

EfD

Environment for Development



EFD CENTER REPORT

CHINA 2012/13

The mission of EfD China, also known as the Environmental Economics Program in China (EEPC), is to improve welfare among poor people by preventing pollution and natural resource depletion, and to promote sustainable use of natural resources and ecosystems through the use of environmental economics tools.

THIS REPORT

This report presents EfD Center China, also known as Environmental Economics Program in China (EEPC), its members and work during 2012/13. The Chinese node of the Environment for Development initiative is based at:

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Cover photo: Forest
This page: view over a lake in the city of Dali, in the province of Yunnan

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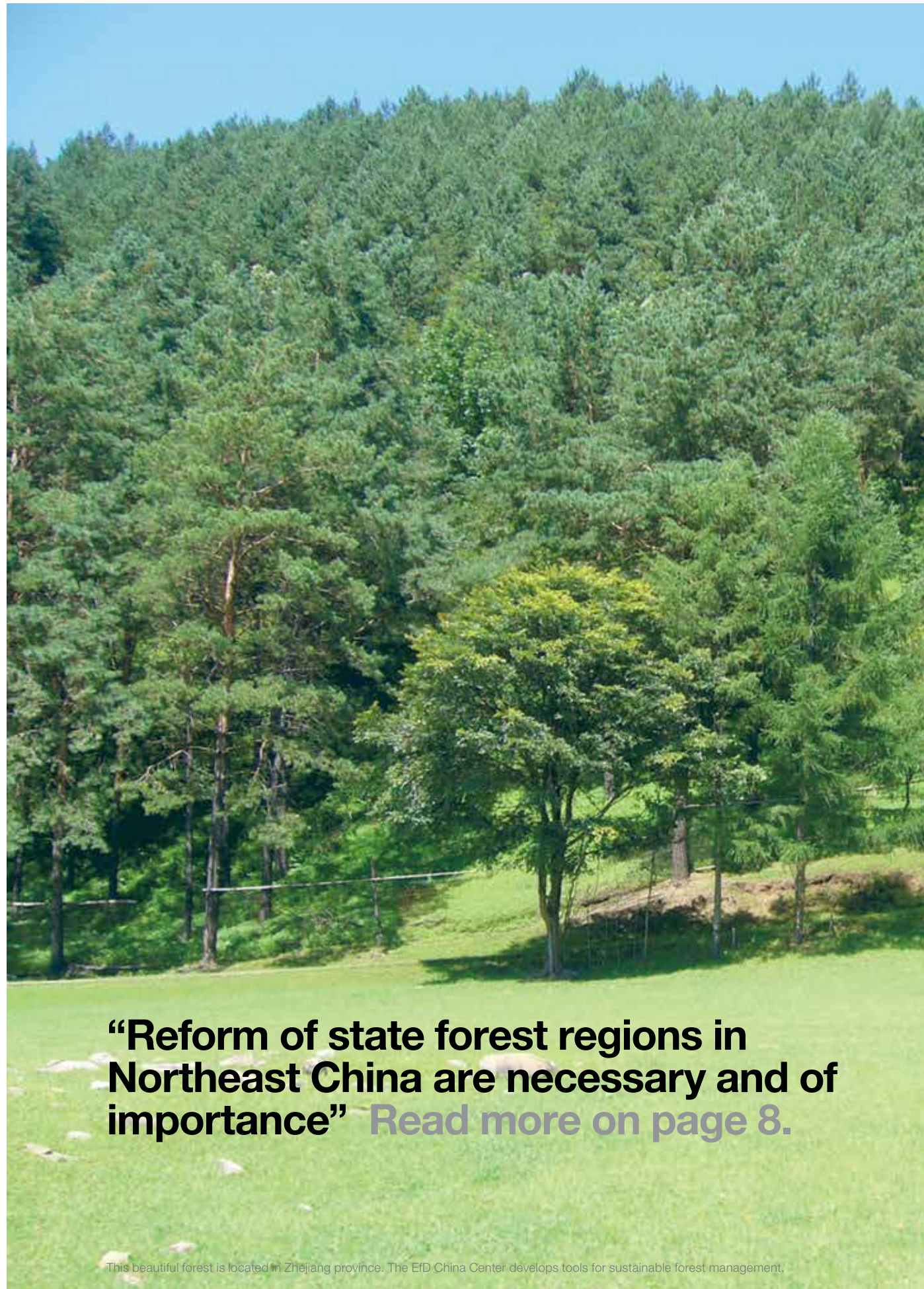
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“Reform of state forest regions in Northeast China are necessary and of importance” [Read more on page 8.](#)

This beautiful forest is located in Zhejiang province. The EFD China Center develops tools for sustainable forest management.



Professor Jintao Xu, Director

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



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 Ikari 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



RESEARCH POLICY INTERACTION

EEPC actively participates in the process of policy reform in China's forest sector and has been the main force in conducting extensive surveys and rigorous analyses on emerging policy issues such as air quality management, water pricing policy reform, etc. The goal of the EEPC is to help the government make intelligent decisions during the process of decentralization in order to reduce the cost of reform and to set a foundation for the sustainable management of natural resources. The EfD initiative is built on the premise that if relevant applied research is introduced into policy making processes, then this will result in improved policies and subsequent poverty reduction and a more sustainable development.

EEPC focuses on applied policy research. In particular, it attempts to identify the areas of environmental policy where improvement is needed, and to address policy needs by conducting social and economic assessment of ongoing public programs. Currently, EEPC is mainly concentrated on analyzing the process of state forest sector reform and collective forest tenure reform, evaluating the reform performance against set criteria and providing policy suggestions. Issues under investigation by EEPC include national forest management, forest governance in collective forests, transformation of state-owned forest enterprises, pollution control policy, environmental indicators, water and soil conservation, and water resource allocation.

In 2012, based on two rounds of surveys in eight provinces of China's collective forest areas, EEPC worked to provide a comprehensive evaluation of the forest tenure reform, as well as providing policy recommendations to cope with current problems and future challenges. In the state forest sector, EEPC has organized a policy forum jointly with the World Bank and the State Forestry Administration (SFA) of China in order to develop a plan for state forest reform in Northeast China.

EEPC has also collaborated with the Beijing Transportation Research Center and provided policy recommendations for the Beijing Municipal Commission of Transportation. In addition, EEPC has been engaged in

the monitoring and assessment of the carbon sequestration potential of agricultural technological changes.

POLICY INTERACTIONS

China's Forest Sector

Since it was founded, EEPC has focused on the study of China's forest sector reform. The major activity of collective forest tenure reform in China has been entitling individual households with certificates of land use rights. Since the early 2000s, this process has involved over 100 million hectares of forestland and more than 400 million people. Commissioned by the State Forestry Administration of China, EEPC started its first round survey in eight provinces in 2006-2007, and conducted the second round survey in 2011, in order to conduct a profound evaluation on the reform performance against a set of criteria including social and economic perspectives, and providing policy suggestions.

Based on EEPC's study of eight reformed provinces in 2006-2007, which was sponsored by the World Bank, EfD, the Ford Foundation, RRI, and SFA of China, three international workshop have been organized by EEPC, four related reports have been submitted and two published, several peer reviewed articles in both Chinese and English have been published, and policy briefs have been drafted and submitted to the SFA departments. In 2012, EEPC conducted rigorous analyses to provide a comprehensive evaluation of the forest tenure reform,

as well as providing policy recommendations to cope with current problems and future challenges. The publication of a book consisting of major papers and findings from the study on collective forest tenure reform is expected.

The key component of China's forest sector and the main supplier of industrial wood is the state-owned forest sector of northeastern China is identified as one of six topics of highest priority to study according to the central government's reform agenda since 2009. Because of its long-term low-efficiency of forest management, associated with the financial problem and resource depletion problem, EEPC has conducted empirically quantitative and qualitative studies in the three key northeastern provinces, i.e., Inner Mongolia, Jilin, and Heilongjiang during 2009 and 2010. Issues under investigation by EEPC include national forest management, forest governance in collective forests, transformations of state forest enterprises, pollution control policy, environmental indicators, water and soil conservation, as well as water resource allocation. In 2012, the main policy interaction activity is that of successfully organizing a US study tour for the delegation of the Chinese Society of Forest Economics, which was designed to enrich their understanding of the management of national forests with multiple goals. And in May 2012, a workshop was held in the Beijing World Bank Office and summarized the findings of EEPC research on the state forest sector for the central government.

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.

Forest

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.

“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

Transportation and Urban Air Pollution Control

After decades of rapid economic growth, China now faces serious urban transport challenges in a number of its big cities, such as congestion, air pollution, energy shortage, and global climate change. EEPC started its policy interaction with the Beijing Transportation Research Center and Beijing Transportation Commission in 2008, with the aim of finding effective policy instruments to address serious urban air pollution, particularly in Beijing.

EEPC continues collaborating with the Beijing Transportation Research Center and providing policy recommendations. Two senior research fellows and two international research associates have been engaged in two transportation research projects funded by EfD, in order to analyze distributional welfare impacts of various transport policies, and the effects of these policies on travelers' choice of transport mode. In addition, EEPC has sent three Master's student to BTRC as interns and supervis-

ing a PhD student from BTRC, as well as inviting researchers to give speeches at PKU regularly for over four years.

Dr. Jianhua Xu has been working on identifying cost-effective SO₂ emissions abatement strategies in Beijing and its surrounding areas, with the effectiveness being measured by two different metrics, i.e., the emissions reduced and the health risks avoided. Results are integrated into the policy recommendations to Beijing Municipal Government on managing regional air quality in Beijing and its surrounding areas. The project was completed in 2011, with a report in association with a drafted paper submitted.

EEPC and Carbon, Climate Change

Since increased focus has been given to global climate change, EEPC has been engaged in the monitoring and assessment of carbon accounting induced by agricultural technologies. As an example, EEPC



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.

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



Professor Jintao Xu (first from left), EfD China/EEPC Director, presenting research results at the conference on Forest Tenure Reform, November 2012.

has worked on such a project for 4 years since 2008, while relevant papers were published in international journals, related project reports were presented in policy seminars organized by SFA and CAAS. EEPC has also actively participated in voluntary forest and agricultural carbon markets design, commissioned by the Management Office on CDM Projects, SFA.

In 2012, EEPC's main research topics of energy and climate change have been oriented toward green growth and structural transformation, energy security, and institutional reform to facilitate renewable energy development. More specifically, these research projects are currently underdeveloped: the establishment of a computable general equilibrium model for the energy sector in China, trends and factors behind China's rural household energy demand, and modeling the relationship of biomass energy policies and land uses.

POLICY LINKS

Senior members of the EEPC sit on several government advisory bodies and give advice on key policy issues such as forest tenure reform, carbon management, environmental indicators, and environmental fiscal reforms. Since state forest reform was identified as one of the ten priority research themes by SFA, EEPC has been commissioned to undertake a field study and provide policy recommendations. Policy briefs and reports

have been submitted to SFA, emphasizing the exploration of institutional reforms and new mechanisms to achieve sustainable development.

Professor Jintao Xu serves as an adviser to the Department of Afforestation within China's State Forestry Administration. He is also a member of the Lead Expert Group within the China Council for International Cooperation on Environment and Development, and took part in research planning, evaluation, and preparation of final policy recommendations to present to the council at its annual conference.

POLICY SEMINARS, WORKSHOPS AND CONFERENCES

The Policy Forum on State Forest Reform in Northeast China, on May 25, 2012, was co-organized by SFA, EEPC, and the World Bank, with participants from the government and academia. The International Workshop on Collective Forest Reform, November 21-23, 2012, was co-organized by SFA, EEPC, and the Rights and Resources Group, with participants from both the central and local levels of SFA, as well as academics from international and home institutions.

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.

PUBLICATIONS 2012

Peer reviewed

Xuehong, Wang, Jeff Bennett, Jintao Xu and Haipeng Zhang. 2012. "An Auction Scheme for Land Use Change in Sichuan Province, China." *Journal of Environmental Planning and Management* 55(10): 1269-1288.

Carlsson, Fredrik, H. He, P. Martinsson, P. Qin, and M. Sutter. 2012. "Household Decision Making in Rural China: Using Experiments to Estimate the Influence of Spouses." *Journal of Economic Behavior and Organization* 84: 525-536.

Li, Wanxin and Duoduo Li. 2012. "Environmental Information Transparency and Implications for Green Growth in China." *Public Administration and Development* 32: 324-334. Published online in Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/pad.1626

Hoffmann, S., P. Qin, A. Krupnick, B. Badrakh, S. Batbaatar, E. Altangerel, and L. Sereeter. 2012. "The Willingness to Pay for Mortality Risk Reductions in Mongolia." *Resource and Energy Economics* 34: 493-513.

He, Hui and Jintao Xu. 2012. "Projection of Timber Supply and Demand Trends in China Based on an Econometric Model." *Forest Products Journal* 61(7): 543-551.

Huang, Desheng, Jianhua Xu, and Shiqiu Zhang. 2012. "Valuing the Health Risks of Particulate Air Pollution in the Pearl River Delta, China." *Environmental Science and Policy* 15(1): 38-47.

Li, Wanxin and Paul Higgins. 2012. "Controlling Local Environmental Performance: An Analysis of Three National Environmental Management Programs in the Context of Regional Disparities in China." *Journal of Contemporary China* 22: 81.

Wei, J., D. Johansson, M. Hennlock, and T. Sterner. 2012. "The Fossil Endgame: Strategic Oil Price Discrimination and Carbon Taxation." *Journal of Environmental Economics and Policy* 1(1): 48-69.

Li, Wanxin, Jieyan Liu, and Duoduo Li. 2012. "Getting Their Voices Heard: Three Cases of Organizing for Environmental Protection." *Journal of Environmental Management* (doi:10.1016/j.jenvman.2011.12.019).

EfD Discussion Papers

Xie, Lunyu. 2012. "Automobile Usage and Urban Rail Transit Expansion." *Environment for Development Discussion Paper* 12-17. Washington, DC: Environment for Development and Resources for the Future.

Research briefs

Jiang, Hongfei and Xuemei Jiang. 2012. "An Analysis of Income Inequality in Collective Forest Areas in China: Based on the Survey Data in Liaoning Province." *Forestry Economics* (in Chinese) 2012.3.

Book chapters

Jiang, Xuemei. 2012. "Chapter 3: Forestry Policy Research and Analysis Tools." *Forestry Policy* (in Chinese).

Reports

Xu, Jintao, Yuehua Wang, Zhenbin Gu, Xuemei Jiang, and Yuanyuan Yi. 2012. "Study of State Forest Reform." World Bank PROFOR Project.

Yi, Yuanyuan and Jintao Xu. 2012. "Worker Household Living Standards and Income Inequality in Northeast China." RRI project.

Xu, Jianhua and X. Wang. 2012. Risk-based Cost-effective Control of SO₂ Pollution at Regional Levels. Economy and Environment Program for Southeast Asia.



Professor Jintao Xu (fourth from left), Senior Research Fellow and Director of EfD China, discussing local forest administration with an Australian visiting scholar

PROJECTS 2012

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

China's Climate Change Policies: Competitiveness and Distributional Effects -- An Ex-post and Ex-Ante Analysis

Theme: Climate Change, Policy Design
PI: Jing Cao (caojing@sem.tsinghua.edu.cn) and Mun S. Ho

A Behavior Model of Transport Mode Choice in Beijing

Theme: Policy design
PI: Peter Berck (peter.berck@gmail.com) and Jintao Xu (xuajt@pku.edu.cn)

Automobile Demand Analysis in Beijing

Theme: Policy design
PI: Ping Qin (pingqin2009@gmail.com)

An Experimental Analysis of Auctioning Subsidy for Carbon Emission Reduction: Evidence from China

Theme: Climate Change, Policy Design
PI: Haoran He (haoran.he@economics.gu.se), Yefeng Chen, Qian Weng, Yean Zhou

Environmental and Economic Policies in China: An overall design and demonstration funded by Ministry of Environmental Protection (MEP), China. EEPC is responsible for one of the sub-projects: **The economic Methodology of Environmental Policy Instruments**, funded by the Ministry of Environmental Protection, China.



Professor Jintao Xu and EEPC PhD and Master's students conducting a survey on state forest reform, Yichun, Northeast China.

PROJECTS 2013

Assessment of Collective Forest Tenure Reform: Book and Papers

Theme: Forestry
PI: Jintao Xu (xujt@pku.edu.cn)

The Value of Automobile Travel Time and Its Congestion Policy Implications

Theme: Policy Design
PI: Ping Qin (pingqin2009@gmail.com), Hang Yin and Fredrik Carlsson

RESEARCH PRESENTATIONS

Academic conferences

Conference on Forests and Common Lands: Rights, Conflicts, FRA and PESA, December 18, 2012, New Delhi, India

Jintao Xu: China's Collective Forest Tenure Reform

Global Environment and the Role of China, December 13-14, 2012, Shanghai

Jintao Xu: Green Growth and Structural Transformation

Min Wang: Climate Change Impacts of Renewable Energy Policies: the Roles of Capacity Constraints and Market Power

Environment for Development Sixth Annual Meeting, October 25-29, Costa Rica

Jianhua Xu: Risk-risk Tradeoffs: On Regulating Mercury Emissions in China

International Workshop on Forest Institutions and Reform, August 29-30, 2012, Vietian, Lao

Jintao Xu: China's Forest Tenure Reform

Society for Risk Analysis: World Congress on Risk 2012, July 18-20, Sydney, Australia

Jianhua Xu: Emerging Risks in Emerging Markets: An Exploratory Study on Risk Profile in China

The 19th Annual Conference of the European Association of Environmental and Resource Economists (EAERE 2012), June 27-30, 2012, Prague, the Czech Republic

Xuemei Jiang: Impacts of Policy Measures on the Development of State-owned Forests in Northeastern China: Theoretical results and empirical evidence

RFF Forest Economics Program Annual Workshop, May 18, 2012, Washington DC

Jintao Xu: "Analysis of China's Forest Tenure Reform"

The Tenth Forestry Economics Forum in China, May 26, 2012, Fuzhou, China

Xuemei Jiang: The Effect of China's Collective Forest Tenure Reform on Labor Allocation

The World Bank Land Conference, April 20-23, 2012, Washington DC

Jintao Xu: Impact of China's Collective Forest Tenure Reform on Household Labor Decisions
Yuanyuan Yi: Property Rights, Tenure Security, and Forest Investment Incentives: Evidence from China's Recent Forest Tenure Reform

ACADEMIC CAPACITY BUILDING

The EfD academic capacity building component is designed to minimize 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 with academia is one of the unique features of EfD.

EEPC, in association with the Institute of Environment and Economy (IoEE) at Peking University and with the support of the Environmental Economics Unit of the University of Gothenburg, is devoted to developing productive international scholars and institutions in order to advance its academic research in modern environmental economics. We receive students from all over China who are interested in environmental sciences and economics. Our graduate program includes an MSc in

environmental economics and policy and a PhD in environmental economics and resource economics.

The Master's program prepares professionals with strong analytical skills and a critical, objective vision, both essential to confronting the interrelated challenges of development and environmental protection, whether in the private or public sectors, non-governmental organizations, or academic institutions.

EEPC, incorporating PKU's strength in economics and natural sciences, will be able to develop a comprehensive curriculum for its PhD program, and students will be able to develop their skills in a multi-disciplinary environment. With assistance from international collaborators and programs within the university, EEPC aims to build up a top PhD program in environmental and climate economics.

Professor Jintao Xu with Ph.D. and Master's students (Row 1: Ying-ao Chen, Hongfei Jiang, Jintao Xu, and Xiaoli Hou; Row 2: Yuanyuan Yi and Ping Qin)



COURSES TAUGHT BY EFD CHINA INCLUDE

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

PhD Theses

Jiang, Hongfei. 2012. “Forest Products Market Model”, Ph.D. dissertation, supervised by Jintao Xu, Department of Environmental Management, College of Environmental Sciences and Engineering, Peking University, June 2012.

Msc Theses

Hou, Xiaoli, 2012, “Analysis of Performance of the Forest Processing Industry in China”, MSc thesis, supervised by Jintao Xu, Department of Environmental Management, College of Environmental Sciences and Engineering, Peking University, June 2012.

Chen, Ying-ao, 2012, “Analysis of Transport Mode Choice in Beijing”, MSc thesis, supervised by Jintao Xu, College of Environmental Sciences and Engineering, Peking University, June 2012.

Undergraduate Theses

Wu, Tong, 2012, “Mass Media and Climate Foreign Policy: Through the Lens of Media Reports on Climate Conferences”, supervised by Jianhua

Xu, Department of Environmental Management, College of Environmental Sciences and Engineering, Peking University, June 2012.

Ge, Yali, 2012, “Analysis of Factors Influencing Tenure Security on Forest Land in Collective Forest Areas in Liaoning, China”, supervised by Xuemei Jiang, College of Economic Management, Beijing Forestry University, June 2012.

Ren, Yunan, 2012, “An Evaluation of the Collective Forest Tenure Reform on Rural Household Labor Allocation: Evidence from Liaoning, China”, (2012 Best Thesis Award of the College of Economic Management, Beijing Forestry University), supervised by Xuemei Jiang, College of Economic Management, Beijing Forestry University, June 2012.

Xie, Yu, 2012, “Analysis of Efficiency and Driving Factors in the Forestry Industry of China”, supervised by Xuemei Jiang, College of Economic Management, Beijing Forestry University, June 2012.



Students participating in a survey held by EFD

SPREADING THE WORD

News about research and policy interaction



The delegation listened to Bob Harrington, Forest Division Administrator of Montana, US, as he gave a presentation on Montana’s public forest management. (Professor Jintao Xu, fourth from right, Senior Research Fellow and Director of Efd China, and Yuanyuan Yi, second from left, Efd Research Fellow).

2012-06-15

What steps to take to reform the Chinese state forest sector?

Forests have unique potential to contribute to sustainable economic development and reduction of China’s massive carbon emissions. Forest tenure reform in China’s collective forests is a process of historic importance with widespread and long-lasting impacts. Currently, the question of what steps to take to reform the Chinese state forest sector is hotly debated.

2012-05-10

A US Study Tour for the Delegation of the Chinese Society of Forestry Economics

EEPC and the Rights and Resources Group jointly organized a US study tour for a delegation of the Chinese Society of Forestry Economics (CSFE) from April 29-May 6, 2012. The objective of this study tour was to examine options for public forest reform and to learn from the American experience.

IN THE MEDIA

On the webpage of College of Environmental Sciences and Engineering at Peking University (<http://cese.pku.edu.cn/>), readers can link to the Efd Initiative by clicking on the logo located in the lower left corner, where browsers have access to Efd China in both English

and Chinese. The Efd Initiative can be also accessed via the webpage of the China Center for Energy and Development (CCED), National School of Development, Peking University (<http://cced.nsd.edu.cn/>). Here is a list of links to articles about members of Efd China. Some are in English, and some are only in Chinese.

DECEMBER 8, 2012

Prof Jintao Xu, on 163.com, a very high-hit webpage (in Chinese), being introduced as a well-known economist: <http://money.163.com/12/1208/10/8l6Q2NC600254SO1.html>

THE CHINESE NODE IN THE EFD NETWORK

The Environmental Economics Program in China (EEPC), was set up within the College of Environmental Science and Engineering, PKU, in January 2007. It is one of the six Environment for Development (EfD) centers worldwide, sponsored by the Swedish International Development Agency (Sida), with academic and administrative support from the University of Gothenburg. The goals of EEPC are three-fold: building capacity for rigorous economic analysis of environmental policy in China; policy outreach; and graduate education that emphasizes systematic training in modern environmental economics. EfD China is currently the only EfD center in the Asia-Pacific region.

Peking University is one of the pioneer teaching and research institutions in the field of environmental economics. It has been the key institution for environmental economics and policy research and education. The environmental economics and policy program has made tremendous contributions to the advancement of environmental science as well as policymaking. Many policy recommendations have been adopted by the government. Faculty members of Peking University have been active in the process of international environmental and climate agreements, and have played important roles in international organizations dealing with global environmental issues.

EEPC occupies a lab room with 100 m2 at the Conservation Biology Building (Bao Hu Sheng Wu Xue Lou) located at northwest corner of PKU's campus. There are 14 tables equipped with computers and networks, accommodating both research fellows and graduate students.

EFD CHINA CENTER STAFF

Local researchers and staff

Professor Jintao Xu

COORDINATOR AND SENIOR RESEARCH FELLOW

Dr. Ping Qin

SENIOR RESEARCH FELLOW AND DEPUTY COORDINATOR

Professor Shiqiu Zhang

SENIOR RESEARCH FELLOW

Dr. Jianhua Xu

SENIOR RESEARCH FELLOW

Dr. Min Wang

SENIOR RESEARCH FELLOW

Dr. Haipeng Zhang

SENIOR RESEARCH FELLOW

Dr. Xuemei Jiang

SENIOR RESEARCH FELLOW

Dr. Michael Bennett

VISITING SCHOLAR

Yuanyuan Yi

RESEARCH FELLOW AND COMMUNICATION OFFICER

Jie Li

RESEARCH FELLOW

Ling Li

ADMINISTRATIVE ASSISTANT

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Dr. Wanxin Li

School of Public Policy and Management at Tsinghua University and City University of Hong Kong

International research associates

Lunyu Xie

Ph.D. Candidate, Department of Agricultural and Resource Economics at the University of California, Berkeley

Dr. Priscilla Cooke St.

Clair of Pacific Lutheran University

Professor Stein Holden

of the Department of Economics and Resource Management at the Norwegian University of Life Sciences

Professor Thomas Sterner

of the Department of Economics at the University of Gothenburg

Professor Fredrik Carlsson

of the Department of Economics at the University of Gothenburg

Dr. Gunnar Köhlin

of the Department of Economics at the University of Gothenburg

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



A picture of EEPC/EfD China

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), the Chinese Academy of Agricultural Sciences (for example, the Institute of Environment and Sustainable Development in Agriculture, www.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), 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.





View over a lake in the city of Dali, in the province of Yunnan

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

CONTACT US

You are most welcome to contact EfD China/Environmental Economics Program in China (EEPC):

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www.efdinitiative.org/centers/china



Corn cultivation in the province of Yunnan, near the city of Lijiang

THE EFD INITIATIVE IN BRIEF

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

The Environment for Development initiative received its name from our conviction that with proper management the environment can be seen as a source of development and not as a constraint.

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 to both identify the roots to environmental problems in modern economies, and to find what social and economic mechanisms can be used to solve them.

The foundation of the EfD initiative is its members, environmental economists in a selection of countries. As research fellows and associates

we work for EfD centers hosted by well-established academic institutions in China, Costa Rica (for Central America), Ethiopia, Kenya, South Africa and Tanzania. EfD have an important partner organization in Resources for the Future (RFF), Washington DC, USA. A new partner to EfD Since 2012 is also Universidad de Concepción in Chile. Our associates are based at RFF and several universities across the world. One of them, University of Gothenburg in Sweden, hosts the EfD secretariat.

The Swedish International Development Cooperation Agency (Sida) is currently a major funder of the EfD research and capacity building program through core administrative support, a research fund, and funds to strengthen academic training and policy interaction.

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

Research Program in Economics and Environment for Development in Central America. Centro Agronómico Tropical de Investigación y Enseñanza (CATIE)
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EFD PARTNERS



UNIVERSITY OF GOTHENBURG
SCHOOL OF BUSINESS, ECONOMICS AND LAW

EEU, Environmental Economics Unit

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

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Sida

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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Universidad de Concepción

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To find out more about our work and the EFD initiative:

Please visit www.efdinitiative.org/centers/china

You are most welcome to contact us:

EfD China

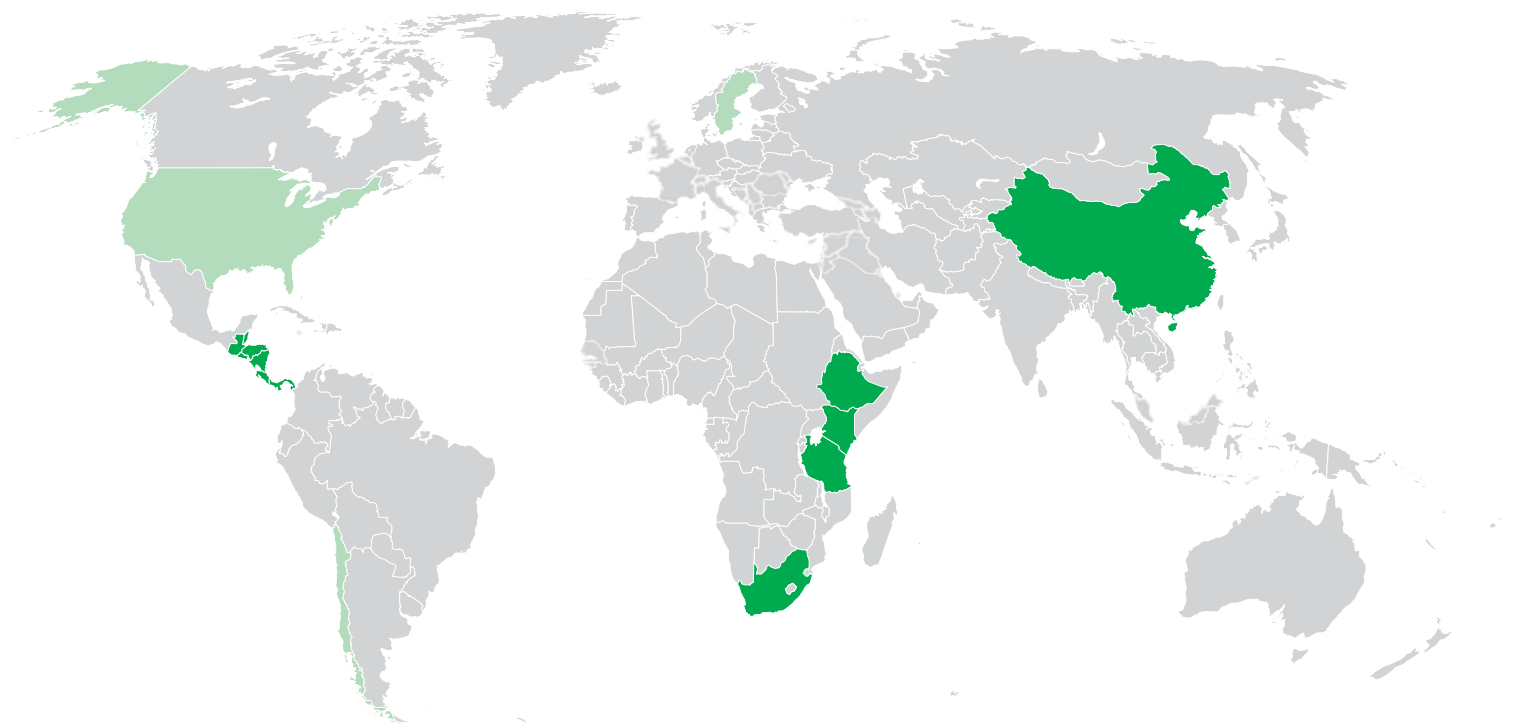
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EfD CENTERS

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

PARTNERS

Sida, University of Gothenburg, RFF



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