector Reforms in Kenya: the Role of Institutions in Water Resources Management

EfD Theme: Policy Design

South Africa

Assessment of dry-lands ecosystem services on Khomani San communal land and the possible implications

EfD Theme: Parks & Wildlife

Spatial economics of marine and coastal management: the South African recreational line fishery

EfD Theme: Fisheries

Poverty, resource scarcity, and climate variability: constraints to adaptation

EfD Theme: Climate change

Risk and Time Preferences among Western Cape Fruit Farmers

EfD Theme: Agriculture; Policy design

Ambiguity Aversion in the Uptake of New Farming Practices: Experimental Evidence from South Africa

EfD Theme: Responses to Climate Risk

Estimating Optimal Conservation Fees in the Presence of Land Restitution in the Kgalagadi Transfrontier Park between Botswana and South Africa

EfD Theme: Parks & Wildlife.

Value of protection and management of the South African coast

EfD Theme: Parks and wildlife

Evaluation of Dry-lands Ecosystem Services in the area surrounding the Kgalagadi Transfrontier Park in South Africa

EfD Theme: Parks & Wildlife.

Tanzania

The Impact of Fertilizer on Cereal Crops Production and Land Conservation in Tanzania

EfD Theme: Agriculture

Effects of Deforestation on household Time Allocation among the Rural Agricultural Activities: Evidence from Central and Southern Tanzania

EfD Theme: Agriculture, Forestry and Climate changes

Group decisions over the allocation of REDD payments: A natural experiment from Tanzania

EfD Theme: Forestry, Climate Change, Policy Design

Investments, labor market participation and participatory forest management in Tanzania

EfD Theme: Common Property Resource Management and enforcement

Improving the potential for successful implementation of REDD in Tanzania

EfD Theme: Forestry and Common Property Resource Management

Assessing Tanzania's Marine protected areas: Incentives, opportunities and constraints

EfD Theme: Marine Resource and Forestry

The Vulnerability of Households Welfare to Shocks in Tanzania

Theme: Climate Change/Policy design

PI: Adolf F. Mkenda

Land Conservation Technologies Adoption and its Impact on Smallholder Agriculture in Tanzania: A case study of REDD Implementing Areas

Theme: Agriculture

PI:John Mduma

Sustainable financing options of the climate change and climate variability adaptation measures by rural smallholder farmers in Tanzania

Theme: Agriculture and climate Change

PI:Aloyce Hepelwa

EfD CENTERS AND PARTNERS

There are six EfD centers, hosted by universities or academic institutions in each respective country.

For more information on each center, please contact the Center Director/Coordinator:

EfD CENTRAL AMERICA

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EEU, Environmental Economics Unit

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



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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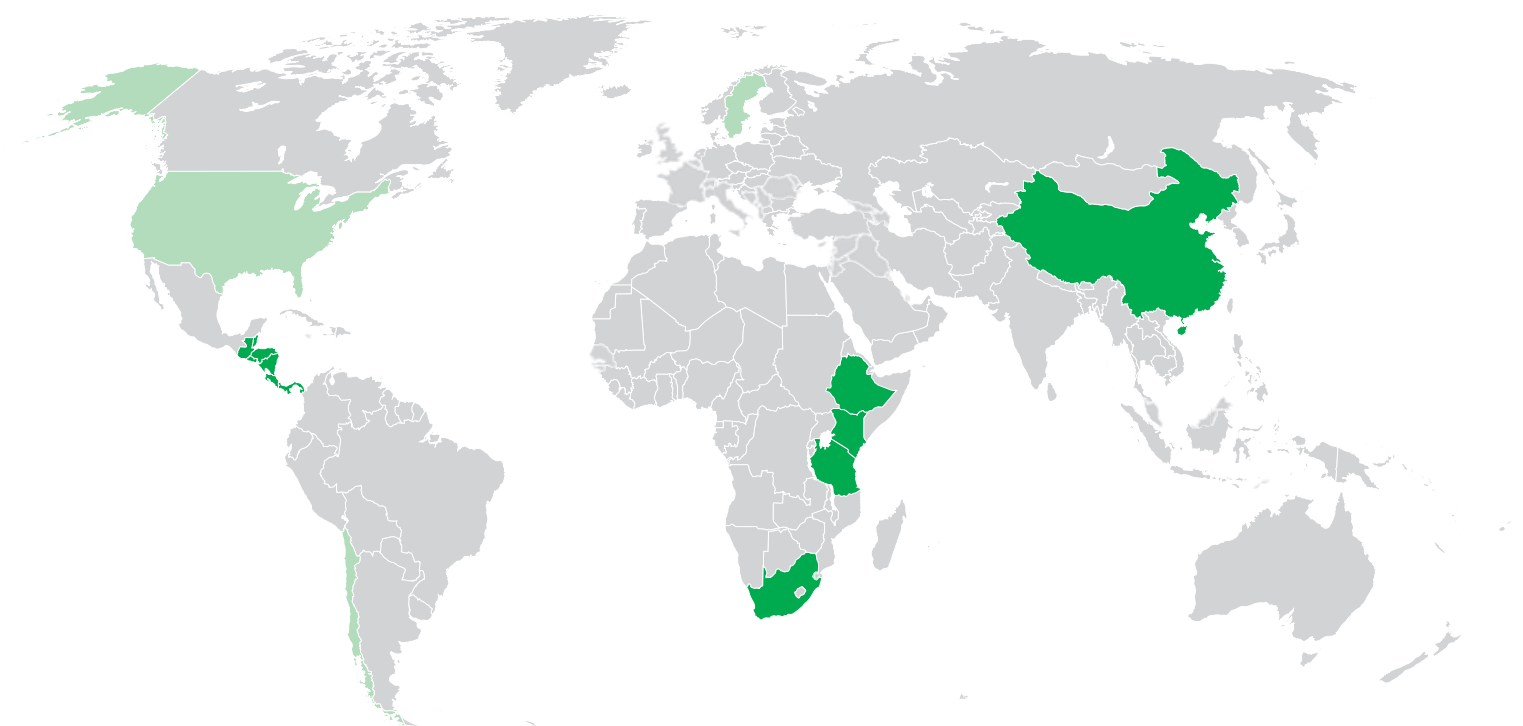
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EfD CENTERS

Central America, China, Ethiopia, Kenya, South Africa, Tanzania

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