



Economy and Environment Program for Southeast Asia

Progress Report

November 2012 to March 2013



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PROGRESS REPORT

November 2012 to March 2013

Donors:

International Development Research Centre
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ECONOMY AND ENVIRONMENT PROGRAM FOR SOUTHEAST ASIA

PROGRESS REPORT

November 2012 to March 2013

This progress report documents the activities of the Program from November 2012 to March 2013. It also presents some outcomes that were identified from the March 2013 tracer study of outcomes and impacts.

The closure of the IDRC office in Singapore in June 2012 and the subsequent consolidation of IDRC's activities in Asia at the New Delhi office, led IDRC and Sida, in close coordination with the EEPSEA Management, to find a new home for EEPSEA. This event provided an opportunity to set into motion the planned devolution of EEPSEA, which is considered by both donors as a mature program ready to operate outside of IDRC.

After a series of consultations with several potential host organizations, and following a set criteria, WorldFish was identified as a suitable host for EEPSEA. Following a series of negotiations, IDRC and Sida each entered into a 48-month Memorandum of Agreement with WorldFish to fund EEPSEA.

The EEPSEA Philippine office was immediately set up within the WorldFish-Asia office on SEARCA premises. The Penang office was set up in January 2013 within WorldFish Headquarters. EEPSEA maintains three staff at the Philippine office to manage grant administration and publications and appointed a Research Manager at the Penang office. The Director spends half-time at each office.

1.0 HIGHLIGHTS OF THE REPORTED PERIOD

Aside from the setting-up of the two EEPSEA offices, including the hiring of new staff, EEPSEA concentrated its efforts on the reviewing, editing and finalizing of 13 Research Reports which will be printed in April 2013. These were part of about 25 reports that were submitted in the last year of EEPSEA under IDRC. EEPSEA also organized two training workshops in March 2013 in Penang, Malaysia, involving 46 attendees. In November 2012, EEPSEA sponsored two panel sessions involving 10 presentations by its researchers at two international events, held in Myanmar and the Philippines. The Program also supported the participation of 14 researchers at three conferences and a workshop and brought together 20 researchers from its five (5) cross-country projects to a February 2013 write-shop meeting in Hue, Vietnam. The main findings from these cross-country projects will be reported at the EEPSEA Annual Conference to be held from May 14-16 in Penang, preparatory work on which is currently ongoing in earnest. In terms of outcomes, the Program monitored that EEPSEA studies (research projects implemented from 2010-2012) have been published in 11 journals and two book chapters. It has also documented some stories on how EEPSEA research has been used to influence environmental policy-making.

2.0 ACTIVITIES

2.1 New Research Projects

EEPSEA calls for research proposals twice a year. It made a call for proposals in January 2013 and received 38 responses. Of the proposals received, 27 were sent for review by a panel consisting of nine international Resource Persons and the EEPSEA Director and Senior Economists. Grants to five (5) researchers (four dissertation proposals) were subsequently approved. Three of these five research projects (60%) have a specific gender component. Two of the five (40%) are looking into pro-poor policy/programs. There are eight (8) proposals that will be presented at the May 2013 EEPSEA Conference. Brief descriptions of the five new research grants are given below.

- ***Effects of Risk Communication and Gender on the Flood Mitigation Behavior of Households in the Mekong Delta, Vietnam. Researcher: Phung Thanh Binh***

This study investigates the effects of risk communication programs on household appraisals of flood threats and coping capacity, examining the relationship between flood risk coping appraisal and risk perceptions and identifying the determinants of intended flood mitigation behavior. It will also investigate the role of women in flood risk communication. In particular, it will compare the differences in elements of threat appraisal, coping appraisal, and mitigation behavior between groups of household heads with and without their wives' participation.

- ***Livelihood and Conservation Impact Analysis of Forestland Tenure Reform in Guizhou Province, China. Researcher: Zhaoyang Liu***

This study aims to explore the determinants of the occurrence of various tenure attributes in different forestland parcels; provide rigorous empirical evidence of the influence of specific forestland tenure attributes on rural livelihoods and forest conservation; and investigate whether females have equal opportunities to obtain those forest rights which provide better livelihood benefits. The outputs of the research will provide policy-makers with useful information on how to adjust the attributes of forestland tenure regimes, policies and other factors to achieve better rural development and forest conservation.

- ***Estimation of Flood River Damage in Jakarta. Researcher: Pini Wijayanti***

This research study aims to estimate river flood damage in the residential and business sectors in Jakarta and analyze the relationships among flood exposure indicators, vulnerability indicators, and flood damage.

- ***Cost- Benefit Analysis of Sustainability Standards in Smallholder Oil Palm Farming in Sumatra, Indonesia. Researcher: Ernah***

The general objective of this research is to assess the costs and benefits of the implementation of the Indonesian Sustainable Palm Oil (ISPO) criteria from the viewpoint of smallholder oil palm farmers in Jambi, Sumatra, (largest palm oil-producing province in Indonesia) in the context of a case study. The study will also assess the potential role of women in sustainable oil palm production. The results of this study will provide important inputs for the formulation of pro-poor and environmentally-friendly development policies for a sustainable palm oil industry.

- ***The Welfare Effects of Mekong Riverbank Erosion: Does the Choice of Measures Matter? Researcher: Phumsith Mahasuweerachai***

This study will value the welfare changes caused by Mekong riverbank erosion by comparing the values estimated from gain and loss domains and different reference states; comparing the values estimated from similar reference states but different experiences; and evaluating whether women are more affected by the riverbank erosion than men. In addition, this study will also assess the impact of riverbank erosion on people's happiness using a happiness equation which will take into account gender differences, among other things.

2.2 Training Courses and Conferences

2.2.1 Sponsorship of Two Panel Sessions at International Conferences

The Program responds to invitations to sponsor sessions where researchers can present their research results to demonstrate how environmental economics studies can support the improvement of environmental and natural resource management. In the reported period, we accepted two such invitations.

2nd Myanmar Green Economy Green Growth Forum

EEPSEA participated in the Second Myanmar Green Economy Green Growth Forum held at the Myanmar International Convention Center in Naypyidaw, Myanmar, last 13 - 15 November 2012. With the theme “Moving Forward”, the forum was held to facilitate the exchange of state-of-the-art knowledge and practices to promote and implement efficient natural resource management for a green economy and green growth in Myanmar.

EEPSEA sponsored four presentations by EEPSEA resource persons in a panel session on: “Environment, Economics and Research Methodologies: Improving Natural Resource Management in Southeast Asia”, which was moderated by the EEPSEA Director:

- Dr. Arief Yusuf: *Modelling the impact of environmental policies: Will carbon tax hurt the poor?*
- Dr. Pham Kham Nam: *Managing a protected area in the coast of Vietnam: Option analysis*
- Dr. Vo Thanh Danh: *Adaptation to sea level rise in the Vietnamese Mekong River Delta: Should a sea dike be built?*
- Dr. Orapan Nabanchang: *Managing a shared resource: Are urban dwellers of Asia willing to protect marine turtles?*

In addition, EEPSEA also supported the participation of Dr. Marian Segura Delos Angeles, a Natural Resource Economist formerly with the World Bank and former EEPSEA Advisory Member, in a panel discussion on “Implementing Enabling Means for Green Economy Green Growth”.

The 25 participants at the EEPSEA Session expressed interest in being part of EEPSEA’s research and training capacity program. In this new phase, EEPSEA will open up its activities to Myanmar researchers, subject to the approval of its donors.



International Conference on Climate Change Impacts and Adaptation for Food and Environmental Security

The Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA) and partners sponsored an International Conference on Climate Change Impacts and Adaptation for Food and Environmental Security at Los Baños, Philippines, from November 21-22, 2012. The event was attended by researchers, policy-makers and representatives from several funding and non-governmental agencies.

EEPSEA supported the participation of six (6) conference speakers who presented the results of their research. Three of them spoke on vulnerability and climate change economic impacts. Dr. Bui Dung The of Hue University presented the partial results of *A Cross-Country Research on Climate Change Vulnerability at the Commune and Household Levels in Cambodia, Philippines, and Vietnam*. EEPSEA Senior Economist, Dr. Orapan Nabangchang, presented on *Household Economic Losses during Thailand's 2011 Flood* while Dr. Flordeliza Bordey of the Philippine Rice Research Institute presented on the *Link between Climate Change, Rice Yield and Migration in the Philippines*.

The three other speakers presented research that looked into the economics of climate change adaptation (CCA) options and behavior. EEPSEA Senior Economist from Vietnam, Dr. Pham Khanh Nam, presented on the *Attitudes towards Flooding Risks in Vietnam and the Implications for Insurance* while Dr. Asa Jose Sajise of the University of Los Baños presented on *Climate Change Vulnerability Assessments and Economic and Policy Analysis of Adaptation Strategies in Selected Coastal Areas in Indonesia and the Philippines*. Lastly, Dr. Vo Thanh Danh of Cantho University presented the *Risk Cost-Benefit Economic Analysis of Creating a Concrete Sea Dike System to Adapt to Sea Level Rise in Vietnam's Mekong Delta*.

The EEPSEA Director also gave an overview of the Program's work on Climate Change Adaptation (CCA) at the Panel Session on Partners' Work on CCA.



2.2.2 Provision of Travel Grants to Researchers Attending Regional Forums

The Program encourages its research grantees to present their studies at international or regional conferences. During the reported period, it approved eight (8) travel grants to enable researchers to participate in two conferences and sponsored the participation of six (6) researchers at a workshop on Payment for Ecosystem Services.

3rd Congress of the East Asia Association of Environmental and Resource Economics

Five researchers received funding to attend the 3rd EAAERE Congress held in Huangshan, Anhui Province, China, in February 2013. They presented the following papers:



- *Economic Development, Carbon Emissions, and Inter-regional Disparity: An Inter-regional CGE Analysis of Agricultural Expansion in Papua, Indonesia*, by Mr. Irlan Adiyatma Rum (co-authored with Dr. Yusuf and Dr. Budy Resosudarmo of the Australian National University)
- *Climate Change Impact in the Agriculture Sector and the Effectiveness of Fiscal Instruments: The Case of Indonesia*, by Dr. Hermanto

- *Determinants of Deforestation in Sarawak, Malaysia*, by Dr. Adbul Rahim Abdul Samad
- *Economic Analysis of Multi-Pollutant Control in Coal-Fired Electricity Plants in China*, by Dr. Wu Dan
- *Land Compensation Value for Dam Construction: Hedonic Pricing Methods*, by Dr. Zuzy Anna Ilyas

EEPSEA also supported the attendance of Dr. Arief Anshory Yusuf and Dr. Orapan Nabangchang, both EEPSEA Senior Economists, and members of the EAAERE Board of Directors. EEPSEA is committed to supporting EAAERE conferences as they provide a platform where EEPSEA researchers can network with other environmental economists from Asia.

2nd International Conference on Environmental Pollution, Restoration and Management

Dr. Zenaida M. Sumalde (Professor in the Department of Economics in the University of the Philippines Los Baños) received a travel grant to attend the 2nd International Conference on Environmental Pollution, Restoration and Management from 6-8 March, 2013, in Hanoi, Vietnam. She presented the paper entitled “*Assessment of Gender Role Participation in a Coastal Resource Management Program: A Case Study in Masinloc, Zambales, Philippines*”.

2.2.3 Grants for Researchers’ Participation at Workshops of Other Organizations

The Australian National University and the University of Western Australia invited EEPSEA to send participants to a short course entitled *Introduction to Payments for Environmental Services (PES) Schemes* held last 6-7 March 2013 in Vientiane, Lao PDR. EEPSEA sponsored the participation of the following researchers/government staff:

- *Dr. Do Nam Thang, Deputy Director, Institute of Science for Environmental Management, Vietnam Environment*



Administration, Ministry of Natural Resources and Environment, Vietnam

- *Ms. Nguyen Thi Hong Lam, Researcher, Institute of Science for Environmental Management, Vietnam Environment Administration, Ministry of Natural Resources and Environment, Vietnam*
- *Ms. Nguyen Hoang Diem My, Faculty of Economics and Development Studies, Hue College of Economics, Vietnam*
- *Ms. Paula Beatrice M. Macandog, Department of Agricultural Economics, College of Economics and Management, University of the Philippines Los Baños, Philippines*
- *Ms. Maria Laya O. Espaldon, Researcher, World Agroforestry Center (ICRAF)*
- *Dr. Orapan Nabangchang, EEPSEA Senior Economist for Thailand*

2.2.4 Researchers' Workshops

Workshops are organized to provide opportunities for researchers to learn new skills and to offer avenues to research members of multiple-country research projects to interact. EEPSEA organized two workshops; one on journal writing and another, on behavioral and experimental economics in early 2013. It also conducted a write-shop for cross-country researchers.

Journal Writing Workshop

One of the goals most researchers aspire towards after completing their research studies is to get their reports published in refereed journals. This is also one of the outcomes EEPSEA expects from the environmental economics research projects it supports. Needless to say, however, getting a high quality paper published in a journal is not easy; it requires much perseverance and patience. EEPSEA invited Dr. Jack Knetsch, Professor Emeritus at Simon Fraser University, Canada, and EEPSEA Resource Person, to share his experience in publishing journal articles in the field of economics. Jack's articles appear in internationally refereed journals such as the American Economic Review, Journal of Political Economy, Quarterly Journal of Economics, Journal of Economic Perspectives, Journal of Economic Behavior and Organization, and Journal of Environmental Economics and Management.

The aim of this course was to address the challenges in getting good research reports published in relevant journals. It focused mainly on how to write good journal articles as well as how to navigate the whole submission/application process. The three-day course was held in Penang, Malaysia, from 4–6 March, 2013, and 16 researchers from Malaysia, Thailand, Vietnam, Philippines, Cambodia, Indonesia and China attended.



Introductory Course on Behavioral and Experimental Economics

Behavioral Economics (BE) is concerned with choices and decisions people make and with the testing and modification of various behavioral assumptions of standard economic theory while Experimental Economic (EE) methods are often used to study the choices and behavior of people. This course was held from 7–9 March, 2013, at the WorldFish Center, Penang. Twenty-six applicants were chosen from about 95 to participate; they came from Malaysia, Thailand, Cambodia, Vietnam, China, Indonesia and the Philippines. Four (4) WorldFish scientists/analysts also attended the course. The Resource Persons were Dr. Jack Knetsch (for BE), and Dr. Pham Khanh Nam (for EE), EEPSEA Senior Economist in Vietnam. The course offered researchers an opportunity to get acquainted with these various methods and how they could be applied to environmental economics research.



Cross-Country Research Teams' Write-shop

EEPSEA had supported six (6) cross-country research projects in the last two years of the previous project period and the sudden closure of the IDRC office in Singapore did not provide an opportunity for the research teams to discuss their final reports. The Program provided the various teams this opportunity in a write-shop that was organized in Hue, Vietnam, last 25-28 February, 2013.



Five cross-country teams, made up of 20 researchers, participated. The first team which was led by Dr. Arief Anshory Yusuf, consisted of four studies and applied Computable General Equilibrium (CGE) modeling in analyzing the impacts of environmental taxation. The second team,

led by Dr. Asa Sajise, focused on climate change adaptation in coastal communities in three Southeast Asian countries. The third team, led by Dr. Pham Khanh Nam, had four researchers who used behavioral economic tools to look into farmers' risk attitudes towards extreme flooding disaster. Fiscal gap analysis and the financing of protected areas in the region was the focus of eight studies that made up the fourth team, led by Dr. Gem Castillo. Lastly, developing capacity to adapt to climate change was the focus of the fifth cross-country team led by Dr. Bui Dung The.

The meeting had two main agenda items: 1) the discussion and writing up of lessons from the cross-country projects and 2) the identification of additional analyses and dissemination strategies by each research team. All the participants drafted and revised policy briefs based on the project studies and discussed how to best showcase the results in a cross-country policy brief which would provide regional observations and recommendations. The teams also revisited the cross-country strategy. Suggestions to enhance the strategy in the future included extending the project life to two years, allowing for at least two cross-country meetings to enhance coordination and for EEPSEA to assign a resource person who could readily provide technical support to the various research teams.

3.0 PUBLICATIONS

3.1 Research Reports

The Communications and Training Manager of EEPSEA coordinated the editing and laying-out of 13 research reports for immediate printing in April 2013. This work entailed her and the Research Manager (who had done editing jobs for EEPSEA in previous phases) doing some editing themselves and hiring four (4) additional English editors. The technical editing was coordinated by the EEPSEA Director with support from the Program's resource persons and Senior Economists. The various reports are described briefly below:



2013-RR1

Exploring the Forestry Carbon Finance Potential for an Indigenous Cultural Community in the Philippines, by Margaret M. Calderon, Nathaniel C. Bantayan, Florencia B. Pulhin, and Lourdes J. Cruz (January 2013)

This study explored the potential of a forestry carbon project for an indigenous cultural community in the Philippines. Specifically, it assessed the global potential of forestry carbon finance; reviewed the legal and policy environments of forestry carbon projects in the Philippines; and evaluated the feasibility of a forestry carbon project in an Ayta community. The results of the feasibility analysis revealed that developing a forestry carbon project for the Magbukún Ayta of Kanawan, Morong, and Bataan is technically and financially feasible. The Magbukún Ayta have also expressed, in a resolution, that they are amenable to the possibility of being involved in a payment for ecosystem services (PES) project, specifically on the carbon sequestration potential of their forest, making the forestry carbon project socially acceptable.



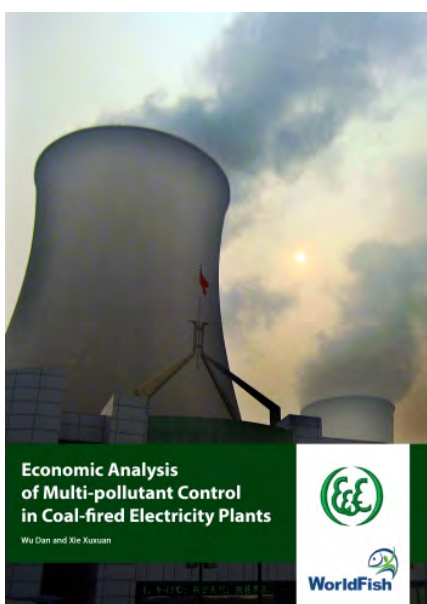
2013-RR2

Response of Fishermen to Fishing Control Policies in Southern Songkhla Lake, Thailand: A Field Experiment,

by Kunlayanee Pornpinatepong, Pathomwat Chantarasap, Juntip Seneerattanaprayul, Wittawat Hemtanon, and Papitchaya Saelim (February 2013)

This study used game theory to analyze the extraction behavior of fishermen around Southern Songkhla Lake in south Thailand. The field experiments were designed based on the concept of non-cooperative game theory for investigating fishermen's behavior in response to four management policy options: external regulations with individual transferable quotas (ITQs) and with individual quotas (IQs), and co-management with ITQs and with IQs. The results revealed that a co-management policy significantly led to better results than imposed external regulation in terms of reducing extraction, ensuring resource

sustainability, and less violation behavior. There was significantly less violation behavior when ITQs were used rather than with IQs. The ITQs provided more flexibility for fishermen who wanted to increase their extraction while still following conservation guidelines.



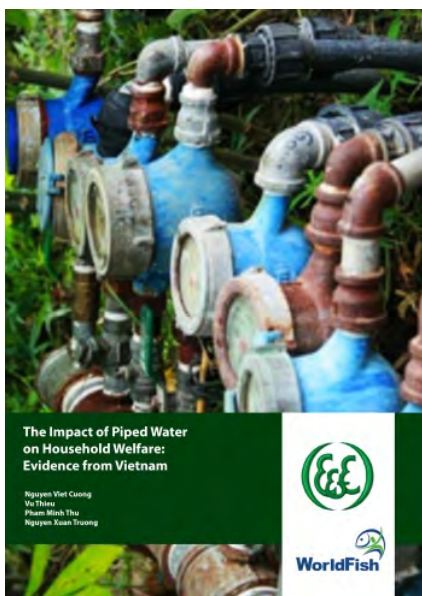
2013-RR3

Economic Analysis of Multi-pollutant Control in Coal-fired Electricity Plants in China,

by Wu Dan and Xie Xuxuan (February 2013)

China is experiencing severe air pollution and huge greenhouse gas (GHG) emissions as a result of its booming economy over the last 30 years. To cope with current international climate change problems, GHG emissions reduction should therefore be considered alongside air pollution control. The past 30 years have shown that total emissions reduction of a single pollutant does not proportionally improve urban ambient air quality. This study shows the difference between a single-pollutant control strategy (SPC), an air pollution control strategy that sets pollutant reduction targets one by one, and multiple-pollutant control (MPC), which sets multiple pollutant reduction targets at the same time, focusing on the coal-fired

electricity sector. The results showed that end-of-pipe technology schemes for coal-fired power plants under MPC were more cost-effective than SPC. Reductions in GHG emissions through MPC cost CNY 8 billion per year less than SPC. If coal washing were to be added to 20% of the sector's installed capacity, then reductions through MPC would cost CNY 6 billion a year less than SPC.

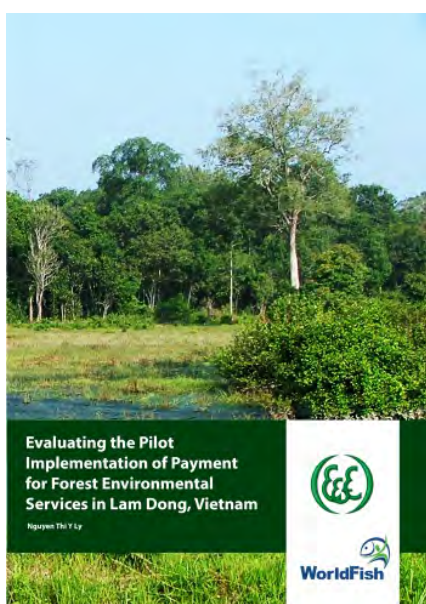


2013-RR4

Impact of Piped Water on Household Welfare in Vietnam, by Nguyen Viet Cuong, Vu Thieu, Pham Minh Thu, and Nguyen Xuan Truong (February 2013)

Clean water is essential for human survival, yet many people do not have access to clean water in Vietnam. Only around 23% of the population had access to piped water in 2006. Other households have to use water from wells, rivers, and ponds without any purification.

This study measured the effect of piped water on household welfare using difference-in-difference estimators on panel data from the Vietnam Household Living Standard Surveys. The results showed a positive, albeit insignificant, effect of piped water on household income and labor supply and a negative effect on sickness of household members.



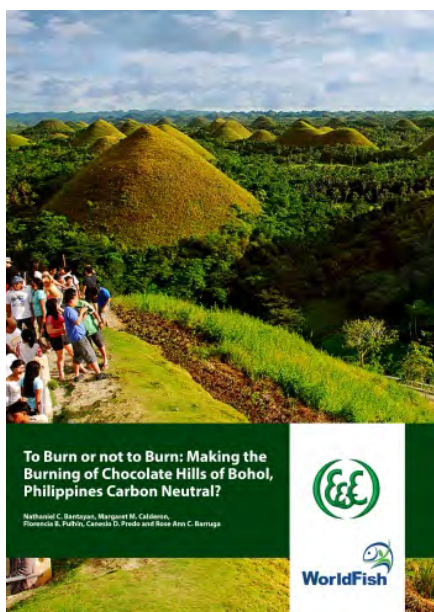
2013-RR5

Evaluating the Pilot Implementation of Payment for Forest Environmental Services in Lam Dong, Vietnam, by Nguyen Thi Y Ly (February 2013)

This study assessed the performance and the short-term impacts of the payment for forest environmental services (PFES) policy in Lam Dong Province, Vietnam. The study focused on the economic and environmental impacts of the pilot PFES. By applying the propensity score matching and difference-in-difference methods, the research found that PFES had contributed to increasing annual household income by about VND 3.9 million/household per year.

It also generated positive effects on forest environmental services as well as improved the awareness of local farmers and authorities of the value of forests and the need to protect them. However, some problems remain and

are associated with the following: forest environmental services have not been fully defined; participation is not completely voluntary; payment relies on a top-down mechanism; and the sustainability of the system is not assured.

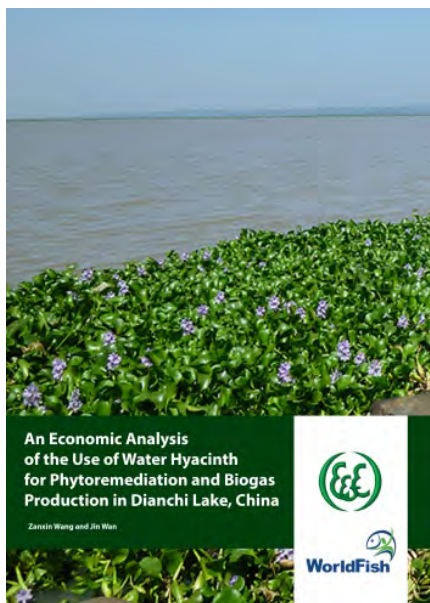


2013-RR6

To Burn or Not to Burn: Making the Burning of Chocolate Hills of Bohol, Philippines Carbon Neutral, by Nathaniel C. Bantayan, Margaret M. Calderon, Florencia B. Pulhin, Canesio D. Predo, and Rose Ann C. Barruga (February 2013)

The current scheme of burning the Chocolate Hills Natural Monument (CHNM) in Bohol, Philippines, to maintain the grass-covered (tree-less) and brown hills and sustain tourist arrivals is seen as environmentally unsound and inconsistent with existing environmental laws. The study estimated the carbon loss from burning and compared the carbon loss value with the tourism income of the Chocolate Hills under the status quo scenario with the end view of evaluating a carbon offset project as an alternative management scheme.

It was found that the present value of tourism income was very much higher than the cost of carbon emissions due to the burning. The vegetation and biomass analysis and the carbon study showed that an estimated 153 ha of forest should be established to offset the carbon emissions due to the clearing of the hills. The cost of forestation could be supported by income from tourism in a form and manner that directly involves the community.



2013-RR7

An Economic Analysis of the Use of Water Hyacinth for Phytoremediation and Biogas Production in Dianchi Lake, China, by Zanxin Wang and Jin Wan (February 2013)

The use of water hyacinth to remove nutrients from bodies of water and to produce biogas is a technically feasible way of controlling the excessive growth of water hyacinth, but its environmental and economic performance is not well understood. This study collected data from an experimental biogas plant to develop a lifecycle analysis and a cost-benefit analysis for the control of water hyacinth in Dianchi Lake, a eutrophic lake in China.

A comparison was made between the proposed project and the current approach at Dianchi Lake of disposing of water hyacinth via collection and landfill. The results revealed that the proposed project is economically feasible with a desirable energy gain. The results also showed that the project is not financially feasible but, compared to the current landfill practice, the government would be able to spend less on controlling water hyacinth if they implemented the proposed project. The removal of water hyacinth to produce biogas can also contribute to water quality improvement and GHG emission reduction, the values of which would depend on the scale of processing undertaken by the biogas plant.



2013-RR8

Economic Analysis of Rice Straw Management Alternatives and Understanding Farmers' Choices, by Cheryl C. Launio, Constancio A. Asis, Jr., Rowena G. Manalili, and Evelyn F. Javier (March 2013)

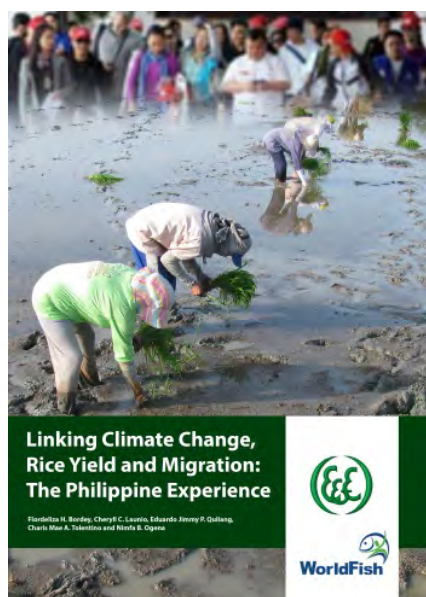
This research project assessed the environmental consequences of rice straw burning and other straw management practices in terms of greenhouse gas (GHG) emissions, and evaluated the cost-effectiveness and adoption of selected rice straw management alternatives. The results show that the most cost-effective option for farmers is to incorporate stubble and straw into the soil more than 30 days before crop establishment. Rapid straw composting and incorporation of rice straw compost entails much higher additional costs but also significantly mitigates GHG emissions, hence it is the next most cost-effective option.



2013-RR9

Impact of Eco-labeling on Indonesia's Smallholder Coffee Farmers, by Nuva, Yusif, Nia Kurniawati H., and Hanna (March 2013)

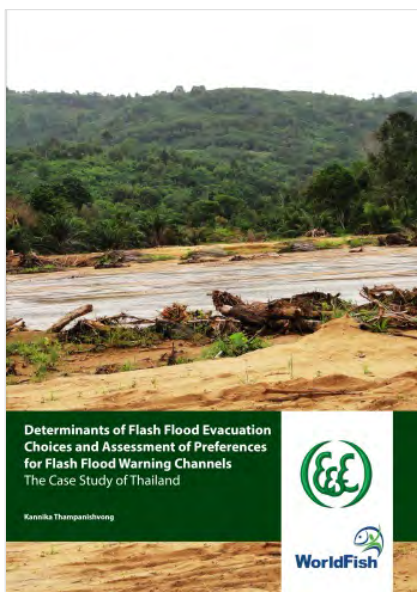
Eco-labeling can indirectly increase productivity and solve environmental problems brought about by coffee cultivation through better farming techniques required by eco-labeling organizations. This study's findings show that eco-labeling in the coffee sector is profitable as evidenced by the results of a cash flow analysis for both eco-labeled and non-eco-labeled Arabica and Robusta coffee farms. Coffee certification will benefit from increased support from the government and better information dissemination on the advantages of eco-labeling.



2013-RR10

Linking Climate Change, Rice Yield and Migration: The Philippine Experience, by Flordeliza H. Bordey, Cheryl C. Launio, Eduardo Jimmy P. Quilang, Charli Mae A. Tabalina, and Nimfa B. Ogena (March 2013)

This study tests the hypothesis that climate change, through its rice productivity impacts, induces out-migration in the Philippines. The results show that climate change effects such as increased night time temperature and extreme rainfall patterns which cause reductions in rice yields and farm revenues, significantly increase the number of Overseas Filipino Workers. The findings also show that the overseas migration of female workers is more sensitive to climate and rice productivity changes compared to male overseas migration.

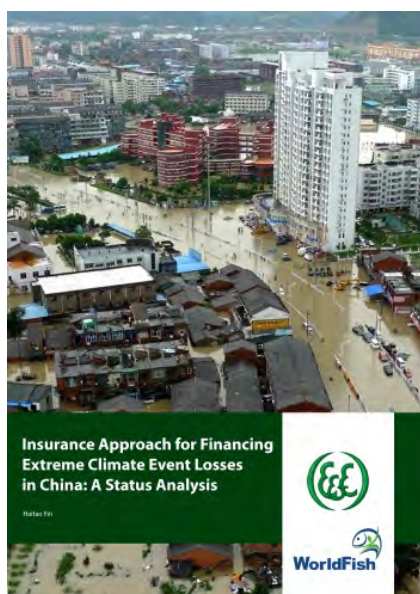


2013-RR11

Determinants of Flash-flood Evacuation Choices and the Assessment of Preferences for Flash-flood Warning Channels: The Case of Thailand, by Kannika Thampanishvong (March 2013)

Flash-flood warnings can give individuals much needed information that can help them decide whether to evacuate or not, thus reducing casualties and losses. This research examined the factors that affected individual and household decisions to evacuate in case of a flash-flood. The results showed that individuals with a higher probability of evacuation prior to or during a flash-flood had received a flash-flood warning; had received information about the meeting places in the villages; had higher incomes; and were female. At the household level, the probability of both male and female members agreeing not to evacuate decreased

with the proportion of young children in the household and if the head of the household was female.

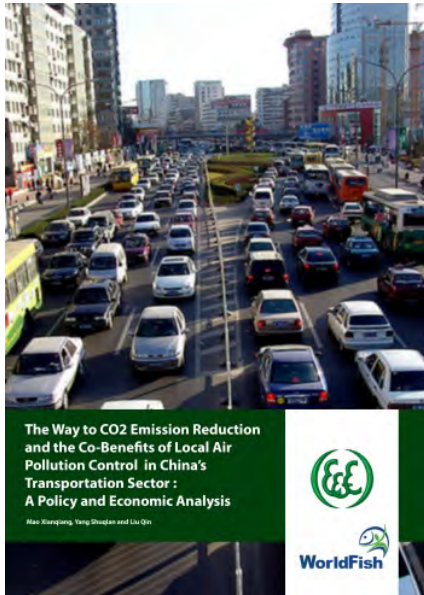


2013-RR12

Insurance Approach to Financing Extreme Climate Event Losses in China: A Status Analysis, by Haitao Yin (March 2013)

The frequency and consequences of natural disasters in China have risen due to climate change, resulting in increased economic losses. This paper investigates how China's insurance industry (as suppliers) and the Chinese people (as consumers) view natural disaster insurance. Insurance companies hesitate to offer insurance coverage against natural disasters because of institutional barriers (e.g., existing accounting and tax regulations and the fact that natural disaster coverage is not considered a separate category), low demand from consumers and the ambiguity associated with natural disasters.

It was found that people had a low demand for insurance because of three major reasons: a) the perception of "*It won't happen to me*", b) budgetary constraints, and c) a deep distrust in the insurance industry. It was also found that people tended to avoid insurance offered by small-scale insurance companies and strongly favored government insurance. These analyses suggest that neither the current public nor private approach presents an adequate solution to the challenge of financing natural disaster losses in China. Government-business collaboration may provide a viable alternative.



2013-RR13

The Way to CO₂ Emission Reduction and the Co-benefits of Local Air Pollution Control in China's Transportation Sector: A Policy and Economic Analysis, by Mao Xianqiang, Yang Shuqian, and Liu Qin (March 2013)

To determine which policy instrument(s) would be effective in reducing CO₂ emissions in China's transportation sector, various policy instruments which have been or are likely to be implemented in the near future in China are examined and compared in this study (i.e., carbon tax, energy tax, fuel tax, clean energy vehicle subsidy, and a reduction on ticket prices). The results showed that among the above-mentioned policy instruments, energy and fuel taxes (with the tax rates set) were the two most promising instruments for CO₂ emission intensity reduction to reach China's 2020 carbon intensity reduction targets while subsidies were the least promising option. CO₂ tax could be an effective policy

tool, but with the low tax rate considered in China, there is no way that the transportation sector would significantly contribute to achieving the desired carbon intensity reduction targets.

3.2 Policy Briefs

There were five (5) policy briefs written during the reported period (listed below). More will be produced in the coming months.

- **2013-PB1:** *How to Make Shrimp Fishing More Sustainable: A Study from Thailand*
- **2013-PB2:** *Using Water Hyacinth to Clean Up Pollution: A Case Study from China*
- **2013-PB3:** *Finding Alternatives to Rice Straw Open-Field Burning: A Study from the Philippines*
- **2013-PB4:** *Does Climate Change Drive Migration? A Study from the Philippines*
- **2013-PB5:** *Improving Flash-flood Warnings: A Study from Thailand*



4.0 OUTCOMES/IMPACTS

This progress report covers the first five months of EEPSEA's work under the new phase. Technically, there are yet no outcomes/impacts to report on for this initial phase. However, there are outcomes from the activities of previous years that we have not reported on yet. Research impacts take time to manifest and so we are reporting here outcomes that we have gleaned from the 36 research grantees and 64 training participants who responded to our March 2013 Impact Tracer Survey. Many of those who responded to the researchers' survey had also attended one or more of our training courses for researchers.

4.1 Journal/Book Publications

Eleven (11) EEPSEA studies were published in several journals and two (2) had their reports included in books. These are listed below:

Journal Articles

- **Xianqiang Mao, Shuqian Yang, Qin Liu, Jianjun Tu, Mark Jaccard.** 2012. Achieving CO₂ emission reduction and the co- benefits of local air pollution abatement in the transportation sector of China. *Environmental Science & Policy*. Volume 2. August 2012. 1-13.
- **Zanxin Wang and Margaret M. Calderon.** 2012. Environmental and economic analysis of the application of water hyacinth for eutrophic water treatment coupled with biogas production. *Journal of Environmental Management* .110 (2012). 246-253.
- **Cuong Nguyen Viet & Thieu Vu.** 2012. The impact of piped water on household welfare: Evidence from Vietnam. *Journal of Environmental Planning and Management*. DOI:10.1080/09640568.2012.720568.
- **Vibol San, Tharith Sriv, Vin Spoann, Sovannndara Var and Sophat Seak.** 2012. Economic and environmental costs of rural household energy consumption structures in Sameakki Meanchey District, Kampong Chhnang Province, Cambodia. *Energy* (2012), <http://dx.doi.org/10.1016/j.energy.2012.10.017>.
- **Vibol San, Vin Spoann, Dalin Ly and Ngov Veng Chheng.** 2012. Fuelwood consumption patterns in Chumriey Mountain, Kampong Chhnang Province, Cambodia. *Energy* 44 (2012). 335-346.
- **Liguo Lin.** 2013. Enforcement of pollution levies in China. *Journal of Public Economics*. Vol. 98. February 2013. p 32–43.
- **Yanbo Li, Wenjun Li, Chengcheng Zhang and Mingming Fan.** 2013. Current status and recent trends in financing China's nature reserves. *Biological Conservation*. 158 (2013). 296–300.
- **Loan T. Le, Ekko C. van Ierland, Xueqin Zhu and Justus Wesseler.** 2013. Energy and greenhouse gas balances of cassava-based ethanol. *Biomass and Bioenergy* 51(2013). 125 – 135.
- **Thanh Cong Nguyen, Jackie Robinson, Shinji Kaneko and Satoru Komatsu.** 2013. Estimating the value of economic benefits associated with adaptation to climate change in a developing country: A case study of improvements in tropical cyclone warning services. *Ecological Economics* 86 (2013). 117–128.
- **Jin Jianjun and Hermi Francisco.** 2013. Sea-level rise adaptation measures in local communities of Zhejiang Province, China. *Ocean & Coastal Management* 71 (2013) 187-194.
- **Huynh Viet Khai and Mitsuyasu Yabe.** 2012. Rice Yield Loss Due to Industrial Pollution in Vietnam. *Journal of US-China Public Administration*. Vol 9(3). p 2480256. 3/2012.

Book Chapters/Books

- **Huynh Viet Khai and Mitsuyasu Yabe.** 2013. Impact of Industrial Pollution on Rice Production in Vietnam in Dr. Nigel W.T. Quinn (editor). *International Perspectives on Water Quality Management and Pollutant Control*. Croatia. INTECH Publishing. 2, 2013. ISBN 978-953-51-0999-0. pp. 61-65.

- **Huynh Viet Khai** and Mitsuyasu Yabe. 2013. *Economic Impact of Water Pollution on Rice Production in Vietnam*. Germany, LAP LAMBERT Publishing, 1/2013. ISBN 978-3-659-26432-0.

4.2 Influence in Policy Formulation and/or Discussions

Seven (7) of the 36 researchers who responded to the research survey indicated that their EEPSEA-supported studies had contributed significantly to environmental policy reforms of national significance in their own countries. Two researchers who were involved in climate change research projects of EEPSEA (one in the Philippines and the other in Vietnam) claimed that their research had been used in the formulation of the Climate Change Agenda for the Philippines and the Mekong Region, respectively. Five of the seven have provided detailed accounts of their research impacts and these are described below.

Reversion of Disused Fishpond Lease Agreement Areas to Mangrove Forests in Region VI, Philippines

Alice Ferrer's research project entitled "Reversion of Disused Fishpond Lease Agreement Areas to Mangrove Forests in Region VI, Philippines" was used by the Bureau of Fisheries and Aquatic Resources (BFAR) as reference material in the revision of the Fisheries Administrative Order (FAO) 197 (*Rules and Regulations Governing the Lease of Public Lands for Fishpond Development*), which was approved in December 2012 (Now FAO 197-1, *Rules and Regulations Governing the Lease of Public Lands for Fishpond and Mangrove-friendly Aquaculture*).



Dr. Ferrer's study put forward several recommendations on the need to increase the rent for public land and establish a process to update fees regularly. She also emphasized the need to clearly define the process of cancellation of Fishpond Lease Agreements (FLAs) and the importance of having signboards on such properties under FLAs which bore the FLA name, and dates of FLA issuance and expiration. Such signboards would inform people that the properties in question were public land on lease and not private land as some people had begun to assume. These recommendations were taken up in the revised FAO as Dr. Ferrer had been invited to be a member of the Technical Working Group that prepared the draft version of the revision. She is also one of the writers in the (ongoing) formulation of a manual for the inventory of the fishponds under lease agreement. Similarly, her research report is being used as reference material in the drafting of a Department Order by the Department of Environment & Natural Resources (DENR) on the biophysical reversion to mangrove forest of AUU fishponds under fishpond lease agreements which are cancelled and officially turned over by BFAR to DENR (still at the public consultation stage).

Design of an Emissions Trading Program at Provincial and National Levels in China



Zhang Bing's research project entitled "Policy Conflict and Performance of Emissions Trading Markets: An Adaptive Agent-based Analysis" used the Jiangsu SO₂ emissions trading market as a case study. The results showed that policy conflicts, such as China's regional total pollution control policy and pollution discharge standards had the most significant impact on Jiangsu's SO₂ emissions trading. The research findings caught the interest of the Jiangsu Environmental Protection Department (EPD) and Ministry of Environmental Protection (MEP). At the national level, the researcher

suggested that a large-scale emissions trading market be designed in China. This suggestion was taken up by the MEP which is designing a national level SO₂ emissions trading program. In Jiangsu Province, the researcher is also involved as a key expert in the design of an SO₂ emissions trading program. Based on his suggestions, the Jiangsu EPD developed a new permit allocation method which is based on 'best available technology'. The new Jiangsu SO₂ emissions trading regulation was issued recently.

Eutrophication of Dianchi Lake Using Water Hyacinth

In March, 2011, an assessment workshop on the feasibility of using water hyacinth for the phytoremediation of eutrophic Dianchi Lake was held in Kunming. Participants included officials from Kunming municipal governments; researchers in the fields of ecology, economics and environmental science from universities and research institutions; and staff from local biogas and/or water treatment companies. The results of the EEPSEA-funded project by Xanzin Wang entitled "Economic feasibility of utilizing water hyacinth for the phytoremediation of a eutrophic lake coupled with biogas production in China" were presented and policy suggestions provided. This was the only environmental economics study to be presented at the workshop and thus provided important economic information for the launch of the project.



On July 12, 2011, the Kunming Municipal Government decided to launch a project to cultivate 26 square kilometers of water hyacinth to reduce the eutrophication of Dianchi Lake and to produce biogas using the cultivated biomass. This was a major recommendation made by the author. That same month, the researcher also presented this project results at the "International Symposium on China's Environment and Policies" in Hangzhou, China.

Dr. Zhang received a Beijer scholarship to spend some months (April to December 2011) at the Beijer Institute of Ecological Economics, Swedish Royal Academy of Science, where he studied the dynamic effect of the harvesting of water hyacinth from the lake. The study was also published in the SCI-indexed international *Journal of Environmental Management* (Vol. 110, 2012).

Blue Swimming Crab Fishery Management Plan in Indonesia

From March 28-30, 2012, Dessy Anggraeni, along with other scientists, was invited to an initial stakeholder workshop hosted by the Directorate of Fishery Resources (of the Ministry of Marine Affairs and Fisheries - MMAF) in Indonesia to discuss the development of the Blue Swimming Crab (BSC) Fishery Management Plan. The workshop was attended by processor associations, scientists, researchers from universities, members of the National Commission for Fish Stock Assessment, NGOs, and other divisions or scientific bodies of MMAF as well as the MMAF's Provincial Offices (Jakarta, Banten, West Java, Central Java and East Java).

Dr. Anggraeni presented the results of her EEPSEA study entitled "The Economic Evaluation of Implementing Minimum Legal Size on Blue Swimming Crab Fishery in Indonesia". Her study provided information on the economic analysis of implementing a minimum legal size and comparing that with the continuation of unregulated fishing (the business-as-usual situation). The Directorate of Fishery Resources took all this information into account and began drafting the Indonesian BSC (*Portunus pelagicus*) Fishery Management Plan following the workshop, focusing first on fishery management areas Fishery Management Area (WPP-NRI) 712 in North Java. The whole process of drafting this law will take time and the researcher will most likely be involved in the process, being one of the few researchers working on this area. Dr. Anggraeni's research has thus contributed to the process to improve the management of the local BSC fishery.



Co-control Strategy in China's 12th Five-Year Plan (2011-2015) for Environmental Protection

Mao Xianqiang, a Professor at the School of Environment in Beijing Normal University, and his research team have been interested in policies that will reduce carbon emissions and local pollutants at the same time (a co-control strategy). The grant received from EEPSEA in 2010 enabled the team to do their first research study on this topic. The project was entitled "The Way to CO₂ Emission Reduction and the Co-Benefits of Local Air Pollution Control and Energy Saving in China's Transportation Sector – A Policy and Economic Analysis". In the project, the team looked at how a co-control strategy could be implemented in the transportation sector. A journal paper on

the work of the team was recently published in the Elsevier *Journal of Environmental Science and Policy* (Vol. 21, 2012) (available online at www.sciencedirect.com).

This research work has led to similar co-control research projects funded by the Energy Foundation under the Ministry of Environmental Protection (MEP) from 2011-2013. The team's research findings have been submitted to the Minister of MEP through a policy brief drafted jointly by the researchers from Dr. Mao's team and the Policy Research Center of MEP. This study has helped in the promotion of the 'co-control strategy' of MEP which is emphasized in its 12th Five-Year Plan for Environmental Protection and successive national environmental protection strategic documents published. The co-control evaluation methodology developed in the study has also been used by some of the most important think-tanks in China such as the China Council for International Cooperation on Environment and Development (CCICED). Dr. Mao was also invited to present the research results at the Carnegie Center Beijing office on May 22, 2012, and at the China Environmental Forum (CEF) held at the Woodrow Wilson Center in Washington on March 13, 2013.



4.3 Contribution to Career Advancement

Thirty-two (89%) of the research survey respondents and about the same percentage (84%) of the training survey respondents affirmed that EEPSEA research and training had contributed to their career advancement in various ways, described below.

Research grantees

- Secured job promotions/recognition at work (41%)
- Got their studies published in refereed journals (19%);
- Completed their PhD with the EEPSEA research grant or got accepted for an advanced study program (22%);
- Improved their research and teaching skills (25%).
- Were invited to speak at or participate in programs/forums as experts/resource persons (31%)
- Experienced improved relationships with local communities and leaders (19%)
- Widened their network, namely with other professionals (16%)

Training grantees

Forty-seven (47) of the 54 respondents who claimed that the EEPSEA training courses had helped improve their careers provided explanations on how this had been achieved. Majority

(31/47) said that the training courses had equipped them with the skills and analytical capacity to conduct research projects using environmental economics analysis. Their capacity to teach had also been improved by learning from internationally renowned EEPSEA resource persons and using the materials that they had obtained from the various courses. Similar to the research survey respondents, about 13% of them claimed to have secured job promotions while others had earned their doctoral degrees, served as resource persons/consultants, and widened their professional network.

4.4 Development of New Academic Courses

The training survey had a question that asked respondents if they had developed Environmental Economics or related courses at their universities after attending the EEPSEA courses. Of the 64 who responded, there were seven (7) who led their institutions to offer a subject on Environmental Economics, Cost-Benefit Analysis, or Environmental & Natural Resource Economics. Two (2) had developed new courses altogether: "Primary and Experimental Data Analysis for Economists" in Khon Kaen University and "Economics of Climate Change", a course included in the Master's Degree program for Agricultural Economics in Cantho University. The Royal University of Phnom Penh is also currently developing the Faculty of Development Studies, where Environmental Economics will be taught by a number of researchers we have trained. It is worth noting that 27 out of the 64 respondents (42%) are currently teaching Environmental Economics and related courses in various universities in the region. In conclusion, it can be said that attending EEPSEA training courses has provided trainees with the opportunity to sharpen their teaching skills and expand their knowledge base.

4.5 Presentation of Studies at Various Conferences

Twenty-seven (27) of the respondents (75%) had presented their research findings at various conferences. Thirteen (48%) had made presentations at local/national conferences, 19% at regional conferences, and a significant number (44%) at international conferences. Overall, it would appear that EEPSEA researchers have been quite successful in getting opportunities to communicate their research findings, especially at the national and international levels.

4.6 Capacity to Secure Research Funding

From the 36 research survey respondents, 22% managed to secure new funding from other donors on a related research topic. Most of these projects were coursed through the researchers' universities, thus enhancing the resources available to their institutions.

The survey of training grantees revealed interesting information. Of the 64 respondents to the training survey, 76% had developed research proposals that were submitted to either EEPSEA or other funding agencies. Interestingly, about a third of these proposals had received funding support from EEPSEA (5 out of 16 received SRGs) and another third had received funding from other donors. This means that about 50% of those who received training from EEPSEA managed to secure funding for their research, half from EEPSEA and the rest from other donors. This is a rather good number, showing strong capacity to develop proposals that can get accepted for funding.

4.7 Enhancing the Profile of Researchers' Home Institutions

EEPSEA's capacity-building program also brings benefits to the institutions of the grant recipients. Thirty-one (86%) of the respondents claimed that their research output and attendance at EEPSEA training courses had benefited their own institutions. Their work on certain areas (e.g. climate change adaptation, behavioral economics, mangrove assessment, etc.) had enhanced their institutions' expertise in this area (35%). In like manner, getting the studies published (especially, in journals) had improved the professional ranking of the researchers' respective institutions (26%). Finally, 26% of the researchers used their studies and the various materials obtained from the EEPSEA training courses in their teaching, thus improving the effectiveness of the teaching institutions. Ninety per cent (90%) of the 64 training recipients who had responded to the survey claimed that they had shared their training course materials with their colleagues.

4.8 Research Citations in the Media

Five of the 36 research grantee respondents (14%) reported media citations in 2012. These are as follows:

- *Gov't action urged on abandoned fishponds* By Nestor P. Burgos Jr., *Inquirer Visayas*, 9:13 pm | Monday, April 23rd, 2012. <http://newsinfo.inquirer.net/181491/gov%e2%80%99t-action-urged-on-abandoned-fishponds#ixzz2OSE9F8nm--> Research by Alice Ferrer.
- *Alice Ferrer was also interviewed on her research in a one-hour radio show on DZRB Radyo ng Bayan, April 29, 2012, with Ms. Melly Tenorio (Philippines).*
- *An article on the EEPSEA study by Cheryl Launio on Rice Straw Burning was published in a PhilRice Magazine (right).*



5.0 STAFFING

EEPSEA hired three staff for the Philippine office: the Grant Administrator (also acting as the Communications and Training Manager) was appointed in November 2012 and the Finance Officer was hired in January 2013. In January 2013, a Research Manager was also recruited for the Penang office. As of April 2013, a Program Assistant will be hired to take over most of the grant administration work. EEPSEA's work across the two offices is coordinated by the Director who spends half-time at each location. She is assisted by four Senior Economists who work on a one-third time basis from their home bases in Thailand (Dr. Orapan Nabanchang), Indonesia (Dr. Arief Yusuf Anshory), Vietnam (Dr. Pham Kham Nam) and the Philippines (Dr. Canesio Predo). The Senior Economists coordinate in-country courses and publication work in the four locations and help review and advise local researchers.

6.0 DEVIATIONS FROM WORK PROGRAM AND BUDGET

The Program managed to accomplish a lot within the first five month of its operation in this new project phase. Due to start-up adjustments, including delays in the hiring of some Program staff, there are some savings from the first five months' budget. We are proposing to carry

over these savings to be used for the April 2013-March 2014 Program of Work which is being submitted with this report along with the Budget for next year to both our donors; IDRC and Sida.

7.0 PROGRESS ON ACHIEVEMENT OF OBJECTIVES

Given that we are only five months into the new phase, we are reasonably well on course with our objectives. Our achievements of the targets of our logframe are shown in Appendix 1.

Submitted by
Dr. Herminia A. Francisco
EEPSEA Director

26 April 2013

APPENDIX 1: Results-Based Management Logframe – Status as at 31 March 2013

Contribution Management

Results summary

EEPSEA: Improving the Policy Influence of Environmental Economics Research in Southeast Asia

Improved design and implementation of policies and programs towards sustainable environmental and natural resource management								
Outcome objective	Indicator	Baseline	Target	Results				
		(11/2012)	(10/2016)	(3/2013)				
Indicator 1	Number of policies formulated/informed based on EEPSEA research findings		at least 12 cases of policy influence	7	survey			
Indicator 2	Number of EEPSEA alumni advising environment & natural resource managers/policy makers		20-30 alumni	17	survey			
(1) Increased analytical capacity of local researchers from national and regional institutions, particularly in dealing with regional environmental issues like climate change								
Bridging objective	Indicator	Baseline	Target	Results				
		(11/2012)	(10/2016)	(3/2013)				
Indicator 1	# of researchers trained by EEPSEA		200-300	46	Current phase			
Indicator 2	# of training courses offered by EEPSEA		12-16	2	current			
Indicator 3	# of EEPSEA-trained researchers occupying key positions in universities, government and international organizations		20-40	17	current			
Indicator 4	# of publications in refereed journals and books		10-15	13	current			
Indicator 5	# of gender-sensitive EE research projects		30-40	3	current			
Indicator 6	# of research projects that consider poverty dimension		30-40	2	current			

Bridging objective	(2) Improved understanding of the root causes of environmental problems and potential solutions by natural resource managers (NRMs) and policy makers							
	Indicator	Baseline	Target	Results				
		(11/2012)	(10/2016)	(3/2013)				
Indicator 1	# of training courses for NRMs & policy-makers		8-10	1	Current phase			
Indicator 2	# of NRMs & policy-makers who receive EEPSEA training		150-200	25	current			
Indicator 3	# of EE research to understand root causes of environmental problems		20-30	2	current			
Bridging objective	(3) Greater interaction between researchers and natural resource managers/ policy-makers to facilitate uptake of research results at national and regional levels							
	Indicator	Baseline	Target	Results				
		(11/2012)	(10/2016)	(3/2013)				
Indicator 1	# of researchers-policy-makers/ forums		8-10	2	Current phase			
Indicator 2	# of cases where EEPSEA researchers were consulted by government to assist in specific environmental issues/problems		15-20	7	survey			
Indicator 3	# of news articles and media interviews about EEPSEA work		30-40	3	current			
Bridging objective	(4) Increased sustainability of capacity-building in environmental economics research							
	Indicator	Baseline	Target	Results				
		(11/2012)	(10/2016)	(3/2013)				
Indicator 1	# of national associations/local organizations collaborating with EEPSEA on joint training activities		10-15	1	Current phase			
Indicator 2	# of regional organizations co-funding research/training courses		4-8	2	current			
Indicator 3	# of institutions teaching Environmental Economics through EEPSEA's influence		8-12	7	survey			
Indicator 4	Establishment of an EEPSEA alumni network		1	0	current			

Output objective	(1) Increased number of researchers implementing environmental economics research in Southeast Asia							
	Indicator	Baseline	Target	Results				
		(11/2012)	(10/2016)	(3/2013)				
Indicator 1	# of research grants approved		68	5	current			
Indicator 2	# of research grants in low-capacity countries		20	2	current			
Indicator 3	# of researchers involved in EEPSEA-supported studies		140	11	current			
Indicator 4	percentage of EEPSEA researchers/alumni who were able to secure funding from other donors for EE research (based on monitoring survey)		40%	33%	survey			
Output objective	(2) Increased number of researchers and policy-makers receiving training on various tools and concepts							
	Indicator	Baseline	Target	Results				
		(11/2012)	(10/2016)	(3/2013)				
Indicator 1	# of regional training courses		4-6	2	Current phase			
Indicator 2	# of in-country training courses		8-10	0	current			
Indicator 3	# of participants in both regional and in-country courses		300-400	46	current			
Indicator 4	percentage of women participants relative to men participants		40-50%	52%	current			
Output objective	(3) Strengthening links with other regional environmental organisations in Southeast Asia (regional partnerships)							
	Indicator	Baseline	Target	Results				
		(11/2012)	(10/2016)	(3/2013)				
Indicator 1	# of courses jointly offered with regional partners in SEA		8-10	2	Current phase			
Indicator 2	# of courses where EEPSEA researchers were invited as presenters		15-20	2	current			
Indicator 3	# of regional partners	6	10	2	current			

Output objective	(4) Developing a community of environmental economists in SEA through increased networking and knowledge sharing							
	Indicator	Baseline	Target	Results				
		(11/2012)	(10/2016)	(3/2013)				
Indicator 1	# of environmental economics associations supported by EEPSEA	3	5	1	Current phase			
Indicator 2	# of researchers supported to attend regional/ international conferences		40-60	14	current			
Indicator 3	# of researchers involved in cross-country research projects		25-30	0	current			
Indicator 4	# of researchers in high-capacity countries supporting researchers in low-capacity countries		10-15	7	current			
Output objective	(5) Enhanced communication between EEPSEA researchers and policy-makers							
	Indicator	Baseline	Target	Results	Results	Results	Results	Results
		(11/2012)	(10/2016)	(3/2013)	(10/2014)	(10/2015)	(10/2016)	(year x)
Indicator 1	# of policy impacts/influence reported by EEPSEA researchers		25-30	7	survey			
Indicator 2	# of policy briefs published from EEPSEA projects		40-50	5	current			
Indicator 3	# of researchers presenting their studies at policy-makers forum/dialogues		40-50	10	current			
Indicator 4	# of researchers-policy-makers workshops/ dialogues at national and regional levels		8-10	2	current			
Indicator 5	# of national agencies collaborating with EEPSEA	5-10	10-15	1	current			
Indicator 6	# of regional organizations collaborating with EEPSEA	8	14	2	current			
Output objective	(6) Enhanced communication between EEPSEA researchers and other research users							
	Indicator	Baseline	Target	Results				
		(11/2012)	(10/2016)	(3/2013)				
Indicator 1	# of courses offered to non-traditional research users		8	0	current			
Indicator 2	# of attendees to EEPSEA courses		200	0	current			

	for non-traditional research users							
Output objective	(7) Increased visibility of EEPSEA researchers and their outputs							
	Indicator	Baseline	Target	Results				
		(11/2012)	(10/2016)	(3/2013)				
Indicator 1	# of research reports, technical reports, practitioners series produced by EEPSEA		55 RR 10 TR 2 PS	13 RR	current			
Indicator 2	# of peer reviewed journal publications featuring EEPSEA research		10-15	11	survey			
Indicator 3	# of research papers presented at international conferences		50-60	11	current			
Output objective	(8) Support for the development of teaching materials and training of teachers							
	Indicator	Baseline	Target	Results				
		(11/2012)	(10/2016)	(3/2013)				
Indicator 1	# of case study books published		4-8	0	current phase			
Indicator 2	# of grants for translation of EEPSEA reports		6-8	0	current			
Indicator 3	# of teachers attending EEPSEA courses		200-300	31	current			

Strengthening local capacity in the economic analysis of environmental issues

