

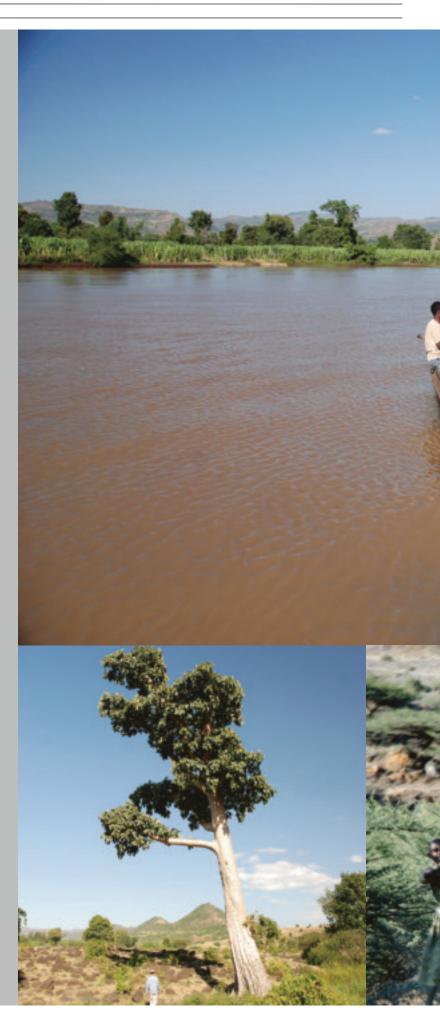
## **EFD INITIATIVE CENTER REPORT**

## ETHIOPIA 2013/14

The Environmental Economics Policy Forum for Ethiopia (EEPFE) works to support poverty alleviation and sustainable development in Ethiopia through an increased use of environmental economics in policy making processes.



EfD Ethiopia / Environmental Economics Policy Forum for Ethiopia (EEPFE)





# CONTENTS

**P.5** Message from our

center directors

**P.6** EfD Annual Meeting 2013, **South Africa** 

**P.8** Research policy interaction

P.13

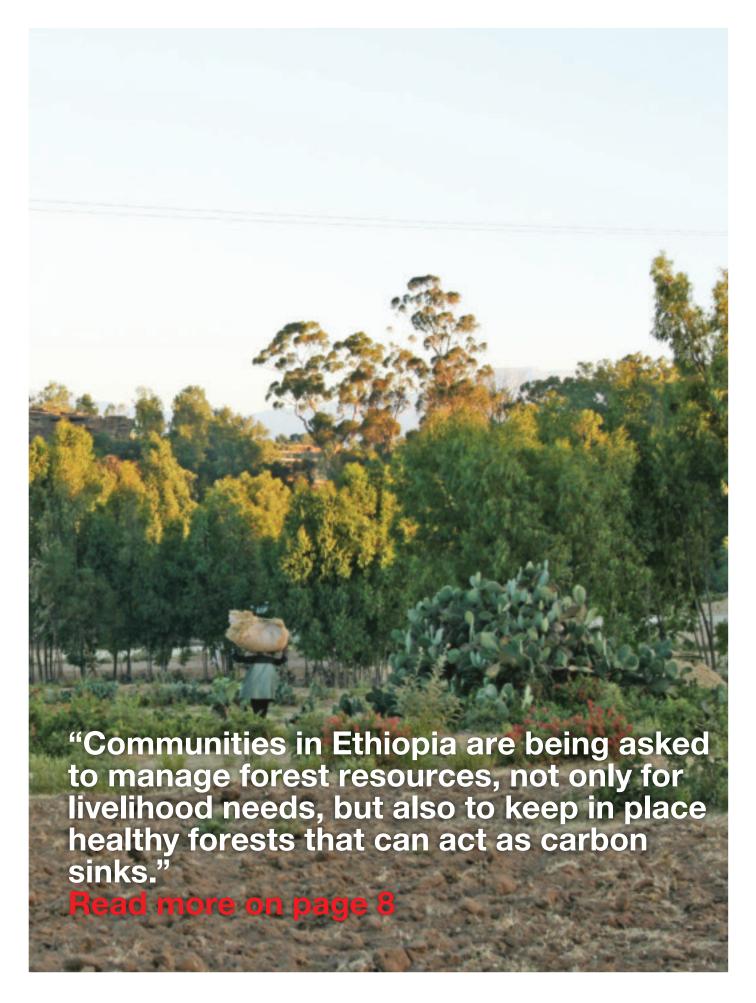
P.16 **Academic Capacity** Building

P.18 Spreading the word

P.20 The Ethiopian node in the EfD network

**P.22** The EfD Initiative in brief







Alemu Mekonnen, Director

## MESSAGE FROM OUR CENTER DIRECTOR

The Environmental Economics Policy Forum for Ethiopia (EEPFE) based at the Ethiopian Development Research Institute (EDRI) is one of nine EfD (Environment for Development) Centers located on five continents. EEPFE has the main objective of supporting sustainable development and poverty reduction through increased use of environmental economics in policy making processes in Ethiopia. It attempts to achieve its objective through research, policy interaction and training.

As in previous years, 2013 was a year of important achievements for EEPFE. The main research projects implemented during the year using Sida funds included economy-wide and macro-level approaches for assessing the demand and impact of the electricity sector in Ethiopia; empirical evidence from house-hold level data on local institutions and better forests; the potential role of sustainable land management practices adaptation to climate change in Ethiopia; and economic valuation

of irrigation water in smallholder irrigation systems in Ethiopia. During this year, the Forum also started implementing a World Bank funded research project on forests and REDD+ in Ethiopia. Unlike previous projects implemented by the Forum, this research project involves examining behavior of rural households through actual distribution of improved biomass cook stoves under different conditions.

Researchers of the Forum participated in a number of seminars, workshops and conferences in and outside of Ethiopia. Some of these seminars were organized or coorganized by the Forum. Workshops and conferences in which the Forum's researchers participated included the third Conference on Climate and Development in Africa, organized by the African Climate Policy Center (ACPC) based at the United Nations Economic Commission in Africa (UNECA), and held in October 2013 in Addis Ababa. The Forum's researchers also presented papers at the annual Interna-

tional Conference on the Ethiopian Economy, held in Addis Ababa in July 2013, and organized by the Ethiopian Economic Association. A member of the staff of the Forum was also invited to present a paper on the economic costs of climate change and climate finance in Africa at the plenary session of a bi-annual research workshop of the African Economic Research Consortium, held in June 2013 in Arusha, Tanzania.

Following previous practices, the Forum plans to continue its work on research, policy interaction and capacity building over the coming years, building on the achievements in the past. Details of the Forum's work during 2013 (presented in this report for 2013) as well as other information about the Forum can be found at www.efdinitiative.org/ethiopia.

Alemu Mekonnen Director





The 7th Annual Meeting of the Environment for Development (EfD) Initiative at Noordhoek, South Africa.

## THE EFD ANNUAL MEETING 2013 IN SOUTH AFRICA

## DECISIONS AND DISCUSSIONS ON RESEARCH

A wide representation of research organizations attended the academic part of the 7th EfD Annual Meeting in Cape Town, South Africa, October 24-27, 2013. Apart from a strong presence from all six EfD centers and a selection of their associated researchers, all EfD partner organizations were present: the Research Nucleus on Environmental and Resource Economics (NENRE) of the University of Concepcion, Chile; Resources for the Future from Washington, DC; and the Environmental Economics Unit of the University of Gothenburg. Also present were other organizations with which EfD collaborates, such as the World Bank, Environmental Defense Fund (EDF), International Development Research Center (IDRC), Swedish Environmental Protection Agency, Beijer Institute of Ecological Economics and Stockholm Resilience Center.

The meeting opened with an enthusiastic welcome by Gunnar Köhlin, followed by welcoming remarks by Anthony Leiman, director of EfD South Africa (EPRU), based at the University of Cape Town. During the four-day meeting, there were four keynote speeches and three other special sessions with invited speakers taking place in a plenary setting. The first keynote speech was by Peter Berck, Professor of Agricultural and Resource Economics. University of California, Berkeley on Identification: the problem that just won't die, discussing the problem of untangling cause and effect in complicated interactions. The second, about **Systematic Conservation**, was given by Juha Siikamäki, Associate Research Director and Fellow, Resources for the Future (RFF). The third keynote on **Modeling Land Use** was given

by Jo Albers, Professor of Applied Economics, Oregon State University. The fourth keynote speech about **Accounting for Ecosystem Services**, should have been presented by Urvashi Narain, Senior Environmental Economist, World Bank, but since she was delayed, Dr Francisco Alpízar substituted and gave the speech in her absence. "Accounting for Ecosystem Services" is a process of assigning values to the services provided by natural resources – for example, the services that natural water sources provide to farmers – which, until very recently, have been ignored in calculations of national income.

The special sessions in the program had a focus on leading the way for EfD to partner in new collaborative research projects.

First out was a session about **REDD** (Reducing emissions from deforestation and forest degradation), where Randall Bluffstone, Professor of Economics, Portland State University, presented **World Bank supported REDD projects**.

REDD is a program to pay people in develop-

forests so that forests can continue to sequester carbon. This was followed by a presentation of Environmental Defense Fund's (EDF's) REDD projects, where opportunities for potential new collaborations between EDF and EfD were elaborated on. Presentations were made by Richie Ahuja, Regional Director, Asia, EDF and Ferdinand Vieder, Social Science Research Center, Berlin. Another focus was Accounting for Ecosystem Services, and contributions to the discussion were made by Jeff Vincent, Professor of Forest Economics and Management, Duke University and Jessica Alvsilver, Swedish Environmental Protection Agency (Naturvårdsverket), who made a proposal to EfD centers to collaborate on a number of case studies to be carried out from 2015 and beyond.

ing countries to avoid cutting or damaging

Finally, Michael Toman, Research Manager, Development Research Group, World Bank, talked about **The World Bank's Environmental Research Priorities**, a fruitful discussion to reflect on what is already on the EfD center's research agendas in light of World Bank needs.



Jane Turpie, Deputy Director, EfD South Africa, Randall Bluffstone, Professor of Economics, Portland State University, Sue Snyman, EfD South Africa Research Fellow, Yonas Alem, EfD Research Coordinator and EfD Ethiopia Research Fellow, and Razack Lokina, Director, EfD Tanzania



Thomas Sterner, Visiting Chief Economist EDF and EfD Sweden Research Fellow, Randall Bluffstone, Professor of Economics, Portland State University, Ferdinand Vieder, Social Science Research Center, Berlin and Richie Ahuja, Regional Director, Asia, EDF

In addition, 66 presentations were made during the parallel sessions. These covered the following themes; Land Use, Energy, REDD, Agriculture, Parks and Wildlife, Forestry, Climate Change, Fisheries, Ecosystem Services and Water, Bioenergy, Environmental Policy Instruments, Experiments, Transport and Health.

The next EfD Annual Meeting will be held in Tanzania in October 2014.

#### POLICY DAY

Since 2010, EfD has hosted a separate Policy Day as a starting point for the annual meeting. The aim of the Policy Day is to make EfD research available for primarily local policy makers and also to get policy makers and other stakeholders' input into the ongoing research.

The policy day in Cape Town on October 23, 2013, hosted by EfD South Africa (EPRU), brought together policy makers from various governmental levels, practitioners, NGOs and, international and national researchers. The purpose of the day was twofold: first, to identify South African policy makers' research priorities as inputs to EPRU's work; second, to highlight examples from EPRU's research and capacities. The policy day included three distinct sessions focusing on fishery economics, biodiversity and conservation, and climate change.

#### **Fisheries**

In the first session, Kim Prochazka, Department of Agriculture, Forestry and Fisheries, presented a range of research questions where economics can provide valuable contributions. These included various efficiency and distributional implications of when to fish or not, who should be given the right to fish and how, how to monitor compliance, etc. Tony Leiman, EPRU center director, gave an overview of research questions that EPRU has worked on in recent years, acknowledging that economics can only be complementary to natural sciences research. The discussion that followed allowed all participants to propose topics and ask questions. There was broad agreement that a particularly important research topic is to evaluate an upcoming reform related to communal rights for inshore fishing in South Africa. What are the impacts of reform on fisheries and fishers who previously had fishing rights, and how are benefits shared? Fisheries reform involves the well-known "tragedy of the commons" problem: if anyone can use a resource, no one has the incentive to conserve it. One solution has been to "devolve" responsibility for a resource to a group of users who can then cooperate to manage it. However, a number of participants from South Africa pointed out that experiences from devolution of other forms of communal rights for agriculture had performed poorly. Another strong message from policy makers to researchers was a call for more multidisciplinary work involving natural sciences, economics and possibly other social sciences. At least, researchers should be well informed of each other's work and make sure that case studies are made in the same area.

#### **Biodiversity and conservation**

Jane Turpie of EPRU gave an overview of the toolbox of environmental economics and how it can be applied to a number of research questions of relevance for biodiversity and conservation. Mandy Driver from the South African National Biodiversity Institute (SANBI) presented its work and gave an overview of economic related research needs. She also pointed to the important role of intermediaries in bringing research findings to policymakers. Research topics included: what proportion of the wildlife industry is linked to biodiversity? What is the importance of South Africa's biodiversity assets to jobs and livelihoods? What are the returns from investing in ecological infrastructure?

#### Climate change

The third session focused on climate change. Thomas Sterner, University of Gothenburg

and Visiting Chief Economist, Environmental Defense Fund, is lead author on the policy instruments chapter for the upcoming IPCC report. He discussed scientific background to the topic and the importance of taking action now despite the political challenges involved. He used Germany as a good example of political and technological leadership, not least through use of feed in tariffs, a policy to encourage investment in renewable energy, which has helped drive down the costs of solar and wind power. Martine Visser highlighted parts of EPRU's work, including the use of experimental economics to increase understanding of how vulnerable groups adapt to flood risk and how farmers respond to climate variability and change. Helen Davies, from the Western Cape provincial government, and Sarah Ward, from the City of Cape Town, gave their views of important research needs. Provincial examples ranged from the costs of not addressing climate change, to more analysis of the economics of the food-water-energy nexus, to efficient use of land, to provincial impacts of a carbon tax at the national level. Examples from the city of Cape Town included how to stimulate behavioural change for greater energy efficiency, economic impacts of green procurement and efficient revenue models for resource taxes to avoid perverse incentives (unintended effects that cause people not to save energy). Questions were asked to the panel, not least related to how provincial and city policies are aligned with decisions at the national level and how the government's agenda for growth and jobs is aligned with sustainable development. Participants appreciated the discussions and stressed the need to continue the dialogue at a more detailed level to narrow down the agenda.

Mare Sarr concluded the policy day by thanking the participants for valuable inputs to EPRU's research agenda and acknowledged EPRU's responsibility for and interest in continuing the dialogue to identify common grounds for research.



Wilfred Nyangena, EfD Kenya Senior Research Fellow, Jane Kabubo-Mariara, Coordinator, FfD Kenya and Senior Research Fellow, and Richard Mulwa, EfD Kenva Senior Research Fellow



Min Wang, EfD China Research Fellow, Marcela Jaime. PhD student at University of Gothenburg and Róger Madrigal, Senior Research Fellow EfD Central America



A delegate from the Climate and Development Knowledge Network poses a question to the panel on Policy Day



## RESEARCH POLICY INTERACTION

To achieve its core goal of supporting and enhancing policy making to ensure sustainable development in Ethiopia, EEPFE works closely with various government and non-government agencies. These include the Ministry of Agriculture (MoA), Ministry of Environment and Forest, and African Climate Policy Center (ACPC). EEPFE organizes periodic workshops and seminars on important policy issues in collaboration with researchers from our host institution, the Ethiopian Development Research Institute (EDRI). The EfD initiative is built on the premise that, if relevant applied research is introduced in policy making processes, this will result in improved policies and subsequently poverty reduction and more sustainable development.





Loading sugarcane crops for transport near Blue Nile Falls.

#### POLICY INTERACTIONS

#### Biofuels increase incomes of poor, EfD Ethiopia study shows

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.

December 2012, the EEPFE held a workshop that stressed the role of forests in sustaining livelihoods and storing carbon. The structure of the government ministries and the low attention given to the forestry sector was one of the main issues discussed by participants at the workshop. A new Ministry of Environment and Forest was created in 2013. "Now we can see forestry in the name of the ministry," said Alemu Mekonnen, director of the EEPFE. While this organizational change was taking place, EfD researchers were busy gathering data on how forests are managed at the community level.

"Control over forests has been shifting to the local level for several years," explained Zenebe Gebreegziabher, deputy director for research and policy interaction of EfD Ethiopia. "Communities in Ethiopia are being asked to manage forest resources, not only for livelihood needs, but also to keep in place healthy forests that can act as carbon sinks."

Most of the population of Ethiopia lives in rural areas and depends on fuel wood for cooking

and heating. These immediate needs have contributed to a deforestation rate of 0.8% per year. Although most forests in Ethiopia are publicly owned, they have traditionally been more or less "open access" resources: evervone can use them, and there is no incentive for conservation. EfD researchers have been evaluating whether the policy of "devolving" forest management rights from government agencies to local communities has resulted in healthier forests.

"We found that restrictive measures that were laid out by the government with the intent of protecting forests did not always translate well in small communities," said EfD Research Fellow Abebe Damte. "Community-controlled forests, on the other hand, tend to have clear rules and sanctions and community participation, and are well-monitored. As a result, community forests tend to be healthier and store more carbon than government managed forests," he concluded. "This shouldn't surprise us," added Dr Gebreegziabher. "Ethiopians have a centuries-old tradition of collective action."

These results were somewhat unexpected. however, because village leaders surveyed in 2009 had provided optimistic reports about the implementation of top-down forestry restrictions. "Perhaps some leaders attempted to portray their villages in a more positive light when reporting to the government," suggested Dr Damte. To get around this problem, EfD researchers collected their data directly from heads of households in the 2013 survey. They also used satellite imagery, combined with on-the-ground carbon estimates. "This data can benefit policy makers, as it is generally more comprehensive as well as more accurate," said Dr Damte.

The next question was to determine the conditions where community management worked best. Using data from 110 community forests, the research team found that local forest management worked better in communities that had low infrastructure, such as low access to main roads, as well as clear and enforceable rules about access to forests. "It is especially important for forest users to see that the benefits they get from forest management match the sacrifices they make," said



#### Profitability of biofuels production in Ethiopia

Because of its location, Ethiopia is viewed as one of the most suitable nations in Africa for tapping renewable sources of energy, not only for its own economy, but also for export to regional economies such as Kenya, Djibouti and Sudan. This research investigates the profitability of biofuels investment in Ethiopia. Specifically, the objectives of this study are analyzing the viability of investment in biofuels and determining the oil price threshold beyond which biofuel is profitable in the context of Ethiopia. Findings reveal that bio-ethanol production (from molasses) in Ethiopia can be very viable and that the viability (and competitiveness) of bio-diesel production in Ethiopia will largely depend on the cost/price of feedstock (the raw material for biofuels). Findings also imply that viable alternatives of co-production through value addition from byproduct seed cake and intercropping options need to be considered to enhance the profitability of bio-diesel. Moreover, R&D efforts and knowledge support to the biofuels industry are called for. These include searching for better adapted and better yielding varieties and good oil-quality biofuels crops. There is also a need for a better regulatory framework and follow-up to find out how effectively biofuels firms are operating after they obtain investment permits and land; this will also help determine the kinds of support that will work best. In general, the biofuels industry can be viewed as a way out of poverty, but a lot remains to be done to enhance its viability.

#### **POLICY LINKS**

The Environmental Economics Policy Forum for Ethiopia (EEPFE) at the Ethiopian Development Research Institute (EDRI) has links and/or interacts with a number of institutions in and outside Ethiopia.

#### **Governmental institutions**

- Ministry of Agriculture (MOA)
- Ministry of Water, Irrigation and Energy
- Ministry of Environment and Forest
- · Regional Bureaus of Agriculture
- · Regional Bureaus of Water, Irrigation and Energy
- · Regional Bureaus of Environment and Forest
- Department of Economics of the Addis Ababa University
- Non-governmental institutions
- African Climate Policy Center (ACPC)
- Forum for Environment
- Climate Change Forum-Ethiopia
- GIZ ECO-Ethiopia
- GIZ SLM-Ethiopia
- Sustainable Land Use Forum

#### International institutions

- World Bank
- International Food Policy Research Institute (IFPRI) http://www.rightsandresources.org/
- Rights and Resources Initiative (RRI)
- Portland State University
- London School of Economics

The Forum also interacts with other centers of the EfD initiative, the EfD secretariat, Resources for the Future and the Ethiopian Development Research Institute.

Dr Gebreegziabher, "and for government agencies to respect the management decisions made locally."

The same concern for forest health has brought Ethiopian officials and EfD researchers together in a conversation about stoves. "Fuel-efficient cook stoves can reduce the need to gather fire wood," explained Dr Mekonnen. "With the newer stoves, families can cook with smaller amounts of fuel wood." A reduced need for fire wood collection can not only protect forests but can also reduce the burden on women and free up children's time for school, while cleaner stoves provide a healthier indoor environment. Although fairly inexpensive stoves exist in Ethiopia, they are in short supply. EfD is planning a workshop for late 2014 to disseminate research results and work with officials to promote the use of fuel-efficient and cleaner stoves.





#### POLICY SEMINARS, WORKSHOPS AND CONFERENCES

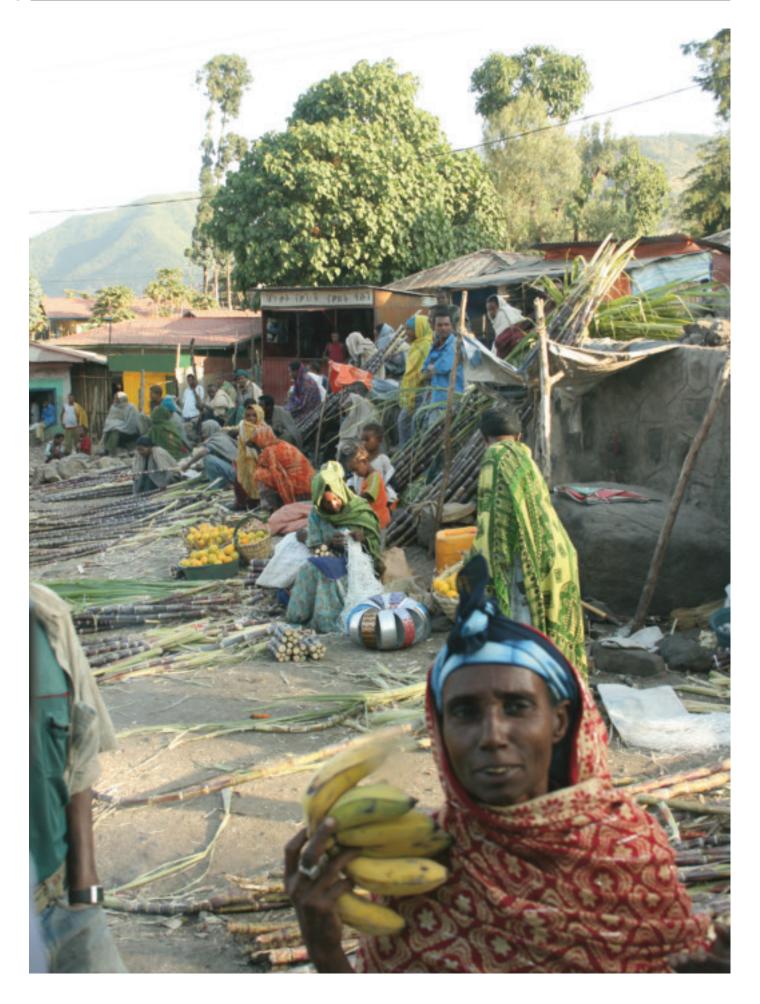
A Research Seminar on "Informality and Macroeconomic Fluctuations: A Small Open Economy New Keynesian DSGE Model with Dual Labour Markets" was held on January 4, 2013. The seminar was organized by Addis Ababa University (AAU) and the Environmental Economics Policy Forum for Ethiopia (EEPFE).

Mainstreaming Trade into National Development Strategies to achieve poverty reduction objectives was held in October 30-31, 2013. The workshop was organized by the Ministry of Trade and the United Nations Conference on Trade and Development (UNCTAD).

Competitiveness of Ethiopia, its Membership in the Common Market for Eastern and Southern Africa (COMESA) free trade area (FTA) and its Participation in the Tripartite FTA Negotiations was held in May 16, 2013. A presentation was made on the economy-wide effects of Ethiopia's accession to COMESA FTA. The Ministry of Finance and Economic Development hosted and organized the event.







## 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 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.

## **PUBLICATIONS 2013**

#### Peer reviewed

Alem, Y., G. Köhlin, and J. Stage. 2014. The Persistence of Subjective Poverty in Urban Ethiopia. World Development 56: 51-61.

Gebru, B., and S. Bezu. 2013. Environmental Resource Collection: Implications for Children's Schooling in Tigray, Northern Ethiopia. Environment and Development Economics 19(2):1-19.

Mekonnen, A., R. Deribe, and L. Gebremedhin. 2013. Fossil Fuel and Food Tax Incidence in Ethiopia. Eastern Africa Social Science Research Review 29: 1-24.

Teklewold, H., M. Kassie, B. Shiferaw, and G. Köhlin. 2013. Cropping System Diversification, Conservation Tillage and Modern Seed Adoption in Ethiopia: Impacts on Household Income, Agrochemical Use and Demand for Labor. Ecological Economics 93: 85-93.

Gebreegziabher, Z., and G. van Kooten. 2013. Does Community and Household Tree Planting Imply Increased Use of Wood for Fuel? Evidence from Ethiopia. Forest Policy and Economics 34: 30-40.

Bayray, A., F. Enquselassie, and Z. Gebreegziabher. 2013. Costs of Osteoporosis Related Fractures in Hospital Admitted Patients. Tigrai. Northern Ethiopia: A Retrospective Study. Ethiopian Medical Journal 51.

Damte, A., and S. Koch. 2013. Property Rights, Institutions and Choice of Fuelwood Source in Rural Ethiopia. Forest Policy and Economics 30: 30-38.

Alem, Y., and G. Köhlin. 2013. The Impact of Food Price Inflation on Subjective Well-being: Evidence From Urban Ethiopia. Social Indicator Research. DOI 10.1007/s11205-013-0318-7.

Gelo, D., and S. Koch. 2012. Does One Size Fit All? Heterogeneity in the Valuation of Community Forestry Programs. Ecological Economics 74: 85-94.

#### **EfD Discussion Papers**

Gebreegziabher, Z., A. Mekonnen, R. Deribe, S. Abera, and M. Molla. 2013. Crop-livestock Inter-linkages and Climate Change Implications for Ethiopia's Agriculture: A Ricardian Approach. EfD Discussion Paper EfD DP 13-14. Washington, DC: Resources for the Future and Environment for Development.

Alem, Y., A. Damte, G. Köhlin, and A. Mekonnen. 2013. Household Fuel Choice in Urban Ethiopia: A Random Effects Multinomial Logit Analysis. EfD Discussion Paper EfD DP 13-12. Washington, DC: Resources for the Future and Environment for Development.

Ferede, T., Z. Gebreegziabher, A. Mekonnen, F. Guta, J. Levin, and G. Köhlin. 2013. Biofuels, Economic Growth, and the External Sector in Ethiopia: A Computable General Equilibrium Analysis, EfD Discussion Paper EfD DP 13-08. Washington, DC: Resources for the Future and Environment for Development.

Damte, A., R. Bluffstone, and A. Mekonnen. 2013. Community Controlled Forests, Carbon Sequestration and REDD+: Some Evidence from Ethiopia. EfD Discussion Paper EfD DP

13-07. Washington, DC: Resources for the Future and Environment for Development.

Whittington, D., and M. Jeuland. 2013. Water Resources Planning under Climate Change: A "Real Options" Application to Investment Planning in the Blue Nile. EfD Discussion Paper EfD DP 13-05. Washington, DC: Resources for the Future and Environment for Development.

Alem, Y., G. Köhlin, and S. Hassen. 2013. The Dynamics of Electric Cookstove Adoption: Panel Data Evidence from Ethiopia. EfD Discussion Paper EfD DP 13-03. Washington, DC: Resources for the Future and Environment for Development.

Gebreegziabher, Z., A. Mekonnen, T. Ferede, F. Guta, G. Köhlin, T. Alemu, and J. Levin. 2013. The Distributive Effect and Food Security Implications of Biofuels Investment in Ethiopia: A CGE Analysis. EfD Discussion Paper EfD DP 13-02. Washington, DC: Resources for the Future and Environment for Development.

#### **Discussion papers**

Bass, S., W. Shannon, T. Ferede, and D. Fikreyesus. Making Growth Green and Inclusive: The Case of Ethiopia. OECD Green Growth papers No. 2013/7, Paris. DOI 10.1787/5k46dbzhrkhl-en.

#### Research briefs

RB 13-02. Biofuels Can Have a Win-win Outcome that Improves Smallholder Productivity and Increases Household Welfare. Z. Gebreegziabher, A. Mekonnen, T. Ferede, F. Guta, J. Levin, G. Köhlin, T. Alemu, and L.





Proponents of biofuels see an alternative energy source that is renewable and relatively clean. Skeptics consider it a crime against humanity to grow crops for fuel instead of food. Findings in Ethiopia suggest that biofuels investments can have a "win-win" outcome that can improve smallholder productivity, food security, and household welfare.

#### RB 13-08. While Biofuels Expansion Can Help Improve Economic Growth, it Can Be Harmful to the External Sector.

T. Ferede, Z. Gebreegziabher, A. Mekonnen, F. Guta, J. Levin, and G. Köhlin.

Given the volatility of world oil prices, development of biofuels has been considered key in terms of meeting the growing energy demand in Ethiopia and reducing the dependence on imported fossil fuel. This research investigates the economy-wide implications of the country's involvement in large-scale biofuels investments. Findings suggest that biofuels expansion can help improve economic growth, particularly if such expansion generates spillovers of technology and knowledge from biofuels to other sectors. However, the impact on the external sector, especially on exports and imports, is negative.

#### RB 13-14 Climate Change Can Have Significant Negative Impact on Ethiopia's Agriculture.

Z. Gebreegziabher, A. Mekonnen, R. Deribe, S. Abera, and M. Molla Kassahun.

Except for the lowlands and pastoralist areas, mixed crop-livestock farming is the dominant farming type in Ethiopia. However, there have been few attempts to look into the economic impacts of climate change in the context of Ethiopia. Particularly, the role of livestock was disregarded in previous studies. This study explores the crop-livestock inter-linkages and climate change implications for Ethiopian agriculture. Findings suggest that climate change can have significant negative impact on Ethiopia's agriculture unless appropriate adaptation measures are adopted. Moreover, increasing/ decreasing rainfall associated with climate change is damaging to both crop and livestock agricultural activities.

#### **Book chapters**

Mekonnen, A., H. Ghebru, S. Holden, and M. Kassie. 2013. The Impact of Land Certification on Tree Growing on Private Plots of Rural Households: Evidence from Ethiopia. In *Land Tenure Reform in Asia and Africa: Assessing* 

*Impacts on Poverty and Natural Resource Management.* New York: Palgrave Macmillan Publishers, 308-330.

Ferede, T., A. Belayneh, and M. Hanjra. 2013. Agroecology Matters: Impacts of Climate Change on Agriculture and its Implications for Food Security in Ethiopia. In *Global Food Security: Emerging Issues and Economic Implications*, edited by M.A. Hanjra. USA: Nova Science Publishers, Inc., 71-112.

Ferede, T., M.A. Hanjra, J. Blackwell, T.M. Jackson, and A. Abbas. Global Food Security: Facts, Issues, Interventions and Public Policy Implications. In *Global Food Security: Emerging Issues and Economic Implications*, edited by M.A. Hanjra. USA: Nova Science Publishers, Inc., 1-36.

Broussard, N., T. Tekleselassie, J. Page, T. Ferede, and H. Reda. 2013. Youth, Jobs, and Structural Change in Ethiopia. In *Empowering Young Africans to Live Their Dreams*, edited by N. Nobuaki Hamaguchi, M. Henstridge, H. Hino, and G. Mwabu. Japan International Cooperation Agency, 197-276.

## **PROJECTS 2013**

For more information on each project, please see the website.

Economic Valuation (Pricing), Institutions, and Water Use Efficiency in Smallholder Irrigation Systems in Ethiopia

Theme: Policy Design
Pl: Zenebe Gebreegziabher

Economy-wide Impact of the Electricity Sector in Ethiopia

Theme: Energy PI: Tadele Ferede

Local Institutions and Better Forests: Empirical Evidence from Household Data

Theme: Managing the Commons PI: Zenebe Gebreegziabher

#### Adaptation to Climate Change in Ethiopia: The Potential Role of Sustainable Land Management Practices

Theme: Agriculture and Climate Change Pl: Alemu Mekonnen and Salvatore di Falco

## PROJECTS 2014

Impact Evaluation of the Sustainable Land Management (SLM) Program in Ethiopia

Theme: Agriculture
Pl: Zenebe Gebreegziabher

Access to Finance, Adaptation to Climate Change, and Household Welfare
Dynamics: Empirical Evidence from Rural
Ethiopia

Theme: Climate Change
PI: Tadele Ferede and Hailu Elias



## RESEARCH PRESENTATIONS

#### **Academic conferences**

#### Bi-annual Research Workshop of the African Economic Research Consortium

• Alemu Mekonnen: Economic Costs of Climate Change and Climate Finance with Focus on Africa

#### 11th International Conference on the Ethiopian Economy

- Alemu Mekonnen: On Adaptation to Climate Change and Food Security in Ethiopia
- Tadele Ferede: Biofuels, GHG Emissions and Forests in Ethiopia: A CGE Analysis
- Zenebe Gebreegziabher: Profitability Analysis of Biofuels Investment in Ethiopia
- Abebe Damte: Social Capital, Climate Change and Soil Conservation Investment: Panel Data Evidence from the Highlands of Ethiopia

#### **EfD Seventh Annual Meeting**

- Alemu Mekonnen: The Impact of Natural Resource Scarcity on Agriculture in Ethiopia
- Abebe Damte: Natural Resource Collection, Child Labor, and Child Schooling: Empirical Evidence from Rural Ethiopia

- Rahel Deribe: Determinants of Farm Households' Agro-Forestry Technology Adoption in Ethiopia: Empirical Evidence from Selected Districts
- Zenebe Gebreegziabher: Local Institutions and Better Forests: Characterization and Empirical Evidence from Community-Level Data

#### **Trade into National Development Strategies**

• Tadele Ferede: Mainstreaming Trade into National Development Strategies to Achieve Poverty Reduction Objectives

#### East Africa's Manufacturing Sector

• Tadele Ferede: Promoting Technology, Innovation, Productivity and Linkages

#### Competitiveness of Ethiopia and its Membership in the COMESA FTA and its Participation in the Tripartite FTA **Negotiations**

• Tadele Ferede: The Economy-wide Effects of Ethiopia's Accession to COMESA FTA

#### Macroeconomics and Sectoral Effects

• Tadele Ferede: Macroeconomic and Sectoral Effects of Ethiopia's Accession to the COMESA Free Trade Area

#### **Academic seminars**

#### Research Seminar 15th

· Sisay Regassa: Informality and Macroeconomic Fluctuations: A Small Open Economy New Keynesian DSGE Model with **Dual Labour Markets** 

#### Research Seminar 16th

• Dr Abbi M. Kedir: Why Use ROSCAs When You Can Use Banks? Theory and Evidence from Ethiopia

#### Research Seminar 17th

• Dr Dambala Gelo: Common Property Right Forestry and the Welfare Distribution: Evidence from Ethiopian Villages







## **ACADEMIC CAPACITY BUILDING**

The EfD academic capacity building component is designed to correct 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 policy research with academia is one of the unique features of EfD

One of the objectives of EEPFE is to increase the number of trained environmental economists. EEPFE has very close academic links with the Department of Economics of Addis Ababa University. The forum supports the seminar series at AAU and most of our research fellows are actively in-

volved in teaching and thesis supervision in the graduate program. EEPFE also provides MSc thesis grants to those doing their thesis in the area of resource and environmental economics.

#### COURSES TAUGHT BY EFD ETHIOPIA INCLUDE

#### **Graduate courses**

- Environmental Economics and Policy
- Climate Policy and Law
- Environmental Valuation and Policy

#### **PhD Theses**

 Medhin, Haileselassie. 2013. The Poor and Their Neighbors: Essays on Behavioral and Experimental Economics.



#### **MSc Theses**

- Aemiro Melkamu: Non-Market Valuation of Ziqualla Monastery Forest, Ethiopia. Supervised by Dr Alemu Mekonnen
- Tarekegne Wubie: Economy-Wide Implications of Carbon Tax in Ethiopia: A Recursive Dynamic Computable General Equilibrium Analysis, Ethiopia. Supervised by Dr Alemu Mekonnen
- Tsegazeab Gebremariam: Adaptation to Climate Change and Livestock Activity Choice in the Nile Basin of Ethiopia. Supervised by Dr Zenebe Gebreegziabher
- Kide Gebru Tesfay: Smallholder Farmers' Perception and Adaptation to Climate Change: The Case Study Adwa Woreda in Tigrai Region, Ethiopia. Supervised by Dr Zenebe Gebreegziabher
- Gebretsadik Teshager: Economic Valuation of Urban River Protection in Addis Ababa, Ethiopia: A Choice Experiment Application. Supervised by Dr Zenebe Gebreegziabher
- Mohammed Abrar: Residential Energy Consumption Pattern and Conservation in Urban Areas of Ethiopia: Case Study of Gondar Town. Supervised by Dr Abebe Damte
- Amare Fentie: Impact Evaluation of Teff Technology Adoption in Ethiopia: A Case Study from Guba Lafto District. Supervised by Dr Abebe Damte

- Addisu Anteneh: Recreational Demand Modeling and Nonmarket Valuation of Cultural Heritage in Ethiopia (Case Study). Supervised by Dr Abebe Damte
- Belay Kasaye: Farmers' Willingness to Pay for Improved Land Management Practices in North Shoa Zone, Oromia Regional State. Application of Contingent Valuation and Choice Experiment Method. Supervised by Dr Abebe Damte
- Tamiru Terefe: Total Factor Productivity: Estimates for the Ethiopian Economy for the Period 1977/78-2011/12. Supervised by Dr Tadele Ferede
- Nega Muhabaw: What Determines the Export Performance of Ethiopia: A Time Series Analysis
- Demeke Abate: Determinants of Tax Performance in Ethiopia: An Econometric Analysis Using ARDL Model. Supervised by Dr Tadele Ferede
- Robel Alemu: Impacts of Rural Income Transfer Schemes in Ethiopia: A Recursive Dynamic Computable General Equilibrium Approach. Supervised by Dr Tadele Ferede
- Esubalew Asmare: Economic Growth and the Quality of Life in Ethiopia: A Time Series Analysis. Supervised by Dr Tadele Ferede







## SPREADING THE WORD

News about research and policy interaction

Read more on the website www.efdinitiative.org/ethiopia/news 2013-10-31

#### **Ethiopia -The Emerging Power Hub in East Africa**

Ethiopia is becoming the emerging power hub in East Africa in hope of meeting its growing energy requirements and exporting its surplus to the region. Currently the country is using only about 3% of the total power capacity. A documentary by ETV reviews the status of the two major hydropower dam construction activities taking place in the country: the Grand Renaissance Dam on the Blue Nile and the Gibe III on the Omo River. Ethiopia has power generating capacity amounting to over 60,000MW. But the current generation is only 2000 MW. Energy is an important input in production and there is a close link between energy consumption and economic growth. In the context of Ethiopia, evidence suggests that energy causes economic growth. Therefore, enhancing (ensuring) uninterrupted

energy supply is important for sustaining fast economic growth in Ethiopia.

#### The Poor and their Neighbors: **Dissertation by Haileselassie Medhin**

In this PhD thesis from the Environmental Economics Unit, School of Business, Economics and Law at University of Gothenburg, it is shown how economics experiments can help in understanding important behavioural dimensions of poverty; and guide the design of development interventions.

The first article of the thesis presents experimental evidence on a non-interventionist institution that could be a cheaper and more effective means of avoiding land conflicts among farmers in developing countries.

The second article in the thesis investigates the problems that small farmers have in coordinating their efforts to learn about new technologies, and shows how a 'sharedexperimentation' mechanism can speed up technology adoption among small-scale farmers. The link between status and poverty is investigated in the next two articles, with a focus on the implications for the success of poverty alleviation activities. The fifth article in the thesis presents experimental evidence on the attitude of small-scale farmers toward uncertainty. It is shown that small-scale farmers are highly averse to risk and ambiguity, making them reluctant to adopt new technologies. The other papers in the thesis focus on issues of social preferences and the differences between the cooperative behavior of teams and individuals.

2013-06-19

#### **Workshop Discusses Land Constraints** and Agricultural Intensification in Ethiopia

A workshop organized and hosted by EDRI concerned a village-level analysis of areas with higher agricultural potential. EEPFE's senior research fellow Dr Abebe Damte attended this workshop.

2013-05-08

**EDRI Seminar: Using Evidence in Unraveling Food Supply Chains in** Ethiopia: The Supply Chain of Teff from **Major Production Areas to Addis Ababa** 

FEPFE's senior research fellow Dr Abebe Damte attended this meeting at EDRI.

2013-10-21

#### **Climate Change and Development in** Africa III

EEPFE's Director. Dr Alemu Mekonnen. participated in a workshop on climate change and development at the UN Conference Center in Addis Ababa on October 21, 2013.

2013-10-31

#### The Land Certification Program in Ethiopia

On October 31, 2013, EEPFE's research associate, Dr Mintewab Bezabih, made a presentation on "The Land Certification Program in Ethiopia: A Review of Achievements, Constraints and Opportunities" at the Swedish Embassy in Addis Ababa. Dr Alemu Mekonnen also attended the workshop.

2013-11-14

#### **Cows, Missing Milk Markets and Nutrition** in Rural Ethiopia

A seminar was organized by EDRI and the International Food Policy Research Institute (IFPRI) on November 14, 2013 at the EEA Conference Center in Addis Ababa, FEPFE's senior research fellow Dr Abebe Damte participated in the conference.

2013-10-31

#### **Mainstreaming Trade into National Development Strategies**

Dr Tadelele Ferede, EEPFE's senior research fellow, presented a paper on "Mainstreaming Trade into National Development Strategies to Achieve Poverty Reduction Objectives: The Ethiopia Case Study" on October 30-31, 2013. at Radisson Blu Hotel, Addis Ababa. The workshop was organized by the Ministry of Trade and UNCTAD.

2013-11-29

#### Promoting Technology. Innovation, **Productivity and Linkages**

Dr Tadele Ferede, an EEPFE senior research fellow, presented a paper on "East Africa's Manufacturing Sector: Promoting Technology. Innovation, Productivity and Linkages, Ethiopia Country Report," which was conducted on November 29, 2013 at Jupiter International Hotel (Cazanchise). It was organized by the Ministry of Industry and the African Development Bank.

2013-05-16

#### Competitiveness of Ethiopia, its Membership in the COMESA FTA and its Participation in the Tripartite FTA **Negotiations**

On May 16, 2013, a meeting on "Competitiveness of Ethiopia and its Membership in the COMESA FTA and its Participation in the Tripartite FTA Negotiations" was held at Ministry of Finance and Economic Development Conference Hall. At this meeting, Dr Tadele Ferede, EEPFE's senior research

fellow, presented a paper entitled, "The Economy-wide Effects of Ethiopia's Accession to COMESA FTA." The meeting was organized by the Ministry of Finance and Economic Development.

2013-12-11

#### **EEPFE Research Fellow Presents a Paper** on Macroeconomic and Sectoral Effects of Ethiopia's Accession to the COMESA Free Trade Area

EEPFE senior research fellow Dr Tadele Ferede presented a paper on "Macroeconomic and Sectoral Effects of Ethiopia's Accession to the COMESA Free Trade Area" at the workshop organized by

The Ministry of Finance and Economic Development on December 11, 2013, at the Ministry of Finance and Economic Development Meeting Hall, Addis Ababa.

#### IN THE MEDIA

2013-10-31

#### ETV: The Emerging Power Hub, a documentary by ETV, October 31, 2013, Addis Ababa

A Senior Research Fellow of the Environmental Economics Policy Forum for Ethiopia (EEPFE), Dr Zenebe Gebreegziabher, was among the key persons interviewed for a documentary which was aired several times on the national TV station of Ethiopia. The speeches of the late Prime Minister, Meles Zenawi, and the CEO of the Ethiopian Electric Power Corporation (EEPCo), Mr. Mihret Debebe, were included.



Hut in the Bahir Dar region.



#### 20

## THE ETHIOPIAN NODE IN THE EFD NETWORK

The Environmental Economics Policy Forum for Ethiopia (EEPFE) is the Ethiopian node in the EfD network. The Ethiopian Development Research Institute (EDRI) hosts EEPFE as one of its projects to work on environment-related issues. EDRI provides financial and administration support services to EEPFE. The forum was founded in 2003. Its goal is to support poverty alleviation and sustainable development through increased use of environmental economics in policy making processes.

More specifically, the forum has the following objectives:

- Increase the number of trained environmental economists by creating a conducive working environment for environmental economics PhD graduates and providing research grants for local MSc environmental economics students;
- Strengthen the capacity of environmental economics graduates to do applied research on poverty and environmental management by linking research fellows with international research organizations and enabling them to participate in international and national conferences;
- Undertake objective research and analysis on impact assessment, environmental management, and poverty with the goal of providing advice to policy makers and development agencies;

- 4) Collect and analyze data on sustainable land use with the objective of disseminating results to a wide range of stakeholders through workshops, conferences, internal seminars, distribution of research publications, and policy briefs:
- 5) Increase the knowledge of civil servants and other stakeholders on environmental and development issues with the objective of increasing awareness of the link between environmental management and poverty alleviation.

#### **EEPFE's Vision:**

 To be the leading center for environmental economics policy research and a locus for interactions among researchers, civil servants, and policy makers interested in policy-oriented environmental research in Ethiopia.  To provide quality policy advice to the government and other stakeholders based on objective research and to engage in capacity building to reduce poverty and contribute to sustainability.

#### EFD ETHIOPIA CENTER STAFF

#### **Local researchers and staff** Alemu Mekonnen. PhD

CENTER DIRECTOR AND SENIOR RESEARCH FELLOW,

#### Zenebe Gebreegziabher, PhD

DEPUTY DIRECTOR AND SENIOR RESEARCH FELLOW

#### Tadele Ferede, PhD

DEPUTY DIRECTOR AND SENIOR RESEARCH FELLOW

#### Tekie Alemu, PhD

SENIOR RESEARCH FELLOW



EfD Ethiopia/EEPFE staff. From top left: Alemu Mekonnen, Zenebe Gebreegziabher, Tadele Ferede, Abebe Damte, Adane Tufa, Rahel Deribe.

#### Abebe Damte, PhD

SENIOR RESEARCH FELLOW

#### Fantu Guta. PhD

RESEARCH FELLOW

#### Adane Tufa, PhD

RESEARCH FELLOW

#### Rahel Deribe, MSc

JUNIOR RESEARCH FELLOW

#### Zelealem Ghebremedhin, MSc

PROJECT MANAGER

#### Ermias Dessie, MSc

DATA MANAGER

#### Goshu Wolde, MA

COMMUNICATIONS OFFICER

#### **Domestic research associates** Gete Zeleke, PhD

AVALLO INTERNATIONAL RESEARCH DEVELOPMENT, ETHIOPIA

#### Fitsum Hagos, PhD

INTERNATIONAL WATER MANAGEMENT INSTITUTE. ETHIOPIA

#### Berhanu Gebremedhin, PhD

II BI - ETHIODIA

#### International research associates Yonas Alem. PhD

DEPARTMENT OF ECONOMICS, UNIVERSITY OF GO-THENBURG

#### Stein Holden

PROFESSOR IN DEVELOPMENT AND RESOURCE ECO-NOMICS, NORWEGIAN UNIVERSITY OF LIFE SCIENCES. NORWAY

#### Salvatore Di Falco

PROFESSOR IN ENVIRONMENTAL ECONOMICS, UNIVER-SITY OF GENEVA

#### **Randall Bluffstone**

PROFESSOR OF ECONOMICS, PORTLAND STATE UNI-VERSITY, USA

#### Mintewab Bezabih, PhD

THE GRANTHAM RESEARCH INSTITUTE ON CLIMATE CHANGE AND THE ENVIRONMENT, LONDON SCHOOL OF **ECONOMICS** 

#### Klaus Deininger, PhD

THE WORLD BANK

#### Haileselassie Medhin, PhD

DEPARTMENT OF ECONOMICS, UNIVERSITY OF GO-THENRURG

#### Hailemariam Teklewold, PhD

DEPARTMENT OF ECONOMICS, UNIVERSITY OF GO-THENBURG

#### Jesper Stage

PROFESSOR OF ECONOMICS, MID SWEDEN UNIVERSITY

#### Menale Kassie, PhD

CONSULTATIVE GROUP ON INTERNATIONAL AGRICUL-TURAL RESEARCH (CGIAR)

#### Peter Martinsson

PROFESSOR OF BEHAVIOURAL ECONOMICS, UNIVER-SITY OF GOTHENBURG

#### Gunnar Köhlin

ASSOCIATE PROFESSOR, ENVIRONMENTAL ECONOM-ICS UNIT, UNIVERSITY OF GOTHENBURG

More details about each person are available on the EfD website, in the "Centers" section for Ethiopia. www.efdinitiative.org/ethiopia/people





From left: Zelealem Ghebremedhin, Ermias Dessie and Goshu Wolde

#### **NETWORKS**

To achieve its goals, EEPFE is working with different governmental and non-governmental organizations, including the Ministry of Agriculture (MOA), Ministry of Environment and Forests (MoEF), Ministry of Water, Irrigation and Energy (MoWIE), 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, the Swedish International Development Cooperation Agency, is the main funding agency for the EfD Initiative. The World Bank and Ministry of Water, Irrigation and Energy were the other sources of funding in 2013.

Number of donors	3
List of donors	Funding by donor during 2013
World Bank Ministry of Water, Irrigation and Energy	41.8% 3.5%
Sida/EfD funding as share of total center bud- get (incl. univ. salaries)	54.7%

List of donors EfD Ethiopia

#### **CONTACT US**

You are most welcome to contact EfD Ethiopia/ Environmental Economics Policy Forum for Ethiopia (EEPFE)

Environmental Economics Policy Forum for Ethiopia (EEPFE)

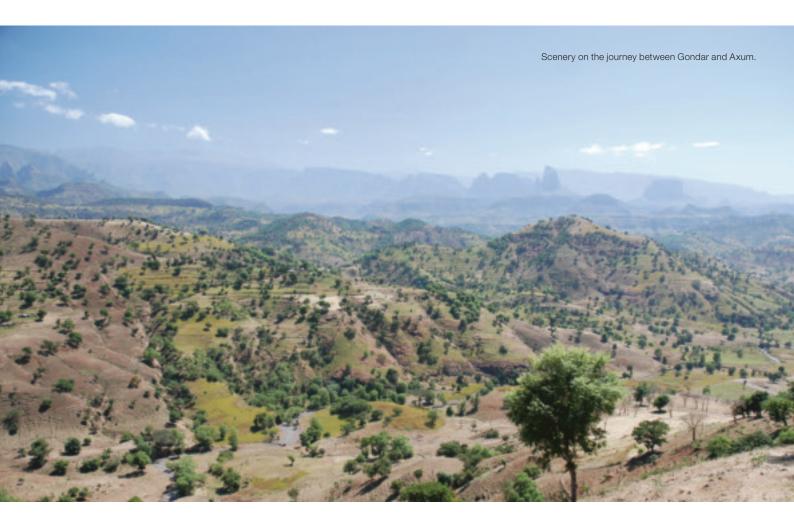
Ethiopian Development Research Institute (EDRI), Blue Building, Near National Stadium, South Wing Office Numbers 401, 402, 408, 409, Fourth Floor P.O. Box 2479, Addis Ababa, Ethiopia

Tel: +251-11-5506066/+251-11-5538632

Fax: +251-11-5505588 Email: eepfe@ethionet.et www.efdinitiative.org/ethiopia







## THE EFD INITIATIVE IN BRIEF

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

The concept of the Environment for Development Initiative is simple – we believe that natural resources and the environment should be seen as the basis for, not the constraint on, sustainable growth in developing countries. But for that to happen, we need to apply our best analytical tools to how to manage these resources. And that is what we do in the Environment for Development Initiative!

Our mission is to contribute to poverty alleviation and sustainable development through increased use of environmental economics capacity in policy design and policy-making processes pertaining to management of ecosystems, natural resources and climate change impacts. We use environmental economics tools both to identify the roots of environmental problems in modern economies, and to find what social and economic mechanisms can be used to solve them.

Institutionally, EfD is now well underway to become a global network of environmental economics centers. The original six EfD centers in China, Costa Rica (for Central America), Ethiopia, Kenya, South Africa and

Tanzania have now been formally joined by three more centers: Resources for the Future (RFF), Washington DC, USA; the Research Nucleus on Environmental and Natural Resource Economics (NENRE) at the University of Concepción in Chile; and the Environmental Economics Unit, University of Gothenburg in Sweden. This is the first step in forming an independent international organization in support of high quality, policy-relevant research on development and the environment, as well as academic capacity building and in-depth policy interaction.

There have also been productive interactions with other partners, such as the United Nations Environment Programme, the African Development Bank, the Global Green Growth Institute and the Climate and Development Knowledge Platform. We are also happy that our unique way of stimulating policy-relevant research through our EfD Research Fund has attracted funding from the World Bank, in addition to our generous core funding from the Swedish International Development Cooperation Agency (Sida).

## **EFD CENTERS**

There are nine EfD centers hosted by academic institutions. For more information on each center, please contact the Center Director or Coordinator:

CATIE

#### **EFD CENTRAL AMERICA**

Research Program in Economics and Environment for Development (IDEA) in Central America Centro Agronómico Tropical de Investigación y Enseñanza (CATIE) Dr. Francisco Alpízar, Center Director

Email: falpizar@catie.ac.cr Phone: +506 558 2215 / 2624

#### **EFD CHINA**

Environmental Economics Program in China (EEPC) **Peking University** Professor Jintao Xu, Coordinator Email: xujt@pku.edu.cn Tel: +86 10 6276 7629



Environmental Economics Policy Forum for Ethiopia (EEPFE) Ethiopian Development Research Institute (EDRI) Dr Alemu Mekonnen. Center Director Email: alemu\_m2004@yahoo.com Tel: +251-115-53 86 32

#### **EFD KENYA**

School of Economics, University of Nairobi Professor Jane Mariara, Coordinator Email: jmariara@uonbi.ac.ke Phone: +254-20-318262, ext. 28122

#### **EFD SOUTH AFRICA**

Environmental-Economics Policy Research Unit (EPRU) University of Cape Town Anthony Leiman, Center Director Email: tony.leiman@uct.ac.za Phone: +27-21-6502725





#### **EFD TANZANIA**

Department of Economics, University of Dar es Salaam Dr. Razack Lokina, Center Director Email: razack\_lokina@yahoo.co.uk Phone: +255-22-241 0252

#### **RESOURCES FOR THE FUTURE (RFF)**

Allen Blackman Senior Fellow, RFF Email: blackman@rff.org Phone: +1 202 328 5073



#### **RESEARCH NUCLEUS ON ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS (NENRE)**

Department of Economics, Universidad de Concepción Professor Carlos Chávez, Center Director Fmail: cchavez@udec.cl

Phone: +56-41-220 4503





#### UNIVERSITY OF GOTHENBURG SCHOOL OF BUSINESS, ECONOMICS AND LAW

#### **EFD SWEDEN**

Environmental Economics Unit (EEU), University of Gothenburg

Associate Professor Gunnar Köhlin Director, EfD Email: gunnar.kohlin@economics.gu.se Phone: +46 31 786 4426

Professor Thomas Sterner Email: thomas.sterner@economics.gu.se

Phone: +46 31 786 1377

Karin Backteman, Communications Officer Email: karin.backteman@economics.gu.se

Phone: +46 31 786 2595



The Swedish International Development Cooperation Agency, Sida, provides core funding for the EfD Initiative.



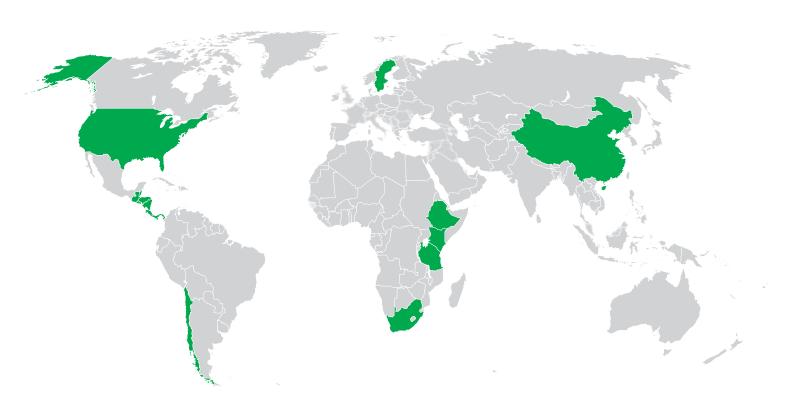


#### To find out more about our work and the EfD Initiative:

Please visit www.efdinitiative.org/ethiopia You are most welcome to contact us: Environmental Economics Policy Forum for Ethiopia (EEPFE) Ethiopian Development Research Institute (EDRI), Blue Building, Near National Stadium, South Wing Office Numbers 401, 402, 408, 409, Fourth Floor P.O. Box 2479, Addis Ababa, Ethiopia

Fax: +251-11-5505588 Email: eepfe@ethionet.et

Tel: +251-11-5506066/+251-11-5538632



**EfD CENTERS** Central America, Chile, China, Ethiopia, Kenya, South Africa, Sweden, Tanzania, USA DONOR Sida



















