

The logo for Environment for Development (EFD) features the letters 'EFD' in a bold, green, sans-serif font. Above the letters is a thick black horizontal bar, and below them is a thinner black horizontal bar.

Environment for Development

A photograph of a dense forest of tall, slender trees with green foliage, viewed from a low angle looking up.

## EFD INITIATIVE CENTER REPORT

# CHINA 2011/12

A graphic of three stylized green leaves of varying sizes, arranged in a cluster at the bottom right of the page.

The overall objective of EFD China, also known as 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 China, also known as Environmental Economics Program in China (EEPC), its members and work during 2011/12. The Chinese node of the Environment for Development initiative is based at:

**Efd China**  
**Environmental Economics Program in China (EEPC)**  
**Peking University**  
Rm 322, Lao Di Xue Lou, Peking University,  
Beijing 100871, CHINA  
Phone: +86 10 62767657  
Email: [eepec@pku.edu.cn](mailto:eepec@pku.edu.cn)  
[www.efdinitiative.org/centers/china](http://www.efdinitiative.org/centers/china)

**Cover photo: Forest in Sichuan, China**  
**This page: A picture of state forest in Northeast China.**



## CONTENTS

**P.5****Message from  
Director****P.6****The EfD Annual  
Meeting 2011 in  
Tanzania****P.8****Research policy inter-  
action EfD China:****P.8****Research****P.15****Academic capacity  
building****P.17****Spreading the word****P.18****The Chinese node in  
the EfD network****P.21****The EfD initiative in  
brief****P.23****EfD Centers and  
Partners**





**“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, and water pricing policy reform.” Read more on page 8.**

The massive China Pavilion at the 2010 Shanghai Expo.



Professor Jintao Xu, Director

## MESSAGE FROM OUR CENTER DIRECTOR

In China, many economic analyses point to the facts that the policy of environmental protection such as pollution control and emission reduction has been undercut by over-emphasis of economic development goals at the local level, while in natural resource side economic opportunity has been much limited by fast expansion of government sponsored ecological programs. Examples of failure of government program 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 believed to take the lead on Green Race while maintaining a stable economic growth rate at 8 per cent 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 program. Most of the EEPC works focused on forest

policy, in recent years on reforming of state forest sector and collective tenure system. These two themes have been of top priority on the agenda of central government 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.

Researches and investigations of EEPC have provided academia and the government agencies most comprehensive information with regard to baseline situation in both state and collective forest sectors. It has been widely acknowledged that lack of appropriate mechanism and incentive in the state forest sector underpins more severe poverty in forested areas and unsatisfactory performance of forest resource conservation. By end of 2010, 20 provinces have launched forest tenure reform policies. Policy recommendations made by EEPC researchers are influential during the reform process of China's forest sectors.

During 2011, EEPC has completed its second-round survey in the eight provinces that was surveyed in 2006-2007, with the aim of a comprehensive evaluation of the reform and providing policy recommendations to cope with current problems and future challenges.

On state forest sector, EEPC has undertaken in-depth studies and prepared a drafted plan for future reform for the State Forestry Administration. EEPC has also collaborated with Beijing Transportation Research Center and provided policy recommendations for Beijing Municipal Commission of Transportation. In addition, EEPC has been engaged in the monitoring and assessment of carbon accounting induced by agricultural technological changes.

During 2011 the total number of peer-reviewed publication on international journals amounts to 7.

On capacity building, EEPC has devoted to graduate and undergraduate courses on environmental and natural resource economics at Peking University, and collaborating with international universities and institutions such as Resources for the Future, University of California, Berkeley, and University of Gothenburg. By 2011 EEPC has 4 faculty members including two professors and one associate professor at College of Environmental Sciences and Engineering, and one assistant professor at National School of Development.

Jintao Xu  
Director





The EfD Policy Day 2011 in Arusha, Tanzania, brought together more than 80 researchers and policy makers in a dialogue on Opportunities for sustainable natural resource use with national and local benefits.

## THE EFD ANNUAL MEETING 2011 IN TANZANIA

**The EfD Annual Meeting 2011 was held in Arusha, Tanzania (October 27-30). The annual meeting is a forum to bring together researchers from EfD centers and their collaborators and other key stakeholders for exchange of research ideas and discussion of research proposals and results from EfD research projects. About 50 participants attend the meetings each year.**

### Discussions on Research

One of the key note speakers in 2011 was Peter Martinsson, Professor of environmental and behavioural economics, Department of Economics University of Gothenburg. Martinsson spoke on the potential of field experiments in undertaking effective research at EfD. The other key note speaker was Pushpam Kumar, Chief, Ecosystem Services Economics Unit, United Nations Environment Programme (UNEP), who spoke on Economics of Ecosystem Services and the need for effective transdisciplinarity in research.

In line with its objective of promoting high quality relevant research, the EfD used the 2011 workshop as an opportunity to launch the new "Collaborative Research Process", which involves a multiple of EfD centers. EfD researchers developed collaborative research projects

focusing on various highly relevant research proposals that were consequently evaluated. Decisions on funding have been made by the research committee at the EfD secretariat.

The 2011 annual meeting also served as an important venue through which the views and comments on the future of EfD have been entertained from all the workshop participants. The session was chaired by Francisco Alpizar, Director of EfD Central America, and useful insights were obtained from the floor which helped enormously in the development of the EfD strategic plan for sustainability.

### EfD Policy Day at the Annual Meeting

The EfD Policy Day 2011, in Arusha, Tanzania (October 27), brought together more than 80 researchers and policy makers in a dialogue on Opportunities for sustainable natural resource

use with national and local benefits. More than 20 representatives from Ministries, Departments and Agencies participated. About one third of them, were members of the EfD Tanzania Research Policy Board (see table).

"Our objectives of the Policy Day is to communicate selected work of EfD's research and its potential contributions to key policy institutions and other key stakeholders present at the meeting. We also want to increase our learning on how to translate research to policy and make a difference with environmental economics tools, and share information across EfD centers on successful research-policy interactions," says EfD Director Gunnar Köhlin.

In Arusha 2011 the news media was invited for the first time. Two press releases on EfD research findings were issued, titled: Benefit



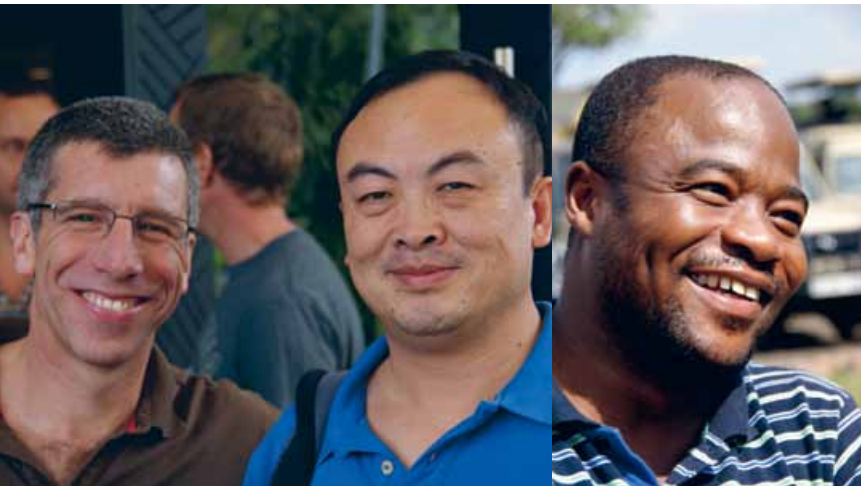
EfD members Razack Lokina, Selma Oliveira, Kofi Vondolia, and Edwin Muchapondwa.



Ruzika N. Muheto, Director, National Environment Management Council, Tanzania, Razack Lokina, EfD Tanzania Director, Wilfred Nyangena, EfD Kenya Director, and Amon Manyama, Chairman, EfD Tanzania Policy Board.



Felix Mwakyembe, Journalist at the Kiswahili weekly, interviewing Elizabeth Robinson, Associate Professor, University of Gothenburg and University of Reading.



Professors Randall Bluffstone, Portland State University, and Jintao Xu, Director EfD China/EEPC



Kofi Vondolia, UNEP, Nairobi and EfD Kenya Research Associate.



Professor Thomas Sterner, Dr Ping Qin, Policy analyst Olof Drakenberg, and Dr Yonas Alem at the EfD Coordination Committee meeting in Arusha 2012.

sharing is key for the success of REDD in Tanzania and Wildlife conservation can help poor communities survive. Journalists came, and reports were published in Kiswahili weekly, Raia Mwema, The Guardian, The Daily News, The Citizen, and broad-casted in the tv-channels ITV and Channel Ten. EfD media coverage can be found under the heading EfD in media on [www.efdinitiative.org](http://www.efdinitiative.org)

Julius Ningu, Director, Environment Division, Vice-President's Office, opened the meeting by discussing about greening the economy through better management of wildlife and forestry. Claude Mung'ongo, Professor at the University of Dar es Salaam's Institute of Resource Assessment, spoke about implementation of Tanzania's REDD+ strategy and key challenges. Elizabeth Robinson, Associate Professor, University of Gothenburg and University of Reading, spoke about experiences of successful forest management in Sub-Saharan Africa and its implications for REDD+ policies and the private sector. Allan Kijazi, Director Tanzania National Parks (TANAPA), spoke about sustainable management of Tanzania's wildlife resources and its contribution to development.

The importance of giving landholders strong

use rights and encouraging the commercialization of wildlife, including trade and developing of new wildlife products was discussed by Edwin Muchwapondwa, Associate Professor at the University of Cape Town and in charge of coordinating EfD research in 2011. This was followed by a presentation by Randy Bluffstone, EfD research associate, EfD Ethiopia, on the determinants of agricultural investment and productivity over the long term-implications for East African policy makers. The policy day ended with a closing speech by Amon Manyama, Chairman, EfD Tanzania policy board and head of poverty unit, UNDP Tanzania.

The final panel discussion on Key actions to attain sustainable natural resource use with benefits for local communities – Tanzania and other examples included also (in addition to some speakers mentioned above) Blandina Cheche, Poverty Environment Coordinator, Vice-President's Office, Olof Drakenberg, Policy Analyst and Chairman, EfD Policy Day Committee, Ruzika Mheto, Director, Environmental Planning and Research, National Environment Management Council (NEMC), Aloyce Nzuki, Director, Tourism Division, Ministry of Natural Resources, and Professor Jintao Xu, EfD Research Fellow and Director, EfD China.

During the Policy Day, members of the policy board also took the opportunity to challenge EfD researchers. Several news media reported from the day (see EfD in media on [efdinitiative.org](http://efdinitiative.org)) and for example The Guardian reported (October 29, 2011) under the heading Researchers challenged to reach out to ordinary people:

Blandina Cheche, Poverty Environment Coordinator, Vice-President's Office, said research findings could influence positive changes in policy directions and society in general. "But researchers must ensure they bridge the gap between themselves and ordinary people in society and that their research findings reach them in a simple language," said Cheche. She also asked researchers in the country to ensure the research conducted and recommendations are used to address burning issues on the ground: "By doing so, we will be helping people out of the poverty gap." According to The Guardian the board member, Ruzika Mheto, Director, Environmental Planning and Research, National Environment Management Council (NEMC) "concurred with the idea, urging researchers to translate their research into Kiswahili: "Research acts as a stimulus to development in a particular locality but its research findings should reach the grass roots."



Blandina Cheche, Vice-President's Office, Claude Mung'ongo, Professor at the University of Dar es Salaam's, Arnold Mapinduzi, The National Environment Management Council (NEMC), and Salvatory Macha, EfD Project Administrator.



Dr. Ping Qin, Senior Research fellow and Deputy Director EfD China/EEPC



EfD fellows Yuanyuan Yi, EfD China, and Mintewab Bezabih, University of Portsmouth among other annual meeting attendants.



# 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 government make intelligent decisions in 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 in policy making processes, then this will result in improved policies and subsequently poverty reduction and a more sustainable development.

EEPC focuses on applied policy research. In particular it attempts to identify the areas of environmental policy improvement and address the policy needs in 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 the 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, as well as water resource allocation.

In 2011 EEPC has completed its second-round survey in eight provinces that was surveyed in 2006-2007, with the aim of a comprehensive evaluation of the reform and providing policy recommendations to cope with current problems and future challenges. On state forest sector, EEPC has undertaken in-depth studies and prepared a drafted plan for future reform for the State Forestry Administration.

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

**Forests have a unique potential to contribute to sustainable economic development and a reduction of China's massive carbon emissions. Forest Tenure Reform in China's collective forests is a process of historical 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.**

Professor Jintao Xu (third from left), Research fellow and Director of EfD China, and Haipeng Zhang (second from left, EfD research fellow, in Sichuan with local forestry administration.



EEPC has also collaborated with Beijing Transportation Research Center and provided policy recommendations for Beijing Municipal Commission of Transportation. In addition, EEPC has been engaged in the monitoring and assessment of carbon sequestration potential from agricultural technological changes.

## CHINA'S FOREST SECTOR

EEPC has since foundation focused on the study of China's forest sector reform. The collective forest tenure reform in China in its main terms of entitling individual households with land certificates of use rights since the beginning of 2000s has involved over 100 million hectares of forestland and more than 400 million people. Commissioned by 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. To study further profound effects 3-5 years after reform, EEPC in 2011 has completed the follow-up (second round) survey and study for the collective forest areas. Currently EEPC researchers have been focusing on quantitative study and drafting papers based on collected data and merging with the existing database.

State-owned forest sector in northeastern China, which is the other key component of China's forest sector and main supplier of industrial wood, is identified as one of the six topics of the highest priorities 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 2011 two policy briefs with the presentation of our study results and policy implications as well as reform recommendations has been finished and submitted to SFA, China.

**O**UR CONTRIBUTION WILL be to provide a comprehensive analysis of different views, and suggest how these can be consolidated into an ultimate future path for state forests," says Professor Jintao Xu, Director of the Environmental Economics Program in China (EEPC), the Chinese node of EfD.

Professor Jintao Xu, Director of the Environmental Economics Program in China (EEPC), the Chinese node of EfD, is one of China's most prominent experts in forestry economics. He has been conducting research in forestry economics for about 25 years. For the last ten years he has pointed to forests as a major asset for sustainable development in China.

"Many climate change experts basically ignored this sector for long. We have contributed to getting the ideas out, together with foresters and colleagues. And suddenly it happens – national leaders promote the forest sector at world summits," says Xu.

In recent years most of the research work by EfD in China has focused on forest policy and on reformation of the state forest sector and

the collective tenure system. The purpose of the reform is to establish individual household management and improve farmers' livelihood. Lack of appropriate mechanisms and incentives in the state forest sector, and lack of secure forest tenure for farmers in the collective forest sector, underpin severe poverty in forested areas and unsatisfactory performance of forest resource conservation. Research done by the EEPC has provided academia and government agencies with comprehensive information about the baseline situation in these two major forest sectors. Their policy recommendations have also been highly influential.

The ongoing State Forestry Reform Project focuses on two important issues: 1) how to transform state forest enterprises to improve their financial performance and their performance with respect to forest conservation, and 2) how to modify the relationship between state forest authorities, provincial governments and state forest enterprises.

The findings of Xu and his research colleagues Xumei Jiang and Haipeng Zhang, from forestry studies in northeast China, are

to a large extent contrary to the view of the State Forest Administration.

"We need to speed up the reformation of the central government forest policy. Our report will inform the central government about what is happening at the local level, affect their thinking, and make them better prepared for local innovations. My anticipation is that local initiatives will be recognized by the central government in 1-2 years," says Professor Xu.

Xu and his EfD research team have also analyzed a potential Chinese forest carbon market, given different scenarios, namely a cap on emissions by 2012, 2030 or 2050. They provided recommendations on the policy needs to effectively develop the market. This work was commissioned by the Forest Carbon Management Office, a proactive department within the State Forest Administration (SFA) that Xu has been working with since its founding.

In late May 2012 EEPC/EfD China, State Forestry Administration and the World Bank will arrange the Third international conference on the State Forest Reform.





One of Beijing's congested roads. Photo by hldpn.

## 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 Beijing Transportation Research Center and Beijing Transportation Commission since 2008, with the aim to find effective policy instruments to address serious urban air pollution, particularly in Beijing.

Based on the co-organized international conference on urban transportation management and environmental policy in August 2010, EEPC in 2011 continues collaborating with Beijing Transportation Research Center and providing policy recommendations. Since then, two senior research fellows and two international research associates have been engaged in a transportation research project funded by EfD, in order to analyze distributional welfare impacts of various transport policies, and effect of these policies on travelers' choice of transport mode. In addition, EEPC has sent two Master's student to BTRC as an intern and invited BTRC researchers to give speeches at PKU regularly for over three years.

The research carried out by Prof Shiqiu Zhang and related to air pollution control for Beijing and surrounding areas with the generation of a policy recommendation for the regional air quality management mechanism has been promoted the policies for "Regional air quality control management" announced by the State Council.

Dr Jianhua Xu has been working on identifying cost-effective SO<sub>2</sub> 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 is completed in 2011 with a report in association with drafted paper submitted.

## EEPC AND CARBON, CLIMATE CHANGE

As increasing focus is 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 has worked on such a project for 4 years since 2008, while relevant paper was published on international journal, related project reports were presented in policy seminars organized by SFA and CAAS. EEPC has also actively participated in projects of voluntary forest and agricultural carbon markets designing, commissioned by the Management Office on CDM Projects, SFA.

Dr Jianhua Xu has been working on analyzing the policies on black carbon control in the different nations and estimating the cost and benefit of controlling black carbon emissions in China. The research is part of a big project on studying black carbon and climate change in China, a collaboration between Peking University and Chinese Academy of Meteorological Sciences. Black carbon is both a short-lived climate warming agent and a health hazard. Abating the emission of black carbon has both climate benefit and health benefit. The policy recommendations will be delivered to National Development and Reform Commission for developing climate changers abatement strategies.

## 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 the state forest reform was identified as one of the ten priority research themes by SFA, EEPC has been commissioned to undertake the field study and provide policy recommendations. Policy briefs and report have been submitted to SFA, emphasizing on the exploration of new in-



stitutional and mechanism reforms to achieve sustainable development.

Prof Jintao Xu serves as an adviser to the Department of Afforestation, China's State Forestry Administration. He was 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 Workshop on Reforming Design of State Forest Sector on April 9th, was co-organized by SFA, EEPC, and World Bank, with participants from both the central and local levels of SFA and the academia.

Jade Dragon Snow Mountain, China.





# RESEARCH

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

## RESEARCH 2011: PUBLICATIONS

### PEER REVIEWED

Li, Wanxin, 2011. "Engaging with the Climate Change Regime: China's Challenges and Activities", *The China Monitor*, Issue 66, October 2011, pp 4-9.

Qin, P, F. Carlsson, and J. Xu. 2011. "Forestland reform in China: what do the farmers want? A choice experiment on farmers' property rights preferences." *Land Economics*. 87 (3): 473-487.

Li, Jie, and Xu, Jintao, 2011. Climate Change in China: Policy Evolution, Actions Taken and Options Ahead. *Journal of Natural Resources Policy Research*, 1939-0467, Volume 3, Issue 1, 2011, Pages 23 – 35

Blumsack, S. and Jianhua Xu (2011). Spatial variation of emissions impacts due to renewable energy siting decisions in the Western U.S. under high-renewable penetration scenarios, *Energy Policy*, 39(11),6962-6971.

Xu, Jianhua, H. K. Florig and M. DeKay (2011). Evaluating an analytic-deliberative risk-ranking process in a Chinese context, *Journal of Risk Research*, 14(7),899-918.

Xu, Jianhua, P. Fischbeck, M. Small, J. VanBriesen, and E. Casman (2010). Closure to "Identifying sets of key nodes for placing sensors in dynamic water distribution networks". *Journal of Water Resources Planning and Management*, 136(2), 295-296.

Bennett, M., A. Mehta, and J. Xu. 2011. "Incomplete Property Rights, Exposure to Markets and the Provision of Ecosystem Services in China". *China Economic Review*, Volume 22, Issue 4 (2011), pp. 485-498.

### EFD DISCUSSION PAPERS

Jiang Xuemei, Gong Peichen, Bostedt Göran, and Xu Jintao, 2011, "Impacts of Policy Measures on the Development of State-Owned Forests in Northeastern China: Theoretical Results and Empirical Evidence". *Environment for Development Discussion Paper Series*, EfD DP 11-12.

### OTHER DISCUSSION PAPERS

Li, Wanxin, and Higgins, Paul, 2011. "Controlling Local Environmental Performance: an analysis of three national environmental management programs in the context of regional disparities in China." Discussion paper, City University of Hong Kong.

Li, W., Liu J., and Li, D., 2011. "Getting their voices heard: Three cases of public participation in environmental protection in China", discussion paper, Tsinghua University.

Carlsson, Fredrik, Elina Lampi, Wanxin Li, Peter Martinsson, 2011, "Subjective well-being among preadolescents - Evidence from urban

China", University Of Gothenburg Working Papers in Economics Nr 500  
Xie, Lunyu, Berck, Peter and Xu, Jintao, The Effect of the Collective Forest Tenure Reform in China on Forestation (March 9, 2011). Available at SSRN.

### EFD/RFF BOOKS

Sterner, Thomas, Jessica Coria, "Policy Instruments for Environmental and Natural Resource Management", (2011), Routledge, Published by RFF Press.

Sterner, Thomas, Editor, "Fuel Taxes and the Poor, The Distributional Effects of Gasoline Taxation and Their Implications for Climate Policy", (2011), Routledge, Published by RFF Press with Environment for Development initiative.

Bluffstone, Randall A. and Gunnar Köhlin, Editors, "Agricultural Investment and Productivity - Building Sustainability in East Africa", (2011), Routledge, Published by RFF Press.

### BOOK CHAPTERS

Cao, J., 2011. Is Fuel Taxation Progressive or Regressive in China? In "Fuel Taxes and the Poor, The Distributional Effects of Gasoline Taxation and Their Implications for Climate Policy", Sterner, T. Ed., RFF Press, Routledge. ISBN 978-1-61726-092-6.





Dr Xuemei Jiang and team members in the survey of Liaoning province: A second-round massive survey of collective forest tenure reform in eight provinces in China.



A picture of the household survey of the Choice Model of Transportation Behaviors, conducted by Beijing Transportation Commission and EEPC researcher and students.

## RESEARCH BRIEFS

Xu, Jintao, Haipeng Zhang, Jeff Bennett, Xuehong Wang and Mark Eigenraam, 2010. "Ecological Afforestation in China: A Market-based Approach". Submitted to Australia Centre for International Agricultural Research (ACIAR). EEPC research brief, Peking University.

## POLICY BRIEFS

Xu, Jintao and Xuemei Jiang, 2010. "Key State-Owned Forest Areas in Northeast of China: Reform Paths and Policy Implications". Submitted to State Forestry Administration, P.R. China. EEPC policy brief, Peking University.

## REPORTS

EfD China Center Report 2010  
This report presents EfD China, its members and work during 2010. For a free hardcopy, please send an email to: [info@efdinitiative.org](mailto:info@efdinitiative.org)

# PROJECTS 2011

### Environmental and economic policies in China:

An overall design and demonstration  
Funded by Ministry of Environmental Protection (MEP), China, and EEPC takes one of the sub-projects:

#### The economics methodology of environmental policy instruments.

Research results so far: an in-depth review on existing literature has been undertaken; follow-up survey in Sichuan province was conducted in 2011 with data collected; data is cleaned for the years of 2009, 2010 and 2011 surveys, and ready for quantitative analysis.

### Risk-based cost-effective control of SO<sub>2</sub> emissions at regional levels

Funded by Economy and Environment Program for Southeast Asia (EEPSEA) (PI)  
Research results so far: the major SO<sub>2</sub> emission sectors in Beijing and its surrounding areas have been identified.

#### Regional air quality management

Funded by Beijing Municipal Science & Technology Commission (Co-PI)  
Research results so far: the analysis on energy consumption patterns has been done and regional air quality management practices in developed nations have been summarized.

### The climate effect of black carbon and the abatement of black carbon as a buffer for abating CO<sub>2</sub> emissions

Funded by Chinese Ministry of Science and Technology (Co-PI)  
Research results so far: preliminary literature review has been finished.

### Economic Analysis on Ambient Air Quality Standard for PM<sub>2.5</sub>

Sponsored by Energy Foundation





Professor Jintao Xu, Center Director EfD China, and Gunnar Köhlin, EfD Director, at the slope of the Jade Dragon Snow Mountain in the province of Yunnan.

## PROJECTS 2012

### **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

### **Automobile demand analysis in Beijing**

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

### **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 in Beijing**

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

## RESEARCH PRESENTATIONS

### **ESPP Public Lecture, Michigan State University (Oct3-11) Climate Policy: A Chinese Perspective**

*Jintao Xu*

### **Department of Forestry, Michigan State University (Oct4-11) Collective Forest Tenure Reform in China: Outcomes and Analysis of Performance based on two rounds of surveys**

*Jintao Xu*

### **Global Political Economy of Climate Change Seminar Series, Yale University (Oct19-11) China's Climate Policy at the Cross-roads**

*Jintao Xu*

### **World Bank Brownbag Lecture (Oct 6-11) Collective Forest Tenure Reform under Village Democracy: Overview and Research Plan**

*Jintao Xu*

### **World Bank Brownbag Lecture (Nov 30-11) China's Sloping Land Conversion Program: Comprehensive but Preliminary Assessment**

*Jintao Xu*



# 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 devoting to developing productive international scholars and institutions in order to advance its academic exploration in modern environmental economics. We receive students from all over China who are interested in environmental sciences and economics. Our graduate program includes a MSc in envi-

ronmental economics and policy and a PhD in environmental economics and resources 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 environment protection, whether in private or public sectors, non-governmental organizations, or in 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 targets to build up a top Ph.D program in environmental and climate economics.

EEPC weekly meeting and discussion.







EEPC weekly meeting and discussion.

## MSC THESES

Fan, Jie

**Cost-effectiveness and welfare analysis of paddy land conversion program.**

Supervised by Jintao Xu and Haipeng Zhang.

Yu, Jialing.

**An analysis on space-time structure and determinants of China's household resource consumption.**

Supervised by Shiqiu Zhang.

Takeshi, Inada

**The institutionalization of corporate environmental reporting: From the viewpoint of the comparison analysis in China and Japan.**

Supervised by Shiqiu Zhang.

## PHD THESES

Xie, Xuxuan

**The value of health: Applications of choice experiment approach and urban air pollution control strategy.**

Supervised by Shiqiu Zhang.

### Courses in environmental economics taught by EEPC include:

#### Undergraduate courses

- 1) Environmental Management
- 2) Environmental Economics

Students	Fellow(s) teaching the course
45	Shiqiu Zhang
15	Shiqiu Zhang

#### Master courses

- 1) Environmental Economics
- 2) Frontier of Env Sciences and Engineering

Students	Fellow(s) teaching the course
10	Shiqiu Zhang
10	Shiqiu Zhang

#### PhD courses

- 1) Advanced Natural Resource Economics
- 2) Environmental Economics
- 3) Frontier of Env Sciences and Engineering

Students	Fellow(s) teaching the course
7	Jintao Xu
10	Shiqiu Zhang
5	Shiqiu Zhan



# SPREADING THE WORD

News about research and policy interaction

**Read more on the website [www.efdinitiative.org/centers/china/news-press](http://www.efdinitiative.org/centers/china/news-press)**

2011-08-03

## **Prof. Jintao Xu, Elected Vice President of the Chinese Association of Forestry Economics**

On May 31st, 2011, the Seventh Member Assembly of the Chinese Association in Forestry Economics (CAFE) was held in Beijing. The assembly elected a new council committee for the association. Professor Jintao Xu was elected Vice-President of the association.

2011-02-27

## **EfD research addresses Beijing's congestion and air pollution**

Beijing is the world's most congested city as measured by average vehicle speed. It is also one of the most air polluted cities, with a substantial part of the emissions coming from vehicles. To find effective policy instruments to address these serious urban challenges, Environment for Development in China/the Environmental Economics Program in China (EEPC) and Beijing Transportation Research Center are collaborating in a research program.

## IN THE MEDIA

On the webpage of College of Environmental Sciences and Engineering at Peking University (<http://cese.pku.edu.cn/>), EfD Initiative can be linked to by clicking on the logo located in the lower left corner, where browsers have access to EfD China center in both English and Chinese. Here is a list of linkages with articles about members from EfD China. Some are in English, and some are only in Chinese.

MARCH 9, 2011

Prof Jintao Xu, Speech on strategic relationship between climate change and China's forestry: <http://www.iincn.net/wdf/huiyiluntan/banjiangyishi/2011/0309/15791.html> (only in Chinese)

Prof. Jintao Xu

AUGUST 25, 2011

Prof Jintao Xu, Local Autonomy in Environmental Protection in China: <http://www.chinareform.net/show.php?id=1989> (only in Chinese)

Prof Shiqiu Zhang on the competing list of Leading Sustainability Awards 2011, <http://globeaward.org/jury>







Professor Jintao Xu, Director, and Dr. Ping Qin, Deputy Coordinator

## THE CHINESE NODE IN THE EFD NETWORK

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

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 sciences as well as policy-making. 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 m<sup>2</sup> at the Conservation Biology Building located at north-west corner of PKU's campus. So far there are 14 tables equipped with computers and network, accommodating for both research fellows and graduate students.

### LOCAL RESEARCHERS AND STAFF

#### Professor Jintao Xu

COORDINATOR AND SENIOR RESEARCH FELLOW

#### Professor Shiqiu Zhang

SENIOR RESEARCH FELLOW

#### Ph.D. Jianhua Xu

SENIOR RESEARCH FELLOW

#### Ph.D. Ping Qin

SENIOR RESEARCH FELLOW AND DEPUTY COORDINATOR

#### Min Wang

SENIOR RESEARCH FELLOW

#### Ph.D. Michael Bennett

VISITING SCHOLAR

#### Ph.D. Haipeng Zhang

VISITING SCHOLAR

#### Ph.D. Xuemei Jiang

VISITING SCHOLAR

#### MSc. Hui He

RESEARCH FELLOW

#### Jie Li

RESEARCH FELLOW

#### Yuanyuan Yi

COMMUNICATION OFFICER AND RESEARCH FELLOW

#### Ling Li

ADMINISTRATIVE ASSISTANT

### DOMESTIC RESEARCH ASSOCIATES

#### Dr. Jing Cao

DEPT. OF ECONOMICS AT TSINGHUA UNIVERSITY

#### Dr. Wanxin Li

SCHOOL OF PUBLIC POLICY AND MANAGEMENT AT TSINGHUA UNIVERSITY AND CITY UNIVERSITY OF HONG KONG

#### Dr. Haoran He

BEIJING NORMAL UNIVERSITY

### INTERNATIONAL RESEARCH ASSOCIATES

#### Lunyu Xie, Ph.D

CANDIDATE, DEPT. OF AGRICULTURAL AND RESOURCE ECONOMICS AT UNIVERSITY OF CALIFORNIA, BERKELEY

#### Ph.D. Priscilla Cooke St. Clair

PACIFIC LUTHERAN UNIVERSITY

#### Professor Stein Holden

DEPT. OF ECONOMICS AND RESOURCE MANAGEMENT AT NORWEGIAN UNIVERSITY OF LIFE SCIENCES

#### Professor Fredrik Carlsson

DEPT. OF ECONOMICS AT UNIVERSITY OF GOTHENBURG





A picture of EEPC/ EfD China

More details of each person listed above are available on EfD website, in the center section of China. The following is a list of EEPC staff, of which full time equivalents is 7 (Jintao Xu, Shiqiu Zhang, Ping Qin, Ling Li, Hui He, Yuanyuan Yi, and Jie Li), while the others are half time (Xuemei Jiang, Haipeng Zhang, Michael Bennett, Min Wang, and Jianhua Xu) and associates (Jing Cao, Wanxin Li, Haoran He, Lunyu Xie, Priscilla Cooke St. Clair, Stein Holden, and Fredrik Carlsson):

## FULL TIME STAFF

### Jintao Xu

coordinator of EEPC and research fellow of EfD, is currently a professor of natural resource economics at the College of Environmental Sciences and Engineering, Peking University (since 2006). He is responsible for overall management as well as researches and teaching in environmental and natural resource economics, etc.

### Shiqiu Zhang

a professor of environmental economics at the College of Environmental Sciences and Engineering, Peking University, joined EEPC (in 2007) as a senior member of the center. She is mainly responsible for supervising research

in environmental protection policies, capacity building in environmental policy analysis, and researching in air pollution control policy, environmental policy in energy sector, etc.

### Ping Qin

joined EEPC as a senior research fellow since she finished her PhD in environmental economics in Department of Economics, University of Gothenburg, Sweden in 2010. Her research interest includes policy and program assessment, environmental valuation, renewable and non-renewable natural resource management in developing countries. Currently she has worked on a project on transportation and urban air pollution control for two years.

### Ling Li

is an administrative assistant in EEPC and responsible for daily administration in the center. She provides administrative and secretarial support to EEPC staff and graduate students, coordinates all the logistics and gives support to all EEPC projects, and takes care of data management as well.

### Hui He

joined EEPC as a senior research assistant in March 2009. She is responsible for quantitative analysis, and modeling firms' behavior in industrial sectors, as well as providing advisory

and assistant support on field trips. In 2011 she works on a project sponsored by Ministry of Environmental Protection, on the economics methodology of environmental policy instruments.

### Yuanyuan Yi

worked in EEPC since 2006 as center administrative assistant, and she functions as a research fellow since 2011 after she finished her Master's study. Her main research interest includes the study of state and collective forest sector, and the relationship between forestry and climate change. She is also responsible for EEPC's public relations and projects coordination, dissemination support and EEPC Chinese website.

### Jie Li

is a senior research assistant recruited in September 2006, and she became a PhD student in Environmental Economics in College of Environmental Sciences and Engineering, Peking University in September 2009. She is specialized in study of social development and responsible for quantitative analysis, survey designing and practice, and database development. She continues to focus on the study of agricultural and forest carbon projects.

## HALF TIME STAFF

### Xuemei Jiang

is currently a lecturer at College of Economics and Management, Beijing Forestry University. She is undertaking the analytical work of state forest reforms and survey leader in collective forest tenure reform study.

### Haipeng Zhang

is currently a researcher at the Institute of Rural Development, Chinese Academy of Social Sciences. He has been doing researches in agricultural policy analysis, rural environmental pollution and natural resource economics. His current research focuses on forest policy.

### Jianhua Xu

an associate professor in the Department of Environmental Management, Peking University, joined EEPC as a senior research fellow in 2010. She is currently doing research on managing risks posed by regional air pollution, and carbon prices and its implication on designing policy instruments.

### Min Wang

an assistant professor at the National School of Development, Peking University, joined EEPC as a senior research fellow in September 2011, is responsible for student advising, and researches in environmental and resource economics, macroeconomics, energy and climate change, growth and development, applied econometrics, etc.

### Michael Bennett

a visiting scholar at Peking University (since 2006) and an environmental consultant based in China, is taking the role as student advising and quantitative analysis, modeling household labor allocation in state forest areas, as well as relevant database development.

## RESEARCH ASSOCIATES

### Jing Cao

Ph.D. in environmental economics (2007, Harvard Kennedy School of Government) has agreed on investigating taxation reform for pollution control with EEPC. She is functioning as a research associate with EEPC while working as assistant professor of economics at Tsinghua University.

### Wanxin Li

is a research associate with EEPC while working as assistant professor at the School of Public Policy and Management at Tsinghua University and City University of Hong Kong. She has been working with EEPC on institutional capacity of environmental protection agencies and its implications for pollution reduction in China.

### Haoran He

completed his PhD study in economics at the Department of Economics, University of Gothenburg, Sweden, in 2010, is now working as a lecturer in the Department of Economics and Business Administration, Beijing Normal University. He is functioning as a research associate of EEPC since then.

### Priscilla Cooke St. Clair

is an associate professor of economics at Pacific Lutheran University in Tacoma, Washington. Her research interests focus on household and intra-household analysis of environmental policy, and specifically on the areas of community forestry, forest tenure, and household energy.

Stein Holden is a professor in development and resource economics at the Department of Economics and Resource Management, Norwegian University of Life Sciences. He has worked with EEPC on tenure analysis within collective forest tenure reform of China.

### Lunyu Xie

is a Ph.D candidate in Department of Agricultural and Resource Economics, University of California, Berkeley. Her main research interests are on foreign trade of agricultural commodities, forest tenure reform in China, inequality and vulnerability in developing countries. She has been working with EEPC on forest plantation, stock and harvest in China after the collective forest reform, as well as transportation management policy.

### Fredrik Carlsson

is a professor of economics at the Department of Economics, University of Gothenburg. His fields of specialization are environmental economics, applied microeconomics, and behavioral economics. He has worked with EEPC on supervising PhD dissertations on China's forest sector studies and behavioral economic topics.

## Contact us

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

Environmental Economics Program in China  
Peking University, Rm 322, Lao Di Xue Lou,  
Peking University, Beijing 100871, CHINA

Phone: +86 10 62767657  
Email: [eeepc@pku.edu.cn](mailto:eeepc@pku.edu.cn)  
[www.efdinitiative.org/centers/china](http://www.efdinitiative.org/centers/china)





Yuanyuan Yi, Communication officer and Research fellow, EfD in China.

## Networks

EEPC has close collaboration 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 Chinese Academy of Social Sciences (for example, the Rural Development Institute, <http://rdi.cass.cn>), Chinese Academy of Sciences (for example, the Center for Chinese Agricultural Policy, [www.ccap.org.cn](http://ccap.org.cn)), Chinese Academy of Agricultural Sciences (for example, the Institute of Environment and Sustainable Development in Agriculture, [www.ieda.org.cn](http://ieda.org.cn)), Chinese Academy of Forestry Sciences (for example, the Research Institute of Forestry Policy and Information, [www.lyzc.org.cn/kxs.htm](http://lyzc.org.cn/kxs.htm)), Tsinghua University ([www.tsinghua.edu.cn](http://www.tsinghua.edu.cn)), City University of Hong Kong ([www.cityu.edu.hk](http://www.cityu.edu.hk)), Renmin University of China ([www.ruc.edu.cn](http://www.ruc.edu.cn)), Beijing Forestry University ([www.bjfu.edu.cn](http://www.bjfu.edu.cn)), Beijing Normal University ([www.bnu.edu.cn](http://www.bnu.edu.cn)), the National School of Development (the former China Center for Economic Research of Peking University, [www.nsd.edu.cn](http://www.nsd.edu.cn)), Center for Economic and Development Research of State Forest Administration, Beijing Transportation Research Center, and so on.

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

## Donors and funding

During the year of 2011 EEPC has received both financial and organizational support from the EfD Initiative, the World Bank, Rights and Resources Initiative, the State Forest Administration of China, and Ministry of Environmental Protection (MEP).

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

### Number of donors

4

List of Donors	Funding by donor during 2011
1) MEP	5.48%
2) The World Bank	9.52%
3) SFA	17.42%
4) RRI	25.89%
5) EfD	41.69%

Sida/EfD funding as share of total center budget (incl. univ. salaries)	41.69%
---	--------



Hangzhou, China.

## 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. 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:**

## CENTRAL AMERICA

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

Dr. Francisco Alpízar, Center Director

Email: [falpizar@catie.ac.cr](mailto:falpizar@catie.ac.cr)

Phone: +506 558 2215 /2624



## KENYA

Environment for Development Kenya

Kenya Institute for Public Policy Research and Analysis (KIPPRA), Nairobi University

Dr. Wilfred Nyangena, Coordinator

Email: [nyangena\\_wilfred@uonbi.ac.ke](mailto:nyangena_wilfred@uonbi.ac.ke)

Phone: +254 20 316282



## CHINA

Environmental Economics Program  
Peking University

Professor Jintao Xu, Center Director

Email: [xujt@pku.edu.cn](mailto:xujt@pku.edu.cn)

Phone: +86 10 62767629



## SOUTH AFRICA

Environmental Economics Policy Research Unit  
University of Cape Town

Dr. Mare Sarr, Center Director

Email: [mare.sarr@uct.ac.za](mailto:mare.sarr@uct.ac.za)

Phone: +27 21 650 2982



## ETHIOPIA

Environmental Economics Policy Forum for Ethiopia  
Ethiopian Development Research Institute (EDRI/AAU)

Dr. Alemu Mekonnen, Center Director

Email: [alemu\\_m2004@yahoo.com](mailto:alemu_m2004@yahoo.com)

Phone: +251 11 5523564



## TANZANIA

Environment for Development Tanzania  
University of Dar es Salaam

Dr. Razack Lokina, Center Director

Email: [razack\\_lokina@yahoo.co.uk](mailto:razack_lokina@yahoo.co.uk)

Phone: +255 22 2410252



## 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:

#### Associate Professor Gunnar Köhlin

Director of EfD Program, University of Gothenburg

Email: [gunnar.kohlin@economics.gu.se](mailto:gunnar.kohlin@economics.gu.se)

Phone: +46 31 786 4426

#### Professor Thomas Sterner

Environmental Economics Unit (EEU), University of Gothenburg

Email: [thomas.sterner@economics.gu.se](mailto:thomas.sterner@economics.gu.se)

Phone: +46 31 786 1377

#### Karin Backteman, Communications officer

Environmental Economics Unit (EEU), University of Gothenburg

Email: [karin.backteman@economics.gu.se](mailto:karin.backteman@economics.gu.se)

Phone: +46 31 786 25 95



### 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:

#### Senior Fellow Allen Blackman

Resources for the Future

Email: [blackman@rff.org](mailto:blackman@rff.org)

Phone: +202 328 5073



### Sida

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





### More information & Contact us

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

For more information please visit [www.efdinitiative.org/centers/china](http://www.efdinitiative.org/centers/china)

You are most welcome to contact us:

Efd China

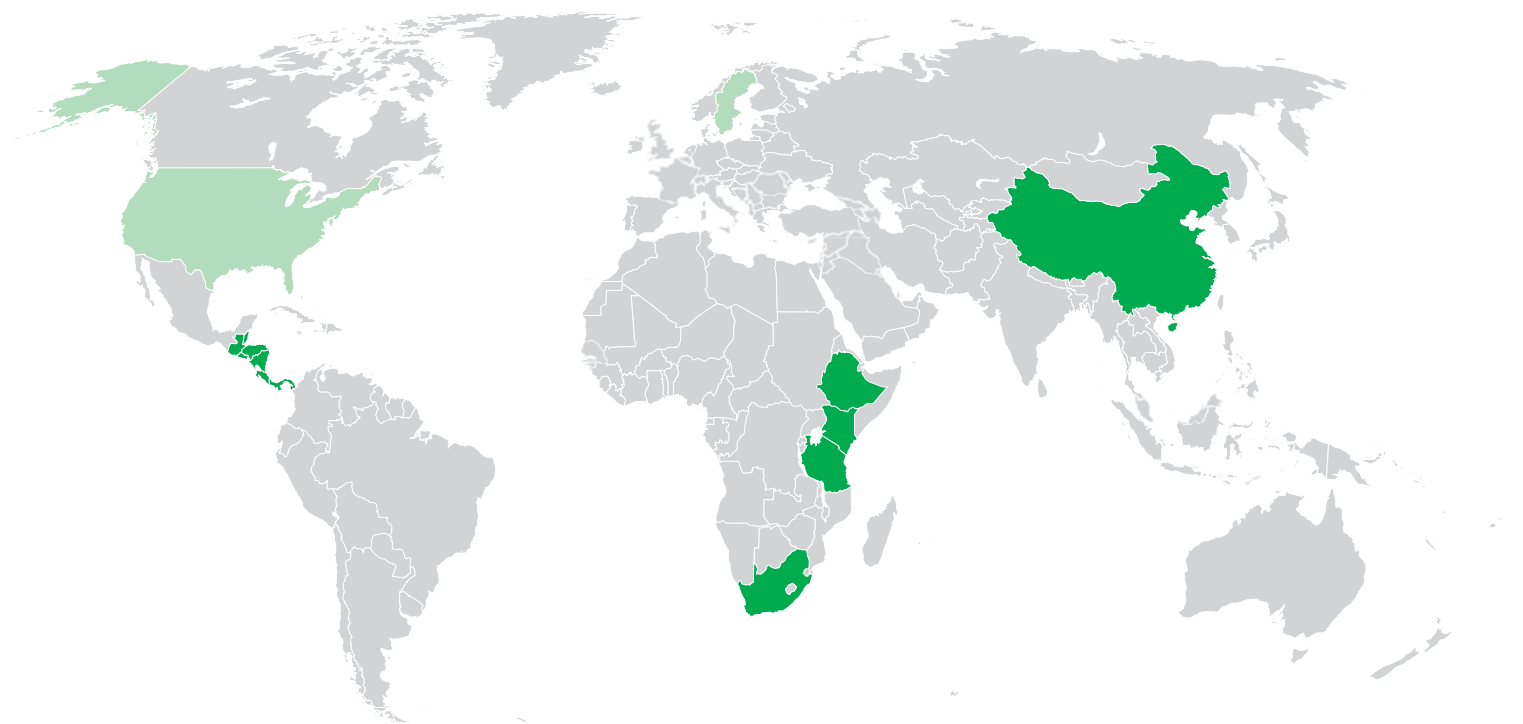
Environmental Economics Program in China (EEPC)

Peking University

Rm 322, Lao Di Xue Lou, Peking University, Beijing 100871, CHINA

Phone: +86 10 62767657

Email: [eepec@pku.edu.cn](mailto:eepec@pku.edu.cn)



### Efd CENTERS

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

### PARTNERS

Sida, University of Gothenburg, RFF



UNIVERSITY OF GOTHENBURG  
SCHOOL OF BUSINESS, ECONOMICS AND LAW

